2025 ANNUAL PROGRESS REPORT

SWMU 14 – OILY WATER SEWER

PHILLIPS 66 FERNDALE REFINERY

MARCH 31, 2026

SUBMITTED BY:

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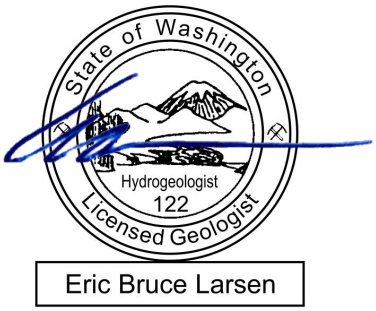
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CERTIFICATION STATEMENT

All geologic and hydrogeologic work performed pursuant to this report was conducted under the supervision of and direction of the geologist listed below:



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3/31/2026

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All engineering work performed pursuant to this report was conducted under the supervision and direction of the engineer listed below:



3/31/2026

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1. INTRODUCTION

This annual progress report has been prepared in accordance with the requirements in Section VII.C. of Agreed Order No DE 16297 (AO). The AO was entered into by the Washington State Department of Ecology (Ecology) and Phillips 66 Ferndale Refinery (P66 or the "refinery") in 2020. The objective of the AO is to investigate and conduct remedial actions to the P66 oily water sewer (OWS) system, also referred to as Solid Waste Management Unit 14 (SWMU-14).

Per the AO, an Investigation and Response Plan (IRP) was prepared to provide a framework to investigate the integrity of the OWS and respond to any potential releases of contamination to soil and/or groundwater (GW). The IRP describes four inspection phases of the OWS major trunk lines to be completed by December 31, 2029.

This report includes a summary of the OWS Phase III line repairs for all sewer line defects with an environmental rating (ER) of four (ER=4) or above identified in the 2024 Phase III sewer line inspection findings. All figures referenced in this report are provided in Appendix A. All tables referenced in this report are provided in Appendix B.

1.1 GENERAL SITE INFORMATION

The Phillips 66 Ferndale Refinery is located at 3901 Unick Road in Ferndale, Washington (parcel 390133197340). The refinery is in Section 32, Township 39 North, Range 1 East. The refinery is situated on the Strait of Georgia approximately 6.03 miles west of Interstate 5 (I-5). The refinery has a median elevation of approximately 200 feet (ft) above mean sea level and the site topography generally slopes from the east/northeast to the west/southwest. A site location map is provided as Figure A-1.

1.2 CONTACT INFORMATION

Contact information for the Ecology site manager, project consultant and property owner/facility operator are included below:

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1.3 SITE GEOLOGY AND HYDROGEOLOGY

Agreed Order DE 16297 Section VII.C.6 requires P66 to provide "a discussion of the geology/hydrogeology in the area of any releases and how these characteristics may influence the migration of contaminants" in the Annual Progress Report.

The site is in the northern Puget Sound Basin and is characterized by thick sequences of Pleistocene glacial advance outwash and meltwater deposits that settled on tectonically deformed sedimentary and ancient metamorphic bedrock. The glacial deposits were reworked by more recent fluvial, lacustrine, and aeolian actions into the landforms present today. The stratigraphic sequence of major geologic units at the Ferndale Refinery has been described in reports previously submitted to

Ecology. Geologic units of importance are described below in stratigraphically descending order:

- Unit I: Fill material consists of silty clays with varying amounts of sand and gravel, resembling Unit III-type material.

- Unit II: Consists of native soils and thin surficial deposits which overlie the regional stratigraphic units. The unit is divided into two lithologic subunits:

    - IIA (Native soil): Silty/sandy clay, silty clay, and clayey silt; dark brown; some gravel; firm; decomposed roots locally; slightly moist to wet; locally very wet. (thickness: 5 - <1 foot)

    - IIB (Surficial deposits): Clayey/silty sand and clayey silt; light gray to greenish gray; some gravel; slightly firm; slightly wet to wet. (thickness: 5 - <1 foot)

Typically, the subunits are distinguishable based on color and textural differences; however, disturbances made during refinery construction often make this distinction difficult.

- Unit III Glaciomarine drift (diamicton) represents the uppermost regionally continuous stratigraphic unit. Unit III diamicton consists of brown silty clay, clayey silt, and clayey sand with minor to moderate amounts of sand, gravel, and matrix-supported pebbles, cobbles, and boulders. Occasionally the angular to rounded clasts are striated. The unit is consistently firm to very hard, depending on moisture content. Orange and gray mottling is observed locally, as are thin (< 1 millimeter) vertical fractures in the uppermost portions of the unit. The unit is predominantly dry to slightly moist (thickness: 16 - <1 foot). As discussed below, this unit is the uppermost weathered portion of Unit IV.

- Unit IV Glaciomarine drift (diamicton). The unit consists of light to dark gray silty clay with traces of sand, gravel, and matrix-supported pebbles, cobbles, and boulders. Occasionally the angular to rounded clasts are striated. The upper portions are firm to slightly plastic, and generally wet. With depth, the unit shows an increase in sand and often a significant increase in moisture content and plasticity (i.e., the material becomes very plastic, sticky, and very wet). Shells and shell fragments are common, confirming a marine origin (thickness: >40 - <1 foot).

Diamicton Units III and IV act as an aquitard impeding the vertical migration of residual hydrocarbons.

- Unit V Mountain View sand and gravel. The Mountain View sand and gravel underlie the younger glaciomarine drift and overlies the Cherry Point silt. The deposit consists of well sorted silt, silty sand, and fine to medium grained sand, interlayered with poorly sorted sand and sand-gravel mixtures. The sands and gravels vary from light brown to gray, with their color influenced by the lithology of the mineral grains. The sands and gravels are loose and dry to slightly wet. The sediments are well stratified, with rounded pebbles, cross-bedding, and other features typical of fluvial deposition. The upper surface of the unit is irregular. The unit contains fine-grained

channel fill deposits interspersed with sands and gravels (Easterbrook, 1976).

- Bodies of silt, representing low energy areas within the fluvial outwash environment during Mountain View time, are widespread over most of the refinery site (BP, 1992). The fine grained interbeds consist of tan clayey silt and lean clay. The silt bodies vary in thickness and stratigraphic position over short distances and are absent in places, indicating that the silt deposits are lenticular in nature. The silt lenses consist of thinly-bedded, micaceous silt, sandy silt, and silty very fine sand which is well sorted. They exhibit a floury texture and low shear strength when dry. The silts are dark gray when freshly exposed but are oxidized to orange and brown near the contact with adjacent materials (thickness: 25-100 feet).

- Unit VI Cherry Point Silt. The top of the Cherry Point Silt lies at approximately 60 feet above mean sea level (approximately 130 feet below grade). The Cherry Point Silt consists of brown to gray interbedded clay, silt, silty sand, and fine to medium grained well-sorted sand. The regional water table occurs within the unit at approximately 160 feet below ground surface. The regional water table aquifer in the Cherry Point Silt is not used as a water supply downgradient of the facility. The direction of flow in the Cherry Point Silt is toward the west, where flowing GW discharges to the Strait of Georgia. The maximum thickness of the Cherry Point Silt is unknown and is estimated at approximately 300 feet thick.

The hydrogeology of the Ferndale Refinery site has been characterized through the installation of numerous soil borings and monitoring wells, as well as the completion of bail tests, laboratory permeability tests, and grain size distribution tests.

GEOLOGY: The Ferndale Refinery area is underlain by a regionally continuous stratigraphic unit known as glaciomarine drift, or diamicton (Easterbrook, 1976). The diamicton unit consists of moderately sorted to unsorted diamicton with lenses and discontinuous beds of moderately to well-sorted gravel, sand, silt, and clay. Bedding is massive to poorly stratified. Color is blue-gray to olive-gray depending on oxidation state. Thickness ranges to as much as 90 meters (WSDNR, 2000). Permeability is low and infiltration of precipitation is very poor.

Geotechnical soil samples collected in the diamicton revealed a fining-downward sequence in the stratigraphic column. The average percentage of sand decreases with depth and the average percentage of silt and clay increases with depth. The bulk density of the samples increases with depth. The average vertical hydraulic conductivity decreases with depth from 1.26×10^{-07} centimeters per second (cm/s) in the upper weathered portion of the diamicton to 7.86×10^{-08} cm/s in the deeper portion of the unit. Horizontal hydraulic conductivity in the saturated deeper portion of the unit is 1.70×10^{-06} cm/s.

The fining-downward grain-size distribution, the increasing bulk density with depth, and the decreasing vertical conductivity with depth all support the conclusion that the diamicton acts as a sufficient aquitard to inhibit the downward migration of precipitation and accidentally spilled petroleum products (BP, 1992).

The uppermost zone of saturation consists of saturated portions of native deposits and fill material located above the diamicton. The diamicton at the site is known to be firm and dry and consists of brown silty clay with minor gravel. The unit acts as an aquitard impeding the vertical migration of contaminants and occurs at approximately 6-10 feet below grade at the site. Soil samples collected at the AOC-2 excavation site are located above the diamicton.

HYDROGEOLOGY: Groundwater contained in shallow surficial deposits is perched atop the relatively impermeable silt and clay of the diamicton (Units III and IV). The unconfined perched water is contained in the fill material, Unit IIA soil layer, and Unit IIB sand layer. Water percolates downward and becomes perched above Unit III because of the textural disconformity between the diamicton and the overlying surficial units. The flow direction of the perched water atop the diamicton follows the structural and elevation contours of the upper surface of the diamicton. Assuming the surface of the diamicton is similar to topographic surface elevation contours in the vicinity of the refinery property, perched groundwater would generally be expected to flow towards the west-southwest and the Strait of Georgia.

The perched water above the diamicton is not classified as potable per the definition in WAC 173-340-720 (2). The perched water at the site does not serve as a current source of drinking water and is not a potential future source of drinking water because the GW is likely present in insufficient quantity to yield greater than 0.5 gallons per minute on a sustainable basis.

The regional water table occurs within the Cherry Point Silt (Unit VI) at approximately 160 feet below ground surface. GW flow in the Cherry Point Silt is toward the west-northwest, where GW discharges into the Strait of Georgia. The Cherry Point aquifer is not used as a water supply downgradient of the Ferndale Refinery as the flow direction is to the west-northwest toward the Strait of Georgia.

2. DEVIATIONS FROM THE INVESTIGATION AND RESPONSE PLAN

Agreed Order DE 16297 Section VII.C.1 requires Phillips 66 to report any deviations from the IRP and provide an explanation for the need to deviate.

Any deviations from scheduled OWS line inspections that were unable to be completed during the designated inspection year are summarized on Table B-1. All sewer inspection deviations that still need to be inspected are shown on Figure A-2. AO sewer phase Inspections are shown on Figure A-3.

- As described in the 2021 Annual Progress report, additional deviations from the IRP included:
    - Phase I OWS inspections occurred prior to the IRP approval. However, the inspections were conducted in accordance with the IRP requirements.
    - Phase I site characterization was initiated prior to IRP approval and did not include analysis of zinc or chlorinated volatile organic compounds (VOCs) in the soil samples. For all areas where there was no contamination, and despite the absence of VOC data, and based on multiple lines of evidence, no release to the environment was found.
- As described in the 2023 Annual Progress report, additional OWS trunk lines were added to the scope of the Phase II inspection scope and included:
    - Four additional manholes (MH) identified as 1K-RE, 2K-FS, 4K-RE, and 4K-FS.
    - An additional 484 ft of trunk line was inspected. The four segments have been labeled 2-23 (from MH 1K-RE to MH 2K-FS), 2-24 (from MH 2K-FS to MH 4K-RE), 2-25 (from MH 4K-RE to MH 4K-FS), and 2-26 (from MH 5K-RE to 4K-FS).
- As described in the 2024 Annual Progress report, the Phase II and Phase III sewer line inspections revealed five additional MHs not shown and a sewer line segment incorrectly displayed on facility drawings:
    - During attempts to inspect segment 2-22, two MHs were discovered along the segment and have been identified as MH 2T-A and MH 2T-B.
    - Segment 2-22 is now divided into two additional segments. 2-22 is now from MH 2T-FS to MH 2T-A. Segment 2-22A is from MH 2T-A to MH 2T-B. Segment 2-22B is from MH 2T-B to MH 5–T.
    - Two MHs were discovered along segment 3-2; one MH is located 341 ft east of MH 12-4 and is identified as FCC Junction Box. The second MH is located 558 ft east of the FCC Junction Box and is identified as MH 10-4.
    - Following discovery of the additional MHs, segment 3-2 accordingly was relabeled into two segments, 3-2A and 3-2B. 3-2A is from MH 12-4 and the FCC Junction Box and is 341

ft in length. Segment 3-2B is from the FCC Junction Box and MH 10-4 and is 558 ft in length.

- Segment 3-2B was incorrectly shown on facility drawings and does not connect to MH 9-4.
- During attempts to inspect segment 3-10, another MH was discovered; the unnamed MH has been given the identity MH 9-5A.
- Following discovery of the additional MH (MH 9-5A) OWS line segment 3-10 was divided into two named segments, 3-10 and 3-10A. Segment 3-10 is located between MH 4-5 and MH 9-5A. Segment 3-10A is located between MH 9-5A and MH 9-5.
- Inspection of the Phase III OWS piping west of MH 4-5 was not performed in 2025 because historic OWS plans were not consistent with field conditions, and additional effort is required to complete inspection of this OWS segment. This segment will be addressed during the pending Phase IV OWS inspection work activities.

3. OILY WATER SEWER INSPECTIONS

The AO Section VII.C.2 requires P66 to report on "the findings of the OWS assessment including an assessment of the general condition of the OWS system components, the location and description of any problems identified and their cause, and a description of actions taken or planned to repair or maintain system components based on the results of the testing."

3.1 PHASE I AND PHASE II OILY WATER SEWER INSPECTIONS

The Phase I OWS inspections were completed in 2021 and were documented by Whatcom Environmental Services (WES) in the 2021 Annual Progress Report. Six locations were identified during the Phase I inspections with OWS defects that had a rating of ER=4 (WES, 2022).

The Phase II OWS trunkline inspections were completed in 2023 and that work was documented in the 2023 Annual Progress Report. Eleven OWS locations were identified with ER=4 defects from the Phase II inspections (ALL4 LLC, 2024).

3.2 PHASE III OILY WATER SEWER INSPECTIONS

In 2024, inspection of all accessible sections of the Phase III OWS trunkline was completed. The inspections were conducted by Industrial Inspection Analysis (formerly Atlas Inspections) using closed circuit television (CCTV) equipment. All inspection videos were provided to TRC Environmental Corporation (TRC) for assessment using the National Association of Sewer Service Companies (NASSCO) rating system. There were no other initial OWS inspections performed in 2025, however additional inspection performed during rehabilitation of Phase III OWS locations with ER=4 defects are described in Section 3.3.

TRC assigned each identified OWS defect an ER based on the potential for a release. When assigning an ER value to a sewer defect, in addition to the NASSCO structural component, piping construction material, process fluid constituency, proximity to groundwater, and other factors (such as defect position) for release are also evaluated. In summary, the ER value given for an observed defect includes input from the NASSCO structural evaluation plus environmental considerations, and the ER value may be greater or less than the NASSCO rating, depending on potential for release. The ER system is based on a 1 - 5 scale. The scale indicates the level of prioritization for follow-up actions. For example, an ER=5 would indicate a significant structural defect with a confirmed release, whereas an ER=1 would be a minor structural

defect with no potential for a release. ER=4 and ER=5 ratings require further site investigation due to the severity of the defect where a high potential or a confirmed release is identified.

Each OWS defect was reviewed and assessed for a potential cause and an estimated repair timeline. A summary of all Phase III OWS – related pipe video inspection observations and details of segment defects discovered during the 2024 inspections is provided in Table B-2 of TRC's *Final Phase III Oily Water Sewer Inspection and Repair Recommendations Report,* March 11, 2025. This report was included in Appendix C of the 2024 SWMU-14 Annual Progress Report. Additional inspections of the remaining Phase III segments described in Section 2 were not performed in 2025.

3.3 PHASE III OILY WATER SEWER REPAIRS

The 2024 Phase III OWS inspections identified ER=4 defects that were separated into nine Repair Areas. In 2025, repairs to the ER=4 and adjacent ER=3 defects were initiated. Rehabilitation of Repair Areas 1 through 9 were performed using pipe relining by sleeving the inner pipe with the Omega Liner. A summary of the ER=4 defects and their sewer repair status are included in Table B-4. A copy of the 2025 Motivo *Remote Visual Inspection and Rehabilitation Report* is attached in Appendix C.

4. RELEASES AND SITE CHARACTERIZATION

The AO Section VII.C.3 requires P66 to report on "information on the nature and extent of releases identified including the characteristics of the release, sampling results, how soil and groundwater quality was evaluated, and information on the extent of soil and groundwater impacts."

4.1 PHASE I AND PHASE II OILY WATER SEWER ENVIRONMENTAL ASSESSMENTS

As described in the 2021 Annual Progress Report, two soil samples collected during the Phase I OWS Investigation contained petroleum concentrations that exceeded the target cleanup levels, this area was identified as AOC-1 (WES, 2022). A notification was provided on February 9, 2022, to Ecology informing the agency of the confirmed release. The 2022 Annual Progress Report reported further site characterization and remediation that was completed at the AOC-1 site (WES, 2023). The 2023 Annual Progress Report described the fourth (final) quarter of GW monitoring completed at AOC-1 providing four consecutive quarters of results that meet Model Toxics Control Act (MTCA) cleanup levels. Further assessment or corrective actions are not required or recommended for AOC-1 (ALL4 LLC, 2024).

The 2023 Annual Progress Report detailed the Phase II OWS inspections that were conducted (ALL4 LLC, 2024). The Phase II OWS inspections identified eleven locations with ER=4 defects, requiring site characterization to evaluate if a release to soil had occurred. Initial site characterization was completed at nine of the eleven ER=4 soil boring locations; the remaining two ER=4 locations near MH 11K-RE could not be completed due to access restrictions at that time. One Phase II soil sample (B-2-23) contained benzene concentrations that slightly exceeded target cleanup levels for protection to groundwater; this area was identified as AOC-2. The location of AOC-2 is shown on Figure A-2. A Sampling and Analysis Plan (SAP) was prepared in May 2024 to investigate soil and groundwater downgradient of AOC-2 (by installing and to install the remaining two ER=4 location soil borings near MH 11K-RE (ALL4 LLC, 2024).

In 2025, P66 asked TRC to complete the Phase II soil sampling at ER=4 soil boring locations (BH-2-6 and BH-2-7) near MH-11K-RE, and to install a monitoring well (MW-OWS-4) to investigate groundwater downgradient of AOC-2. TRC directed the soil boring and monitoring well installations on August 19, 2025 in accordance with the SAP and reported the results of soil and groundwater sample analytical results in a report dated November 18, 2025. A copy of the Phase II Soil and Groundwater Assessment report is presented in Appendix D of this report.

4.2 PHASE III OILY WATER SEWER ENVIRONMENTAL ASSESSMENT

At the request of P66, TRC prepared a Phase III OWS SAP for evaluating soil conditions adjacent to the Repair Areas identified during the 2025 Phase III OWS inspections and rehabilitation activities. These boring locations are shown on Figures A-3 and A-4. Eleven soil boring locations were chosen adjacent to Phase III OWS repair areas. Two soil samples were collected from each boring at different depths using either a direct-push drill rig or a hand auger if the boring was inaccessible to mechanized equipment. The borings were installed as close as possible to each defect location to determine if a release from the OWS system to the environment occurred. Soil sample depths were chosen based on the surveyed elevations of the OWS line segments. Soil samples were collected at one-foot below the OWS pipe elevation in each location. A second soil sample was also collected five feet below the first sample and placed on hold at the laboratory in case the first sample analytical results required additional vertical delineation.

A second groundwater monitoring event for Phase II monitoring well MW-OWS-4 was also performed in conjunction with the Phase III OWS soil assessment activities.

4.3 PHASE III OILY WATER SEWER ENVIRONMENTAL ASSESSMENT RESULTS

Except for boring B-3-25, the results from this investigation did not identify obvious field evidence of COC impacts to soil in boring locations explored to a maximum total depth of 15 feet bgs (Figures 3A and 3B). Soil samples B-1-25:7, B-2-25:7.2, B-4-25:7:14, B-5-25:6.3, B-6-25:7.8, B-7-25:7.8, B-8-25:7, B-9-25:7 and B-10-25:7 contained concentrations of arsenic that exceed the MTCA Method C Soil CUL for Direct Contact (Cancer). However, the exposure scenario for this CUL assumes regular ingestion of a dose of 50 milligrams (mg) of soil containing arsenic at a concentration exceeding the CUL and an exposure duration of 20 years. This is not a reasonably likely exposure pathway at the refinery, because the area where these samples were collected is at depth, covered by pavement or other surfacing, and is within the refinery facility with multiple structures, storage tanks, and piping. It is also within a secure area where all work activities require safety plans and protocols and are controlled by refinery operations. The detected arsenic concentrations also fall within the range of background concentrations of arsenic in the Puget Sound region and are less than the MTCA Method A Industrial CUL for arsenic in soil.

Field evidence of COC impacts was noted in boring B-3-25, which due to access limitations was advanced with a stainless-steel hand auger. While advancing this boring to collect the soil sample just below the

OWS depth, wet soil was encountered from 5 to 7.5 feet bgs that appeared to have an oily sheen and a petroleum odor. Soil sample B-3-25:7.5 from this location exceeded MTCA Method A Industrial CULs for benzene, naphthalene, combined VPH fractions (compared to total GRO), and combined EPH fractions (compared to total DRO+RRO). The deeper soil sample collected at 11.5 feet bgs in B-3-25 encountered denser and drier soils. Analysis of sample B-3-25:11.5 did not detect any COC concentrations that exceed applicable MTCA Method A Industrial or Method C CULs. This sample provides vertical delineation of the COC impacts in soil detected at 7.5 feet bgs in boring B-3-25. A release notification was sent to Ecology on November 29, 2025.

4.4 PHASE II GROUNDWATER MONITORING RESULTS

The November 2025 quarterly groundwater sample from monitoring well MW-OWS-4 contained detections of several VOC compounds, several SVOC compounds, and GRO that were all less than the MTCA Method A or Method C groundwater CULs. The concentration of DRO+RRO in groundwater (2,580 µg/L) exceeds the MTCA Method A Groundwater CUL of 500 µg/L. The concentration of SVOC 1−methylnapthalene (56.6 µg/L) exceeds the Method C Groundwater CUL (Cancer) of 8.6 µg/L.

Compared to the initial MW-OWS-4 groundwater sampling event in August 2025, the concentrations of GRO, DRO+RRO, VOCs, and most of the detected SVOCs increased in November 2025. However, none of the inorganic constituents detected during the August 2025 sampling event were detected in the November sampling event. This may be due to decreased turbidity in the groundwater since the initial sampling event. The specific VOC and SVOC analytes detected in groundwater have remained relatively consistent across both sampling events. The groundwater elevation difference between the two sampling events was only 0.05 foot and is unlikely to be related to the increased analyte concentrations. TRC recommends continued quarterly sampling of monitoring well MW-OWS-4 for two additional events. The additional monitoring is recommended to identify any trends in COC concentrations.

5. CORRECTIVE ACTIONS OR INTERIM MEASURES

In accordance with VII.C.4 of the AO P66 is required to provide a "description of the corrective actions or interim measures taken or planned to remediate soil or groundwater, including the volume and disposition of contaminated soil removed, and measures taken to monitor or remediate groundwater."

5.1 PHASE III OWS SOIL AND GROUNDWATER DELINEATION

As described in TRC's Phase III Soil and Groundwater Investigation Report, While advancing Boring B-3-25 to collect a soil sample just below the OWS depth, wet soil was encountered from approximately 5 to 7.5 feet bgs that appeared to have an oily sheen and a petroleum odor. Soil sample B-3-25:7.5 from this location exceeded MTCA Method A Industrial CULs for benzene, naphthalene, combined VPH fractions (compared to total GRO), and combined EPH fractions (compared to total DRO+RRO). The deeper soil sample collected at 11.5 feet bgs in B-3-25 encountered denser and drier soils and laboratory analysis of sample B-3-25:11.5 did not detect any COC concentrations that exceed applicable MTCA Method A Industrial or Method C CULs. Because of the shallower soil impacts detected in this boring location and the sheen detected on what appears to be perched water near the OWS piping segment, TRC recommends additional soil borings be installed to delineate the extent of impacted soil and to determine if the shallow perched water table is limited to near the OWS pipe segment. If groundwater is continuous, one of the borings should be completed as a monitoring well and sampled in accordance with the other OWS monitoring well installations and laboratory parameters.

The second sampling event of Phase II OWS monitoring well MW-OWS-4 was performed on November 6, 2025. Groundwater analytical results indicated the DRO concentration in groundwater (2,330 µg/L) had increased in comparison to the initial sampling event in August 2025 and continues to exceed the MTCA Method A Groundwater CUL of 500 µg/L. The concentration of SVOC 1-methylnapthalene (56.6 µg/L) also exceeded the Method C Groundwater CUL (Cancer) of 8.6 µg/L.

Groundwater monitoring well MW-OWS-4 should be resampled two more quarters to determine if the observed groundwater concentration trends for COCs are stable, decreasing, or increasing, downgradient of AOC-2.

6. INACCESSIBLE AREAS

In accordance with VII.C.5 of the AO, P66 is required to report areas that were determined to be inaccessible and where contaminated soil or groundwater was left in place.

There are currently no areas that are part of an AOC that are considered inaccessible.

7. RELEASE MIGRATION AND MONITORING

In accordance with VII.C.7 of the AO P66 is required to provide "measures to assess and prevent the risk of migration of contamination until a final remedy is implemented, including the elements of a groundwater monitoring program (number and location of wells, parameters monitored, frequency of monitoring).

As described in Section 4 of this report, AOC-1 remediation is considered complete, and AOC-2 site characterization is ongoing with monitoring of well MW-OWS-4 to determine what additional action may be required.

Soil sample B-3-25 impacts and the apparent perched water zone with a sheen identified during the Phase III OWS exceeded MTCA Method A Industrial CULs for benzene, naphthalene, combined VPH fractions (compared to total GRO), and combined EPH fractions (compared to total DRO+RRO). This sample location will be investigated with delineation soil borings and installation of a groundwater monitoring well as close as practicable to the sample B-3-25 location.

8. HISTORICAL INACCESSIBLE AREA REVIEW

In accordance with VII.C.8 of the AO P66 is required to provide "A review of areas that were previously determined to be inaccessible to determine if they have become accessible in the last year, together with proposed timing and approach for remediation of the area(s). Phillips 66 shall submit a work plan for Ecology review and approval prior to initiating remedial action for a previously inaccessible area."

As previously stated in section 7 of this report, P66 does not have historically inaccessible contamination associated with identified releases from the OWS.

9. CONCLUSIONS

In 2025, Phillips 66 completed rehabilitation of the Phase III Oily Water Sewer (OWS) Repair Areas, addressing all ER=4 defects identified during the 2024 inspection cycle. No new OWS inspections were conducted in 2025, consistent with the schedule established in the Investigation and Response Plan. Inspection activities will resume in subsequent years, including completion of the remaining Phase III segments and the planned Phase IV work.

Phase III OWS soil and groundwater delineation activities are ongoing. Initial field observations and analytical results identified one area requiring additional evaluation, and a strategy is being formulated to complete the necessary follow-up soil borings and groundwater assessment. Groundwater monitoring at MW-OWS-4 will continue on a quarterly basis to track concentration trends.

10. REFERENCES

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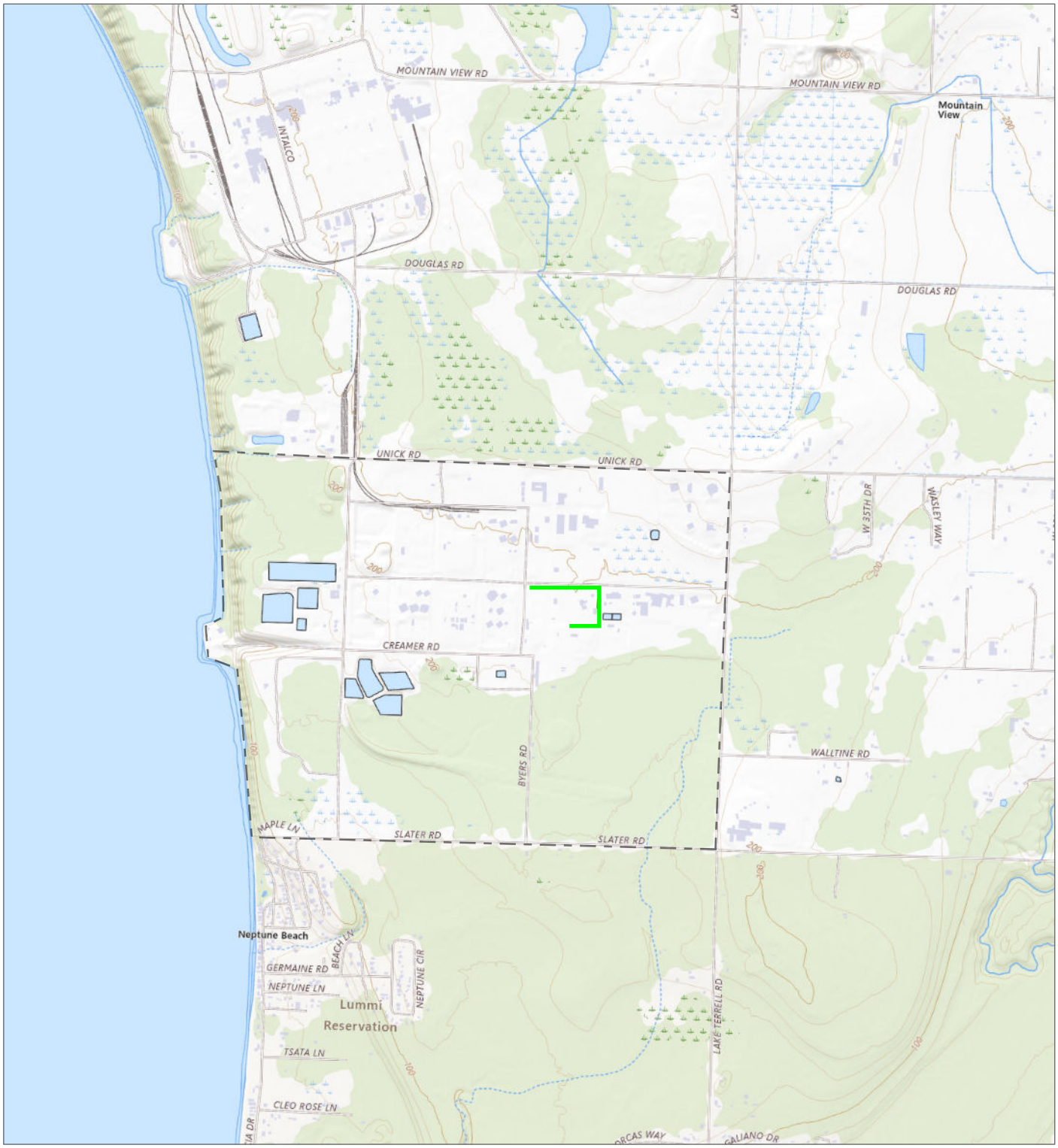
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APPENDIX A-
FIGURES



PHASE III OWS PROJECT AREA

APPOXIMATE PROPERTY BOUNDARY

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'



BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

PROJECT: **PHILLIPS 66 FERNDALE REFINERY**
3901 UNICK ROAD
FERNDALE, WASHINGTON

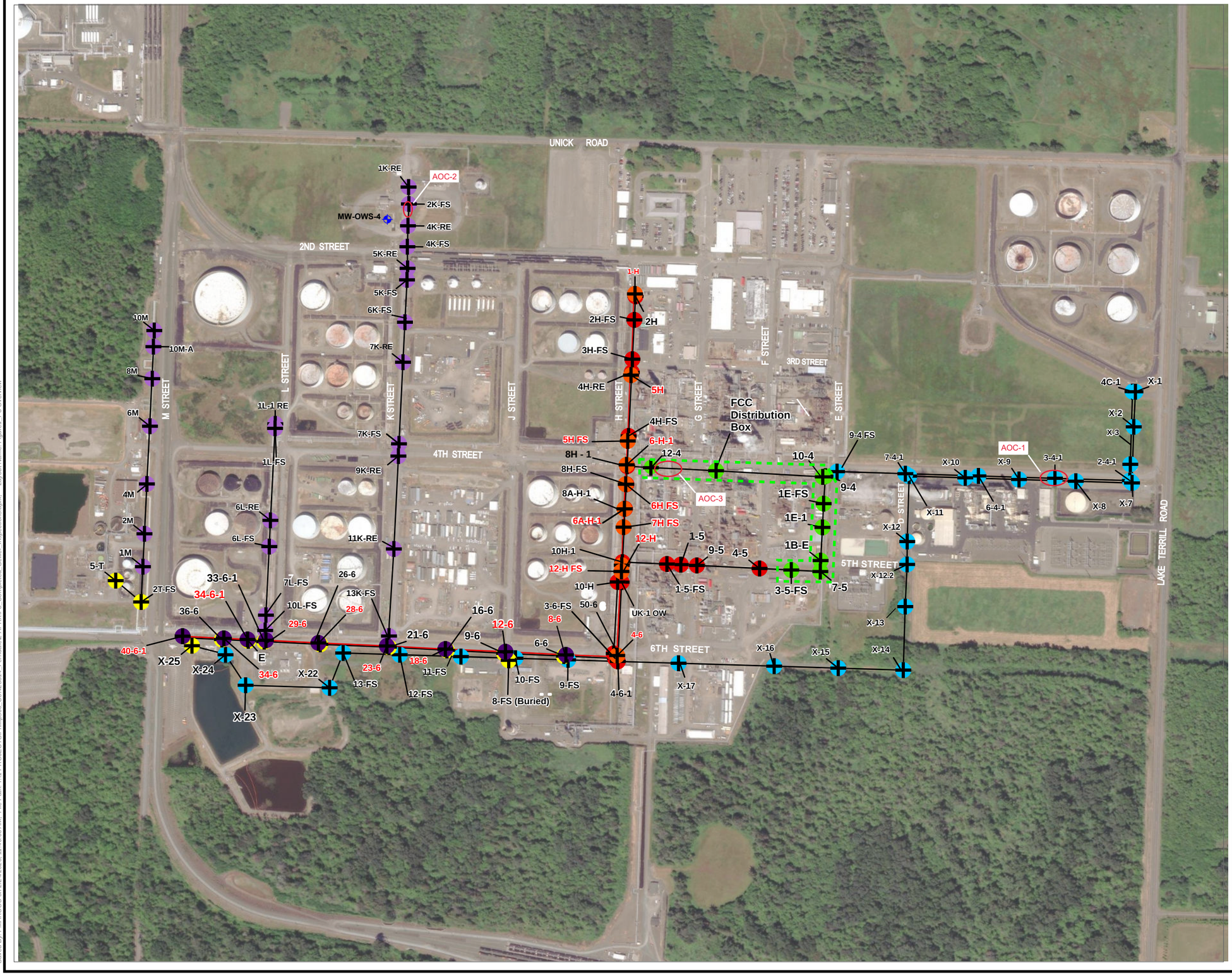
TITLE: **GENERAL VICINITY MAP**
2025 OWS ANNUAL PROGRESS REPORT

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	E. LARSEN		
APPROVED BY:	J. BERNTHAL		**FIGURE A-1**
DATE:	REVISED DECEMBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PHASEIII_OWS_2025 ANNUAL PROGRESS RPT

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE WASHINGTON SOUTH FIPS 4602 FT US; MAP ROTATION: 0
-- SAVED BY: RCOLLINS ON 6/9/2025, 10:13:40 AM; FILE PATH: T:\1-PROJECTS\PHILLIPS66_COI\670297_FERNDALE\2-APRX\P66_PHASEIII_SAP.APRX; -- LAYOUT NAME: FIGURE 1 GVM



PHENOLIC SEWER MAJOR TRUNK LINE

OILY WATER SEWER MAJOR TRUNK LINE

5H FS PHENOLIC SEWER MANHOLE

1E-FS OILY WATER SEWER MANHOLE

GROUNDWATER MONITORING WELL

OILY AND PHENOLIC SEWER LINE MANHOLES AND INSPECTION PHASES:

- PHASE I
- PHASE II
- PHASE III
- PHASE IV A
- PHASE IV B
- PHASE IV C
- PHASE IV

PHASE III OWS SOIL INVESTIGATION AREA

AOC-1 AREA OF CONCERN

N

1:6,000

1" = 500'

0 250 500 FEET

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER. DATA SOURCES: TRC

PROJECT: **PHILLIPS 66 FERNDALE REFINERY**
3901 UNICK ROAD
FERNDALE, WASHINGTON

TITLE: **OILY WATER SEWER INVESTIGATION**
2025 OWS ANNUAL PROGRESS REPORT

DRAWN BY:	P. MARCOU	PROJ. NO.:	728864.0000.0000
CHECKED BY:	E. LARSEN		
APPROVED BY:	J. BERNNTHAL		**FIGURE A-2**
DATE:	REVISED MARCH 2026		

TRC
13810 SE EASTGATE WAY
SUITE #440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_2025_OWS_ANNUAL PROGRESS REPORT

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
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POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

CONTINUOUS DEFECTS

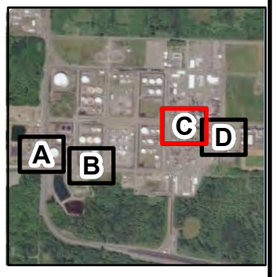
- ENVIRONMENTAL RATING = 3

OILY AND PHENOLIC SEWER MANHOLES

- PHASE III
- PHASE IVA
- PHASE IVB
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- PHENOLIC SEWER MAJOR TRUNK LINE
- OILY WATER SEWER MAJOR TRUNK LINE
- PHASE III OWS SOIL BORING / SAMPLE LOCATION
- B-5-25

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC

PHASE III OWS INSPECTION LOCATION



N

1:845
1" = 70'

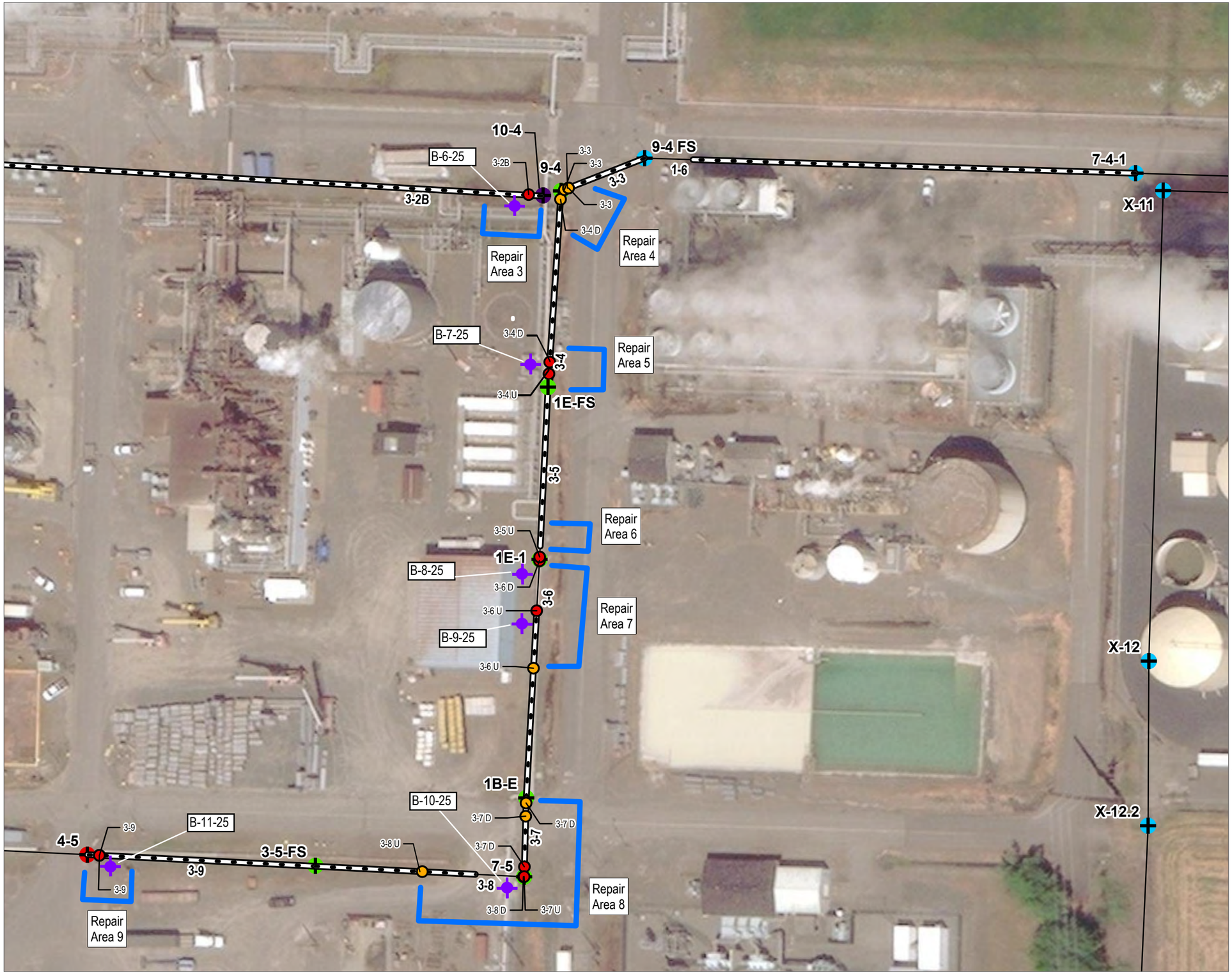
0 35 70 FEET

PROJECT:	PHILLIPS 66 FERNDALE REFINERY 3901 UNICK ROAD FERNDALE, WASHINGTON
TITLE:	PHASE III SEWER INSPECTION REPAIR AREAS SOIL AND GROUNDWATER INVESTIGATION 2025 OWS ANNUAL PROGRESS REPORT
DRAWN BY: R. COLLINS	PROJ. NO.: 728864.0000.0000
CHECKED BY: D. MILLER	FIGURE A-3A
APPROVED BY: E. LARSEN	
DATE: MARCH 2026	

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: 2025_OWS_ANNUAL_PROGRESS_REPORT.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
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POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

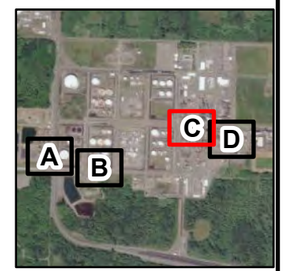
OILY AND PHENOLIC SEWER MANHOLES

- PHASE I
- PHASE III
- PHASE IVA
- PHASE IVD
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- OILY WATER SEWER MAJOR TRUNK LINE
- PHASE III OWS SOIL BORING / SAMPLE LOCATION

B-10-25

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC

PHASE III OWS INSPECTION LOCATION



N

1:845
1" = 70'

0 35 70 FEET

PROJECT:	PHILLIPS 66 FERNDALE REFINERY 3901 UNICK ROAD FERNDALE, WASHINGTON
TITLE:	PHASE III SEWER INSPECTION REPAIR AREAS SOIL AND GROUNDWATER INVESTIGATION 2025 OWS ANNUAL PROGRESS REPORT
DRAWN BY:	R. COLLINS
CHECKED BY:	D.MILLER
APPROVED BY:	E. LARSEN
DATE:	MARCH 2026
PROJ. NO.:	728864.0000.0000
	FIGURE A-3B

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: 2025_OWS_ANNUAL_PROGRESS_REPORT.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
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APPENDIX B-
TABLES

Table B-1
Sewer Inspection Deviations
Phillips 66 Ferndale Refinery

Segment ID	Manhole ID (start : finish)	Inspection Phase	Rescheduled Inspection Phase	Inspection Status	Location	Length of Segement (feet) [a]	Reason for Deviation
1-28	DD:CC	Phase I	Phase IV	Incomplete	Entire segment and MHs	198	High lower explosive limits (LELs) created unsafe work conditions.
NA	4-6-1	Phase IV	Phase I	Complete	Manhole	NA	MH was originally scheduled to be inspected during Phase IV but was inspected during Phase I.
2-8	13K-FS:21-6	Phase II	Phase III	Complete	Entire segment and MHs	47	Operational and safety concerns. Inspected was completed in 2024.
2-10	1L-FS:6L-RE	Phase II	Phase IV	Incomplete	236.9 ft north of MH 6L-RE	32	Pipe diameter reduction.
2-12	6L-FS:7L-FS	Phase II	NA [b]	--	4.2 ft south of MH 6L-RE	145	Inspection from MH 6L-RE to MH 7L-FS was unable to be inspected from 4.2 ft south of MH 6L-RE due to an impassable bend in the pipe. Inspections starting from MH 7L-FS and going to MH 6L-FS was abandoned due to a hole in the pipe 209.7 ft north of MH 7L-FS.
2-14	10L-FS:33-6-1	Phase II	Phase III	Complete	Entire segment	52	Operational and safety concerns. Inspected was completed in 2024.
2-21	1M:2T-FS	Phase II	Phase III	Complete	Entire segment	114	Operational and safety concerns. Inspected was completed in 2024.
2-22	2T-FS:2T-A	Phase II	Phase IV	Incomplete	Entire segment and MHs	60	Full unit shut down is required to access sewer lines.
NA	2T-A	Phase II	Phase IV	Incomplete	Manhole	NA	MH was not included in the AO, discovered during attempt to inspect segement 2-22.
2-22A	2T-A:2T-B	Phase II	Phase IV	Incomplete	Entire segment and MHs	56	Full unit shut down is required to access sewer lines.
NA	2T-B	Phase II	Phase IV	Incomplete	Manhole	NA	MH was not included in the AO, discovered during attempt to inspect segement 2-22.
2-22B	2T-B:5-T	Phase II	Phase IV	Incomplete	Entire segment and MHs	54	Full unit shut down is required to access sewer lines.
2-23	1K-RE:2K-FS	NA	Phase II	Complete	Entire segment	98	Segment and MH not included in Agreed Order.
2-24	2K-FS:4K-RE	NA	Phase II	Complete	Entire segment	165	Segment and MH not included in Agreed Order.
2-25	4K-RE:4K-FS	NA	Phase II	Complete	Entire segment	111	Segment and MH not included in Agreed Order.
2-26	5K-RE:4K-FS	NA	Phase II	Complete	Entire segment	118	Segment and MH not included in Agreed Order.
NA	FCC Distribution Box	Phase III	Phase III	Complete	Manhole	NA	MH was not included in the AO, discovered during Phase III inspections. Inspection was completed in 2024.
NA	10-4	Phase III	Phase III	Complete	Manhole	NA	MH was not included in the AO, discovered during Phase III inspections. Inspection was completed in 2024.
3-5	1E-FS:1E-1	Phase III	Phase IV	Incomplete	114.7 ft south of MH 1E-FS	10	Segment inspection could not be completed due impassable water level
3-6	1E-1:1B-E	Phase III	Phase IV	Incomplete	136.2 ft north of MH 1B-E	38.3	Pipe is broken and impassable.
3-8	7-5:3-5-FS	Phase III	Phase IV	Incomplete	116.4 ft east of MH 3-5-FS	36	Change in diameter of pipe. Impassable.
3-10	4-5:9-5A	Phase III	Phase IV	Incomplete	Entire segment and MHs	150	Mass flow through this section prevented accurate inspection.
NA	9-5A	Phase III	Phase IV	Incomplete	Manhole	NA	Discovered MH. Mass flow through section prevented accurate inspection.
3-10A	9-5A:9-5	Phase III	Phase IV	Incomplete	Entire segment and MHs	178	Segment relabeled due to new MH. Mass flow through section prevented accurate inspection.
3-11	9-5:1-5	Phase III	Phase IV	Incomplete	Entire segment and MHs	86	Mass flow through this section prevented accurate inspection.
3-12	1-5:1-5-FS	Phase III	Phase IV	Incomplete	Entire segment and MHs	72	Mass flow through this section prevented accurate inspection.
3-13	1-5-FS:10H-1	Phase III	Phase IV	Incomplete	Entire segment and MH1-5-FS	231	Mass flow through this section prevented accurate inspection.

[a] Distance is an apporximation and is measured using Google Earth and ArcGIS data system.

[b] Sewer line has been repaired and inspection of pipe is not possible.

Table B-2

Sewer Line Defects Identified in 2024

Phillips 66 Ferndale Refinery

Segment ID	Manhole ID	Distance	Orientation on Pipe	Environmental Rating	Description of Defect/ NASSCO Rating [(a)]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
	(start : finish)	(feet)	(clock)	(1-5)					
1-6	7-4-1:9-4FS	0.4	6	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	0.4	10-1	1	Crack Multiple	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	2.7	1-4	2	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	5.8	11-4	2	Crack Multiple	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	8.9	8-10	2	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	12	12-1	1	Crack Circumferential	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	12	12	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	15.6	1	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	18.7	5	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	18.7	2	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	27.8	2-12	2	Fracture Multiple	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	37.1	6	2	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	37.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	43.3	11-12	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	46.2	10-12	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	46.2	2	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	52.4	12	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	55.5	7-8	2	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	61.6	4	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	61.6	8	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	64.6	9-11	1	Crack Multiple	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	70.7	1	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	73.8	4	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	73.8	1-2	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	73.8	5	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	76.8	11-1	1	Crack Multiple	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	76.8	9	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	86	2	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	89	2	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	95.3	9	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	104.3	3	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	110.4	12	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	113.6	9-10	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	113.6	8-9	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	113.6	8	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	116.6	5	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	116.6	7	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	119.6	6	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	122.7	4	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	125.7	5	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	125.7	3	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	131.8	1-3	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	134.9	3-4	2	Fracture Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	137.9	11-12	1	Crack Multiple	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	144.1	10-12	2	Crack Multiple	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
1-6	7-4-1:9-4FS	147.1	12-3	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	150.3	4	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	153.3	9	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	153.3	12-1	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	165.5	NA	2	Joint Offset Medium	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	168.8	5-7	2	Fracture Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	171.9	4-5	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	184.1	12	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	184.1	10	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	190.3	12-1	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	193.4	10-11	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	193.4	7	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	196.5	12	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	199.5	4	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	202.6	8-9	1	Crack Circumferential	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	202.6	7	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	205.6	12-1	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	208.8	4	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	211.9	3-4	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	211.9	8	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	211.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	215	3	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	221.1	7-9	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	224.2	4-5	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	224.2	9	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	233.3	4	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	239.3	10	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	254.6	6-7	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	260.6	3	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	263.7	7-8	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	269.8	7-8	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	269.8	6	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	276.2	1	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	282.2	8-10	1	Crack Multiple	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	294.5	6	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	297.5	5-6	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	300.7	5-9	1	Crack Spiral	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	303.8	4	1	Crack Longitudinal	To be determined	None	NA	NA
1-6	7-4-1:9-4FS	309.8	3-9	2	Fracture Spiral	To be determined	None	NA	NA
2-8	13K-FS:21-6	0.5	11-12	1	Crack Spiral	To be determined	None	NA	NA
2-8	13K-FS:21-6	0.5	5	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	9.6	4	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	12.8	10	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	15.5	9	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	15.5	1	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	18.7	9-10	1	Crack Multiple	To be determined	None	NA	NA
2-8	13K-FS:21-6	18.7	4	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
2-8	13K-FS:21-6	21.4	9	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	21.4	3	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	21.4	6	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	24.9	12	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	24.9	2	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	24.9	5	2	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	24.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	27.4	10-2	2	Crack Spiral	To be determined	None	NA	NA
2-8	13K-FS:21-6	27.4	2	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	27.4	5	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	30.5	4-6	1	Surface Damage Roughness Increased	To be determined	None	NA	NA
2-8	13K-FS:21-6	31.5	5	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	33.5	9	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	33.6	5	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	33.6	6	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	33.6	7	1	Crack Longitudinal	To be determined	None	NA	NA
2-8	13K-FS:21-6	36.5	11-1	2	Crack Multiple	To be determined	None	NA	NA
2-8	13K-FS:21-6	39.5	4-5	1	Crack Circumferential	To be determined	None	NA	NA
2-8	13K-FS:21-6	39.5	11-12	1	Crack Multiple	To be determined	None	NA	NA
2-8	13K-FS:21-6	43.9	12-3	1	Crack Spiral	To be determined	None	NA	NA
2-14	33-6-1:10L-FS	0.1	12-6	2	Crack Longitudinal Hinge, 3	To be determined	None	NA	NA
2-14	33-6-1:10L-FS	18	12	1	Crack Longitudinal	To be determined	None	NA	NA
2-14	33-6-1:10L-FS	24.2	12	1	Crack Longitudinal	To be determined	None	NA	NA
2-14	33-6-1:10L-FS	27.6	6-8	1	Crack Multiple	To be determined	None	NA	NA
2-14	33-6-1:10L-FS	48.9	8	1	Crack Longitudinal	To be determined	None	NA	NA
2-21	1M:2T-FS	43.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
2-21	1M:2T-FS	54.9	5	1	Crack Longitudinal	To be determined	None	NA	NA
2-21	1M:2T-FS	64.9	2-4	1	Surface Damage Roughness Increased	To be determined	None	NA	NA
2-21	1M:2T-FS	77.5	6	1	Crack Longitudinal	To be determined	None	NA	NA
2-21	1M:2T-FS	82.6	9	1	Crack Longitudinal	To be determined	None	NA	NA
2-21	1M:2T-FS	99	12-12	1	Surface Damage Roughness Increased	To be determined	None	NA	NA
2-21	1M:2T-FS	107.6	7	1	Crack Longitudinal	To be determined	None	NA	NA
2-21	1M:2T-FS	107.6-113.7	3-9	1	Surface Damage Spalling	To be determined	None	NA	NA
3-1	12-4:BH-1	0.3	12-4	2	Crack Multiple	To be determined	None	NA	NA
3-1	12-4:BH-1	0.3	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	5.7	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	10.8	5-7	1	Surface Damage Spalling	To be determined	None	NA	NA
3-1	12-4:BH-1	12.5-77.6	4-6	1	Surface Damage Spalling	To be determined	None	NA	NA
3-1	12-4:BH-1	16.1	6	2	Fracture Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	16.1	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	21.2	2-5	1	Crack Multiple	To be determined	None	NA	NA
3-1	12-4:BH-1	26.4	10-11	1	Crack Multiple	To be determined	None	NA	NA
3-1	12-4:BH-1	28.1	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	31.8	7	2	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	31.8	8	1	Surface Damage Spalling	To be determined	None	NA	NA
3-1	12-4:BH-1	31.8	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	37.2	3	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-1	12-4:BH-1	37.2	7	2	Fracture Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	42.4	6	2	Fracture Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	42.4	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	47.5	6-12	2	Crack Multiple	To be determined	None	NA	NA
3-1	12-4:BH-1	47.5	5	2	Fracture Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	48	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	52.7	1-4	1	Crack Multiple	To be determined	None	NA	NA
3-1	12-4:BH-1	52.7	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	57.7	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	57.7	3-6	2	Fracture Spiral	To be determined	None	NA	NA
3-1	12-4:BH-1	57.7	8-10	1	Crack Circumferential	To be determined	None	NA	NA
3-1	12-4:BH-1	62.7	3-4	1	Crack Multiple	To be determined	None	NA	NA
3-1	12-4:BH-1	62.7	9-11	1	Crack Multiple	To be determined	None	NA	NA
3-1	12-4:BH-1	67.8	2-4	1	Crack Circumferential	To be determined	None	NA	NA
3-1	12-4:BH-1	67.8	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	67.8	5-7	2	Fracture Multiple	To be determined	None	NA	NA
3-1	12-4:BH-1	72.6	8-2	1	Crack Multiple	To be determined	None	NA	NA
3-1	12-4:BH-1	77.7	12	2	Fracture Longitudinal	To be determined	None	NA	NA
3-1	**12-4:BH-1**	**77.7**	**4-9**	**4**	**Broken**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-1	12-4:BH-1	82.6	12-6	3	Fracture Multiple	To be determined	To be Determined	NA	2025
3-1	12-4:BH-1	98	3-6	1	Surface Damage Spalling	To be determined	None	NA	NA
3-1	12-4:BH-1	98	6	2	Fracture Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	103.4	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-1	12-4:BH-1	108.1	4-5	1	Crack Multiple	To be determined	None	NA	NA
3-1	**12-4:BH-1**	**113.2**	**NA**	**4**	**Joint Offset Large**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-2A	12-4:FCC Distribution Box	0	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	3.5	10-12	2	Fracture Circumferential	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	3.5	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	3.5	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	3.5	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	5.4	3-5	1	Crack Circumferential	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	5.4	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	10.5	5	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	10.5	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	10.5	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	10.5	6-8	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	11.5	8	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	12.2	6	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	14	5	1	Surface Damage Wall Missing	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	15.9	8	2	Surface Damage Wall Missing	To be determined	None	NA	NA
3-2A	**12-4:FCC Distribution Box**	**15.9**	**6**	**4**	**Broken Void Visible**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-2A	12-4:FCC Distribution Box	15.9	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	15.9	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	15.9	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	16.4	6	1	Surface Damage Wall Missing	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	17.5	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	19	5	1	Surface Damage Wall Missing	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-2A	12-4:FCC Distribution Box	20.9	4	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	20.9	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	20.9	6-7	3	Fracture Multiple	To be determined	To be Determined	NA	2025
3-2A	12-4:FCC Distribution Box	20.9	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	25.9	6-10	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	29	5-6	1	Surface Damage Spalling	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	30.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	30.9	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	30.9	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	30.9	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	30.9	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	31.9	7	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	36.4	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	41.3	3-10	2	Fracture Circumferential	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	41.3	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	46.4	5	1	Surface Damage Spalling	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	46.5	6-7	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	46.5	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	51.7	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	51.7	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	56.5	12-12	3	Fracture Multiple	To be determined	To be Determined	NA	2025
3-2A	12-4:FCC Distribution Box	57.6	6	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	**12-4:FCC Distribution Box**	**61.1**	**6**	**4**	**Broken Soil Visible**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-2A	12-4:FCC Distribution Box	61.1	12	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	63.5	3-5	3	Fracture Circumferential	To be determined	To be Determined	NA	2025
3-2A	12-4:FCC Distribution Box	65.7	3	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	65.7	8-9	2	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	65.7	11-1	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	71.5	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	71.5	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	71.5	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	76.5	9-11	1	Crack Spiral	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	76.5	3-4	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	79.5	4	3	Surface Damage Wall Missing	To be determined	To be Determined	NA	2025
3-2A	12-4:FCC Distribution Box	81.6	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	86.4	6	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	86.4	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	91.5	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	91.5	7-9	2	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	97.3	9-4	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	102.1	7	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	102.1	3-5	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	102.1	8-1	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	107.5	7-3	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	113.2	7-9	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	113.3	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	113.3	4	2	Fracture Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-2A	12-4:FCC Distribution Box	117	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	117	4-5	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	117	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	117	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	121.8	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	121.8	7-8	1	Crack Circumferential	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	121.8	5	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	126.5	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	126.5	5	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	126.5	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	126.5	8-9	2	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	130.2	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	132.1	7	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	132.1	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	132.1	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	132.1	3-5	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	137.6	6-7	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	137.6	3-4	2	Crack Multiple	To be determined	None	NA	NA
3-2A	**12-4:FCC Distribution Box**	**141.5**	**6**	**4**	**Fracture Longitudinal**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-2A	12-4:FCC Distribution Box	141.5	1-5	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	141.5	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	141.5-152	6-9	2	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	142.5	7-8	2	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	147.4	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	152	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	153.6	2	2	Surface Damage Wall Missing	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	157.9	7-9	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	157.9	4-5	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	162	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	162	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	162	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	162	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	167	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	167	6-7	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	167	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	167	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	167	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	172.3	12-4	2	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	172.3	9-10	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	174	5-7	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	176.9	4	3	Fracture Longitudinal	To be determined	To be Determined	NA	2025
3-2A	12-4:FCC Distribution Box	176.9	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	176.9	6	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	176.9	7-9	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	176.9	3	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	182	7	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	182	11-1	1	Crack Multiple	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-2A	12-4:FCC Distribution Box	182	3-5	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	182	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	184.6	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	188.2	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	188.2	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	193.2	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	193.2	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	198.1	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	198.1	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	201.8	3	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	201.8	9-10	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	201.8	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	201.8	6	3	Fracture Longitudinal	To be determined	To be Determined	NA	2025
3-2A	12-4:FCC Distribution Box	201.8	5	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	202.3-206.5	12-12	2	Fracture Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	215.8	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	226.7	1-3	1	Crack Spiral	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	226.7	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	227.1	11	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	227.1	1-7	2	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	228.4-237.8	12-12	3	Fracture Multiple	To be determined	To be Determined	NA	2025
3-2A	12-4:FCC Distribution Box	237.8	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	242.5	6	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	242.5	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	242.5	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	247	4-7	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	251.8	7-8	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	251.8	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	256.4	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	261.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	261.1	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	261.1	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	270.8	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	270.8	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	270.8	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	270.8	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	270.8	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	270.8	5	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	274.7	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	274.7	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	279.9	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	279.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	284.3	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	284.3	6	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	288.4	5	2	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	288.4	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	288.4	7-9	2	Crack Multiple	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-2A	12-4:FCC Distribution Box	292.9	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	292.9	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	292.9	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	292.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	292.9	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	292.9	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	297.2	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	297.2	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	297.2	6-8	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	298.5	7-9	1	Crack Circumferential	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	301.7	3-4	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	301.7	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	306.3	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	306.3	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	306.3	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	310.9	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	310.9	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	310.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	310.9	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	312.9	4-10	1	Crack Multiple	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	315.7	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	315.7	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	315.7	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	315.7	4	2	Fracture Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	320.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	320.1	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	320.1	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	320.1	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	329.2	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	329.2	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	334.2	1-2	2	Fracture Circumferential	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	335.5	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	335.5	6-1	2	Fracture Circumferential	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	339.7	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2A	12-4:FCC Distribution Box	339.7	NA	3	Joint Offset Medium	To be determined	To be Determined	NA	2025
3-2B	10-4:FCC Distribution Box	2.4	12-3	2	Fracture Multiple	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	8.4	12-12	2	Fracture Multiple	To be determined	None	NA	NA
3-2B	**10-4:FCC Distribution Box**	**10.5**	**6**	**4**	**Hole Soil Visible**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-2B	10-4:FCC Distribution Box	33.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	38	12-3	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	39.1	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	39.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	45.2	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	46-53	12-1	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	59	2-4	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	75.8	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	77.1	2	1	Surface Damage Surface Spalling	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-2B	10-4:FCC Distribution Box	81.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	81.9	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	94	8-9	1	Crack Circumferential	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	94	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	94	6-8	1	Crack Circumferential	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	100.2	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	106.2-112.3	7-5	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	106.2	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	112.3	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	112.5-118.3	12-5	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	113.6	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	118.4	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	122-179.8	7-5	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	130.7	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	130.7	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	142.9	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	142.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	148.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	161.3	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	179.8	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	179.8	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	188-225.1	7-5	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	197.9	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	210	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	210	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	234.6	7-9	1	Crack Circumferential	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	240.6	5-8	1	Crack Multiple	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	240.6	12	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	241	2	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	244	11-2	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	252.8	10-11	1	Crack Multiple	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	252.8	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	254.5	1	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	262.5	12-5	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	265.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	269.2	1-4	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	271.2	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	277.4	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	289.5	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	295.7	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	307.9	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	314	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	344.5	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	350.7	9-10	1	Crack Multiple	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	350.7	7-8	1	Crack Multiple	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	356.8	2-3	1	Crack Multiple	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	369	7	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-2B	10-4:FCC Distribution Box	375	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	381	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	382.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	393.4	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	393.4	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	399.5	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	399.5	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	405.6	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	436	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	436	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	436	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	460.4	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	466.4	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	478.5	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	490.8	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	503.4	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	522.3	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	522.3	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	527.9	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	527.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	547.2	3-4	1	Crack Circumferential	To be determined	None	NA	NA
3-2B	10-4:FCC Distribution Box	554	4	2	Fracture Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	0.6	9-10	1	Crack Spiral	To be determined	None	NA	NA
3-3	9-4FS:9-4	0.6	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	0.6	6-7	2	Fracture Circumferential	To be determined	None	NA	NA
3-3	9-4FS:9-4	3.6	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	6.6	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	6.6	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	10.6	10-12	1	Crack Spiral	To be determined	None	NA	NA
3-3	9-4FS:9-4	10.6	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	10.6	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-3	9-4FS:9-4	10.6	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	14.3	11-12	2	Fracture Multiple	To be determined	None	NA	NA
3-3	9-4FS:9-4	14.3	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-3	9-4FS:9-4	14.3	6	2	Fracture Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	14.3	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	14.3	7	2	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	14.4	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	14.7	12	2	Surface Damage Missing Wall	To be determined	None	NA	NA
3-3	9-4FS:9-4	17.9	11-2	1	Crack Multiple	To be determined	None	NA	NA
3-3	9-4FS:9-4	17.9	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-3	9-4FS:9-4	21.9	6-7	2	Crack Multiple	To be determined	None	NA	NA
3-3	9-4FS:9-4	21.9	5-7	2	Fracture Circumferential	To be determined	None	NA	NA
3-3	9-4FS:9-4	21.9	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	21.9	12-2	1	Crack Spiral	To be determined	None	NA	NA
3-3	9-4FS:9-4	25.3	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	25.3	7	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-3	9-4FS:9-4	25.3	11-2	2	Crack Multiple	To be determined	None	NA	NA
3-3	9-4FS:9-4	28.9	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	28.9	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	28.9	4	2	Fracture Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	28.9	7-11	2	Fracture Spiral	To be determined	None	NA	NA
3-3	9-4FS:9-4	28.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	32.4	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	32.4	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	34.3	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	34.3	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	34.3	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	34.3	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	34.3	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	38.8	4-5	2	Fracture Spiral	To be determined	None	NA	NA
3-3	9-4FS:9-4	41.4	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	41.4	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	41.4	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	45	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	45	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	48.7	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	48.7	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	48.7	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-3	9-4FS:9-4	52.2	10-11	2	Crack Multiple	To be determined	None	NA	NA
3-3	9-4FS:9-4	52.2	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	52.2	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	55.9	12-3	2	Fracture Multiple	To be determined	None	NA	NA
3-3	9-4FS:9-4	55.9	10	2	Fracture Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	55.9	3	2	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	59.4	NA	3	Joint Offset Medium	To be determined	To be Determined	NA	2025
3-3	9-4FS:9-4	59.4	11-7	3	Fracture Multiple	To be determined	To be Determined	NA	2025
3-3	9-4FS:9-4	62.6	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-3	9-4FS:9-4	62.6	5-7	3	Fracture Circumferential	To be determined	To be Determined	NA	2025
3-3	9-4FS:9-4	65.2	2-3	2	Crack Spiral	To be determined	None	NA	NA
3-3	9-4FS:9-4	65.2	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	65.2	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	65.2	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-3	9-4FS:9-4	65.2	11	2	Crack Longitudinal	To be determined	None	NA	NA
3-3	9-4FS:9-4	65.2	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	0.4	12	2	Fracture Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	0.4	9	2	Fracture Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	0.4	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	0.4	6	2	Fracture Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	3	11-2	2	Fracture Multiple	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	3	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	6.1	12-12	3	Fracture Multiple	To be determined	To be Determined	NA	2025
3-4 D [b]	9-4:1E-FS	9.7	1-3	1	Crack Circumferential	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	9.7	6	2	Fracture Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-4 D [b]	9-4:1E-FS	9.7	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	9.7	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	10.5	6	1	Surface Aggregate Missing	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	13.2	10-12	1	Crack Spiral	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	16.8	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	16.8	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	16.8	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	20.5	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	20.5	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	24	9	1	Surface Aggregate Missing	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	24	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	24	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	27.4	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	27.4	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	30.9	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	30.9	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	30.9	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	34	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	34	3-5	1	Crack Multiple	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	34	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	37.1	2-3	1	Crack Spiral	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	37.1	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	37.1	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	40.1	10-11	1	Crack Spiral	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	43.2	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	43.2	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	43.2	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	43.2	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	46.2	3-1	2	Crack Multiple	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	49.2	12-2	1	Crack Multiple	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	49.2	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	49.2	10	1	Surface Aggregate Missing	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	52.2	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	55.2	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	55.2	5-7	2	Fracture Multiple	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	55.2	12	2	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	55.2	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	55.8	6	2	Fracture Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	58.3	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	58.3	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	62.3	8-9	2	Fracture Circumferential	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	62.3	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	64.4	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	64.4	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	64.4	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	67.4	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	67.4	1	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-4 D [b]	9-4:1E-FS	67.4	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	70.4	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	70.4	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	70.4	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	70.4	6	2	Fracture Circumferential	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	76.5	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	76.5	9-10	1	Crack Spiral	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	79.6	3	1	Fracture Circumferential	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	79.6	12	1	Fracture Circumferential	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	79.6	11	1	Fracture Circumferential	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	82.7	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	82.7	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	82.7	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	82.7	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	82.7	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	85.7	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	91.6	3-9	1	Crack Circumferential	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	94.6	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	94.6	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	94.6	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	97.7	8-11	2	Crack Spiral	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	100.6	3-9	1	Crack Multiple	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	100.6	11-2	1	Crack Multiple	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	106.7	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	106.7	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	109.8	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	109.8	7	1	Surface Damage Missing Wall	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	113	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	113	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	113	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	113	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	113	5-8	1	Surface Damage Missing Wall	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	113	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	116	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	116	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	119	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	119	2-4	2	Crack Spiral	To be determined	None	NA	NA
3-4 D [b]	9-4:1E-FS	122	7	1	Surface Damage Missing Wall	To be determined	None	NA	NA
3-4 D [b]	**9-4:1E-FS**	**124.6**	**6-3**	**4**	**Hole Soil Visible**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-4 U [c]	1E-FS:9-4	2.8	9-12	2	Crack Spiral	To be determined	None	NA	NA
3-4 U [c]	**1E-FS:9-4**	**10.6**	**11-6**	**4**	**Hole Soil Visible**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-5 D [b]	1E-FS:1E-1	0.2	3-5	1	Crack Circumferential	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	0.2	6	2	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	6.2	2-5	1	Crack Circumferential	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	9.2	11-12	1	Crack Multiple	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	12.4	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	12.4	8	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-5 D [b]	1E-FS:1E-1	12.4	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	12.4	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	15.3	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	18.4	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	18.4	10-11	1	Crack Circumferential	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	21.5	4-5	1	Crack Multiple	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	21.5	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	21.5	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	24.5	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	24.6	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	24.6	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	24.6	1-3	1	Crack Circumferential	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	29.6	9-11	1	Crack Spiral	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	29.6	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	29.6	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	32.8	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	32.8	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	38.8	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	38.8	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	38.8	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	38.8	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	44.8	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	44.8	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	47.8	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	47.8	4	2	Fracture Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	47.8	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	47.8	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	50.9	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	50.9	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	54.1	6-7	2	Crack Spiral	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	57	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	60	3-9	2	Fracture Multiple	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	60	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	63.2	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	63.2	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	63.2	3	2	Fracture Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	63.2	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	66.3	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	66.3	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	66.3	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	71	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	72.6	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	72.6	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	72.6	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	72.6	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	72.6	11	2	Fracture Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	75.3	4	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-5 D [b]	1E-FS:1E-1	78.4	9-12	1	Crack Spiral	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	78.4	3	2	Fracture Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	78.4	8-9	2	Fracture Spiral	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	81.4	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	84.4	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	84.4	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	87.5	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	88.4	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	88.4	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	97.6	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	100.7	3	2	Fracture Spiral	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	100.7	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	100.7	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	100.7	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	100.7	7	1	Crack Multiple	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	103.7	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	103.7	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	103.7	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	103.7	4	2	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	106.9	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	106.9	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	112.9	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	112.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	114.7	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	114.7	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	114.7	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	114.7	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	1E-FS:1E-1	114.7	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-5 D [b]	**1E-FS:1E-1**	**114.7**	**6**	**4**	**Hole**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-5 U [c]	1E-1:1E-1FS	0.7	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-5 U [c]	**1E-1:1E-1FS**	**1.8**	**6**	**4**	**Hole Void Visible**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-6 D [b]	**1E-1:1B-E**	**1.1**	**3-6**	**4**	**Broken Void Visible**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-6 U [c]	1B-E:1E-1	8.8	4	2	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	8.8	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	8.8	8-9	2	Crack Multiple	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	15	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	18	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	18	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	21	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	27.1	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	30.1	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	33.1	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	36.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	36.1	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	36.1	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	39.2	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	39.2	8	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-6 U [c]	1B-E:1E-1	39.2	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	51.4	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	54.4	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	54.4	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	54.4	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	54.4	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	57.6	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	57.6	11-2	1	Crack Multiple	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	57.6	6-8	2	Fracture Spiral	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	63.6	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	66.7	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	69.7	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	69.8	10-11	2	Fracture Spiral	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	69.8	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	75.9	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	75.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	75.9	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	75.9	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	79	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	79	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	79	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	85.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	88.3	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	88.3	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	88.3	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	94.4	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	94.4	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	94.4	2-3	3	Surface Damage Wall Missing	To be determined	To be Determined	NA	2025
3-6 U [c]	1B-E:1E-1	97.6	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	100.7	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	100.7	9-10	2	Fracture Spiral	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	103.7	12-4	2	Crack Multiple	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	103.7	NA	1	Joint Offset Medium	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	106.8	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	106.8	8-11	2	Crack Spiral	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	109.8	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	113	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	113	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	116.1	2-4	2	Crack Spiral	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	116.1	NA	1	Joint Offset Medium	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	119.2	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	119.2	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	119.2	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	119.2	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	122.1	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	125	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-6 U [c]	1B-E:1E-1	128.1	4	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-6 U [c]	1B-E:1E-1	128.1	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-6 U [c]	**1B-E:1E-1**	**136.2**	**12-6**	**4**	**Hole Soil Visible**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-7 D [b]	1B-E:7-5	3.7	9-12	3	Fracture Spiral	To be determined	To be Determined	NA	2025
3-7 D [b]	1B-E:7-5	5.7	3-12	2	Crack Circumferential	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	13.3	NA	3	Joint Offset Large	To be determined	To be Determined	NA	2025
3-7 D [b]	1B-E:7-5	18.5-29.8	3-9	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	18.8	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	18.8	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	25.9	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	27.7	4	1	Surface Aggregate Missing	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	28.7	7	1	Surface Aggregate Missing	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	29.5	3-9	2	Fracture Circumferential	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	30.8-40	12-12	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	33.1	11	2	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	33.1	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	36.7	1	2	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	36.7	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	36.7	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	40.4	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	40.4	5-10	2	Fracture Multiple	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	40.4	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	40.9-50	11-1	1	Surface Damage Surface Spalling	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	45.5	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	45.5	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	45.5	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	45.5	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-7 D [b]	1B-E:7-5	48.1	9-1	2	Fracture Multiple	To be determined	None	NA	NA
3-7 D [b]	**1B-E:7-5**	**50**	**NA**	**4**	**Joint Offset Large**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-7 U [c]	**7-5:1B-E**	**0.1**	**NA**	**4**	**Joint Offset Large**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-8 D [b]	**7-5:3-5-FS**	**0.5**	**NA**	**4**	**Joint Offset Large**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-8 D [b]	7-5:3-5-FS	0.5	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	0.3	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	3.9	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	3.9	8-10	2	Crack Spiral	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	3.9	1-2	1	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	3.9	3	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	3.9	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	3.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	7.3	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	7.3	8-10	2	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	10.9	8	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	10.9	2-4	2	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	10.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	10.9	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	14.4	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	14.4	4	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	17.8	6	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-8 U [c]	3-5-FS:7-5	17.8	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	21.3	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	21.3	9-11	1	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	24.9	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	24.9	1-10	2	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	28.5	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	28.5	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	28.5	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	28.5	7	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	28.5	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	32.1	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	32.1	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	35.6	5	2	Fracture Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	35.6	8	2	Fracture Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	35.6	9	2	Fracture Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	35.6	12-1	1	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	35.6	3	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	35.6	2-4	2	Crack Spiral	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	35.6	4	2	Fracture Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	42.6	8-9	2	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	42.6	10-11	1	Crack Spiral	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	42.6	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	46.3	10-11	1	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	46.3	1	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	46.3	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	49.7	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	49.7	11	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	49.7	1	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	49.7	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	49.7	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	53.1	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	53.1	8-9	1	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	53.1	1	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	53.1	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	56.6	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	56.6	2-4	1	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	56.6	10-12	2	Fracture Spiral	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	56.6	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	60.2	7-9	1	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	60.2	3-4	1	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	63.6	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	67.1	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	67.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	67.1	11-12	2	Crack Spiral	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	67.1	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	67.1	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	70.7	2	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-8 U [c]	3-5-FS:7-5	70.7	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	70.7	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	74.2	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	74.2	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	74.2	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	74.2	10-11	2	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	74.2	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	77.8	12-12	3	Fracture Multiple	To be determined	To be Determined	NA	2025
3-8 U [c]	3-5-FS:7-5	81.2	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	81.2	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	81.2	12-1	2	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	84.7	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	88.2	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	88.2	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	88.2	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	88.2	11	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	88.2	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	88.2	11-1	2	Crack Spiral	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	91.7	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	91.7	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	95.1	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	95.1	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	98.6	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	98.6	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	98.6	2-5	2	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	98.6	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	102.2	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	102.2	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	102.2	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	102.2	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	105.7	12-9	2	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	108.1	7-9	2	Crack Circumferential	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	109.3	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	109.3	10	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	109.4	3-6	2	Fracture Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	112.9	3-4	2	Crack Multiple	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	112.9	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	112.9	1	1	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	112.9	7	2	Crack Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	112.9	6	2	Fracture Longitudinal	To be determined	None	NA	NA
3-8 U [c]	3-5-FS:7-5	116.4	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	0-157.2	3-9	1	Surface Damage Roughness Increased	To be determined	None	NA	NA
3-9	3-5-FS:4-5	3.9	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	3.9	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	3.9	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	3.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	3.9	7	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-9	3-5-FS:4-5	3.9	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	7.8	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	7.8	2-11	2	Crack Spiral	To be determined	None	NA	NA
3-9	3-5-FS:4-5	11.1	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	11.1	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	14.7	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	14.7	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	14.7	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	14.7	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	18.4	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	18.4	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	18.4	10-4	2	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	21.8	8-12	2	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	21.8	3-7	2	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	21.8	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	25.4	2-3	1	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	25.4	11-12	2	Crack Spiral	To be determined	None	NA	NA
3-9	3-5-FS:4-5	25.4	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	29	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	29	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	32.4	8	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	32.4	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	32.4	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	32.4	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	36.2	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	36.2	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	36.3	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	36.3	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	36.3	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	39.8	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	39.8	7	2	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	43.2	2-4	1	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	43.2	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	43.2	8	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	43.2	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	46.8	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	46.8	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	46.8	11-12	2	Fracture Spiral	To be determined	None	NA	NA
3-9	3-5-FS:4-5	46.8	4	2	Fracture Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	46.8	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	50.3	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	50.3	8-9	1	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	50.3	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	50.3	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	53.9	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	53.9	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	53.9	3	1	Crack Longitudinal	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-9	3-5-FS:4-5	57.5	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	57.5	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	57.5	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	57.5	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	61	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	61	10	2	Fracture Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	61	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	61	2-3	2	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	65.7	7-10	2	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	65.7	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	65.7	3	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	68.1	12-3	1	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	68.1	9	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	71.7	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	75.4	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	75.4	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	75.4	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	78.7	3-7	2	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	78.7	9	2	Fracture Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	78.7	8	2	Fracture Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	78.7	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	82.3	12	2	Surface Damage Wall Missing	To be determined	None	NA	NA
3-9	3-5-FS:4-5	82.3	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	82.3	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	82.3	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	85.9	4	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	85.9	3-9	2	Crack Hinge 3	To be determined	None	NA	NA
3-9	3-5-FS:4-5	89.8	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	89.8	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	89.8	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	89.8	1-3	1	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	93.1	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	93.1	2-4	2	Crack Spiral	To be determined	None	NA	NA
3-9	3-5-FS:4-5	96.7	4	2	Fracture Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	96.7	10	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	96.7	8-9	2	Fracture Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	96.7	6	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	96.7	2	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	100.3	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	100.3	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	100.3	1	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	103.9	4	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	103.9	12	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	103.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	103.9	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	107.4	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	107.4	9-10	1	Crack Multiple	To be determined	None	NA	NA

Segment ID	Manhole ID (start : finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-9	3-5-FS:4-5	107.4	2-3	1	Crack Spiral	To be determined	None	NA	NA
3-9	3-5-FS:4-5	111.2	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	111.2	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	111.2	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	111.2	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	114.8	6-9	2	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	115.3	4	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	115.3	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	118.2	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	118.2	3-6	1	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	118.2	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	118.2	10	2	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	121.9	9	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	121.9	10-11	1	Crack Circumferential	To be determined	None	NA	NA
3-9	3-5-FS:4-5	125.6	3-4	1	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	129.1	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	129.9	3	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	129.9	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	132.6	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	132.6	6	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	132.6	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	136.3	10	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	140.2	11-12	2	Crack Spiral	To be determined	None	NA	NA
3-9	3-5-FS:4-5	140.2	2	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	140.2	3-9	2	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	140.9	NA	2	Joint Offset Medium	To be determined	None	NA	NA
3-9	3-5-FS:4-5	140.9	8-12	1	Crack Circumferential	To be determined	None	NA	NA
3-9	3-5-FS:4-5	143.7	9-2	2	Crack Circumferential	To be determined	None	NA	NA
3-9	3-5-FS:4-5	143.7	5	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	3-5-FS:4-5	147.2	12-8	1	Crack Multiple	To be determined	None	NA	NA
3-9	3-5-FS:4-5	154.3	11	1	Crack Longitudinal	To be determined	None	NA	NA
3-9	**3-5-FS:4-5**	**157.2**	**3-9**	**4**	**Broken Void Visible**	**To be determined**	**Repairs in Planning**	**NA**	**2025**
3-9	3-5-FS:4-5	157.2	2	3	Fracture Longitudinal	To be determined	To be Determined	NA	2025

[a] Photos of defects are provided in Attchment 2 in Appendix C.

[b] D stands for downstream inspection.

[c] U stands for upstream inspection.

Shaded and BOLD require further investigation.

Table B-3

Manhole Defects Identified in 2024

Phillips 66 Ferndale Refinery

Manhole ID	Distance (feet)	Orientation on Structure (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [(a)]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
1E-1	0-6	12-12	2	Surface Damage Aggregate Visible	To be determined	None	NA	NA
1E-1	2.2	5	1	Crack Longitudinal	To be determined	None	NA	NA
1E-1	3	5	1	Crack Longitudinal	To be determined	None	NA	NA
7-5	0	12-12	1	Surface Damage Corrosion	To be determined	None	NA	NA
7-5	1-4.3	12-12	2	Surface Damage Roughness Increased	To be determined	None	NA	NA
7-5	3.5	1-3	2	Surface Damage Aggregate Missing	To be determined	None	NA	NA
9-5	0	12-12	1	Surface Damage Corrosion	To be determined	None	NA	NA
9-5	1-3	12-12	1	Surface Damage Aggregate Visible	To be determined	None	NA	NA
9-5	3.1	12	2	Surface Damage Aggregate Missing	To be determined	None	NA	NA
9-5	5-7.1	12-12	2	Surface Damage Roughness Increased	To be determined	None	NA	NA
1B-E	0.5	12-12	1	Surface Damage Aggregate Visible	To be determined	None	NA	NA
1B-E	0.6-7	12-12	1	Surface Damage Roughness Increased	To be determined	None	NA	NA
1B-E	1.5	10-11	1	Crack Circumferential	To be determined	None	NA	NA
1E-FS	0-8.4	12-12	1	Surface Damage Roughness Increased	To be determined	None	NA	NA
1E-FS	0.8	6	1	Crack Longitudinal	To be determined	None	NA	NA
1E-FS	8	12	1	Crack Longitudinal	To be determined	None	NA	NA

Manhole ID	Distance (feet)	Orientation on Structure (clock)	Environmental Rating (1-5)	Description of Defect/ NASSCO Rating [a]	Cause of Defect	Actions Taken	Completion Date	Estimated Schedule for Completion
3-5-FS	0-1.2	12-12	1	Surface Damage Aggregate Visible	To be determined	None	NA	NA
3-5-FS	2.6	1-4	1	Surface Damage Aggregate Visible	To be determined	None	NA	NA
3-5-FS	4.8	5-7	1	Surface Damage Aggregate Visible	To be determined	None	NA	NA
3-5-FS	4.8-9.8	9	2	Crack Longitudinal	To be determined	None	NA	NA
3-5-FS	6-7.1	7	1	Crack Longitudinal	To be determined	None	NA	NA
3-5-FS	8.4-9.8	12-12	1	Surface Damage Roughness Increased	To be determined	None	NA	NA
12-4	0-2.5	12-12	1	Surface Damage Aggregate Visible	To be determined	None	NA	NA
12-4	2.6-10.2	12-12	1	Surface Damage Roughness Increased	To be determined	None	NA	NA
12-4	6.2	9	2	Surface Damage Aggregate Missing	To be determined	None	NA	NA
12-4	10.2	12-12	2	Surface Damage Aggregate Visible	To be determined	None	NA	NA
FCC Distribution	0-4.4	12-12	1	Surface Damage Aggregate Visible	To be determined	None	NA	NA
FCC Distribution	4.5-6.3	1	1	Crack Longitudinal	To be determined	None	NA	NA
FCC Distribution	4.5-5.6	12-3	1	Surface Damage Aggregate Visible	To be determined	None	NA	NA
FCC Distribution	6.5-11.3	12-12	1	Surface Damage Roughness Increased	To be determined	None	NA	NA
FCC Distribution	10	6	1	Crack Longitudinal	To be determined	None	NA	NA
FCC Distribution	11	5	2	Crack Longitudinal	To be determined	None	NA	NA
FCC Distribution	11.3	12-3	2	Surface Damage Aggregate Visible	To be determined	None	NA	NA

[a] Photos of defects are provided in Attchment 2 in Appendix C.

Table B-4

Summary of ER=4 Investigations and Sewer Repairs

Phillips 66 Ferndale Refinery

Segment ID	Manhole ID (start : finish)	Inspection Phase	Distance (feet)	Environmental Rating (1-5)	Repair Action Taken	Action Taken Completion Date	Soil Sample ID	Soil Sample Depth (feet)	Soil Sample Location	Soil Sample Date	MTCA Cleanup Level (CUL)	Comments
2-1	5K-RE:5K-FS	Phase II	0.1	4	Sewer line sleeved with Omega Liner	2024	B-4-23	9	0.1 ft south of MH 5K-RE	9/30/2023	Met CUL	
2-2	5K-FS:6K-FS	Phase II	144.9	4	Sewer line sleeved with Omega Liner	2024	B-5-23	8.5	115 ft south of MH 5K-FS	9/21/2023	Met CUL	Sample was collect 30ft north of defect due to no accessability caused by above ground utility structure
2-6	11K-RE:9K-RE	Phase II	0.0	4	Sewer line sleeved with Omega Liner	2024	--	--	--	--	--	Initial investigation to be scheduled
2-7	11K-RE:13K-FS	Phase II	0.3	4	Sewer line sleeved with Omega Liner	2024	--	--	--	--	--	Initial investigation to be scheduled
2-10	1L-FS:6L-RE	Phase II	116.6	4	Sewer line sleeved with Omega Liner	2024	B-8-23	5.5	136ft south of MH 1L-FS	11/16/2023	Met CUL	Sample was collected 20ft south of defect due to above ground utilities
2-10	1L-FS:6L-RE	Phase II	142.5	4	Sewer line sleeved with Omega Liner	2024						
2-11	6L-RE:6L-FS	Phase II	34.7	4	Sewer line sleeved with Omega Liner	2024	B-6-23	4.5	38 ft south of MH 6L-RE	9/21/2023	Met CUL	
2-12	7L-FS:6L-FS	Phase II	0.9	4	Sewer line sleeved with Omega Liner	2024	B-7-23	4	153 ft north of Manhole 7L-FS	9/21/2023	Met CUL	Due to underground and above ground utilities, one soil sample was collected
2-12	7L-FS:6L-FS	Phase II	66.5	4	Sewer line sleeved with Omega Liner	2024						
2-12	7L-FS:6L-FS	Phase II	115.2	4	Sewer line sleeved with Omega Liner	2024						
2-12	7L-FS:6L-FS	Phase II	143.1	4	Sewer line sleeved with Omega Liner	2024						
2-12	7L-FS:6L-FS	Phase II	153.4	4	Sewer line sleeved with Omega Liner	2024						
2-12	7L-FS:6L-FS	Phase II	189.5	4	Sewer line sleeved with Omega Liner	2024						
2-12	7L-FS:6L-FS	Phase II	209.7	4	Sewer line sleeved with Omega Liner	2024						
2-13	7L-FS:10L-FS	Phase II	0.0	4	Sewer line sleeved with Omega Liner	2024	B-9-23	5	34 ft south of MH 7L-FS	11/16/2023	Met CUL	
2-13	7L-FS:10L-FS	Phase II	36.0	4	Sewer line sleeved with Omega Liner	2024						
2-13	7L-FS:10L-FS	Phase II	36.0	4	Sewer line sleeved with Omega Liner	2024						
2-23	1K:2K-FS	Phase II	0.3	4	Dig and replace	2024	B-1-23	7.5	0.3 ft south of MH 1K-RE	9/21/2023	Met CUL	
2-24	2K-FS:4K	Phase II	77.5	4	Dig and replace	2024	B-2-23	7	77.5 ft south of MH 2K-FS	9/20/2023	Exceeded CUL	
2-25	4K:4K-FS	Phase II	34.5	4	Dig and replace	2024	B-3-23	7	34.5 ft south of MH 4K-RE	9/21/2023	Met CUL	
2-25	4K:4K-FS	Phase II	37.4	4	Dig and replace	2024						
2-25	4K:4K-FS	Phase II	37.7	4	Dig and replace	2024						
3-1	12-4:8H-1	Phase III	77.7	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-1	12-4:8H-1	Phase III	113.2	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-2A	12-4:FCC Distribution Box	Phase III	15.9	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-2A	12-4:FCC Distribution Box	Phase III	61.1	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-2A	12-4:FCC Distribution Box	Phase III	141.5	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-2B	10-4:FCC Distribution Box	Phase III	10.5	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-4	9-4-1:1E-FS	Phase III	124.6	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-4	1E-FS:9-4	Phase III	10.6	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled

Segment ID	Manhole ID (start : finish)	Inspection Phase	Distance (feet)	Environmental Rating (1-5)	Repair Action Taken	Action Taken Completion Date	Soil Sample ID	Soil Sample Depth (feet)	Soil Sample Location	Soil Sample Date	MTCA Cleanup Level (CUL)	Comments
3-5	1E-FS:1E-1	Phase III	114.7	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-5	1E-1:1E-FS	Phase III	1.8	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-6	1E-1:1B-E	Phase III	1.1	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-6	1B-E:1E-1	Phase III	136.2	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-7	1B-E:7-5	Phase III	50	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-7	7-5:1B-E	Phase III	0.1	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-8	7-5-:3-5-FS	Phase III	0.5	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled
3-9	3-5-FS:4-5	Phase III	157.2	4	In progress	--	--	--	--	--	--	Initial investigation to be scheduled

[(a)] The sewer inspection was completed in the reverse direction.

Table B-5
Soil Sample Descriptions
Phillips 66 Ferndale Refinery

Sample ID	Date	Sample Depth (feet)	Soil Sample Description	PID (ppm)	Sheen Test[(a)]
SS-1	6/25/2024	8.0	silty clay with gravel, gray, firm, moist.	824.1	SS
SS-2	6/25/2024	7.0	Silty clay with gravel, gray, soft, saturated.	776.1	SS
SS-3	6/27/2024	7.0	Silty sand with rootlets and gravel, brown, loose, wet.	426.7	SS
SS-4	7/2/2024	7.0	Silty clay with gravel, gray and brown, firm, wet.	910.2	HS
SS-5	7/2/2024	7.0	Fine sand with gravel, gray and brown, loose, moist.	467.8	VSS

[(a)] NS = No Sheen; VSS = Very Slight Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

Table B-6
Soil Sample MTCATPH Analytical Results
Phillips 66 Ferndale Refinery

Sample ID	Date	Sample Depth	Method C Soil Direct Contact	Method C Soil Direct Contact	Method A Soil Groundwater	Method A Soil Groundwater
		(feet)	Hazard Index	Cancer Risk	Measured TPH Soil Concentration[(c)]	Protective TPH Soil Concentration[(c)(d)]
MTCA Method C Direct Contact Cleanup Level[(a)]:			1	1	-	-
Protection of Groundwater (Vadose)[(b)]:			-	-	mg/kg	mg/kg
SS-1	6/25/2024	8.0	1.10E-01	3.60E-07	**2.34E+03**	3.40E+01
SS-2	6/25/2024	7.0	1.20E-01	3.30E-07	**2.74E+03**	5.20E+01
SS-3	6/27/2024	7.0	4.70E-03	1.20E-08	1.09E+02	2.70E+02
SS-4	7/2/2024	7.0	3.10E-07	3.90E-01	**8.54E+03**	3.50E+02
SS-5	7/2/2024	7.0	1.20E-02	1.20E-08	3.15E+02	5.20E+04

[(a)] Method C cleanup levels obtained from CLARC tables calculated from WAC 173-370-745, Equation 745-2 (carcinogens) based on soil direct contact. If no carcinogenic value was listed then the non-carcinogenic value was applied.

[(b)] Protection of groundwater values obtained from CLARC tables unless otherwise noted.

[(c)] Cleanup level for the protection of groundwater leaching pathway is exceeded when the measured TPH soil concentration exceeds protective TPH soil concentration.

[(d)] Values are rounded to two significant figures as provided in the CLARC tables.

BOLD & shaded - indicates that the concentration in the sample exceeds the most stringent cleanup level.

Table B-7
Soil Sample BTEX Analytical Results
Phillips 66 Ferndale Refinery

Sample ID	Date	Sample Depth (feet)	EPA-8260 Benzene (mg/kg)	EPA-8260 Toluene (mg/kg)	EPA-8260 Ethylbenzene (mg/kg)	EPA-8260 Xylenes (mg/kg)	EPA-8260 n-Hexane (mg/kg)
MTCA Method C Direct Contact Cleanup Level[a]:			2,400	280,000	350,000	700,000	210,000
Protection of Groundwater (Vadose)[b]:			0.03[c]	4.5	5.9	14	72
SS-1	6/25/2024	8.0	**3.83**	**66.2**	**20.0**	**121**	27.9
SS-2	6/25/2024	7.0	**4.55**	**60.4**	**17.9**	**106**	26.1
SS-3	6/27/2024	7.0	ND(<0.0378)	ND(<0.189)	0.105	0.545	ND(<0.378)
SS-4	7/2/2024	7.0	**1.11**	**17.9**	**14.9**	**86**	31
SS-5	7/2/2024	7.0	ND(<0.042)	ND(<0.21)	0.0472	ND(<0.126)	ND(<0.421)

[a] Method C cleanup levels obtained from CLARC tables calculated from WAC 173-340-745, Equation 745-2 (carcinogens) based on soil direct contact. If no carcinogenic value was listed then the non-carcinogenic value was applied.

[b] Protection of groundwater values obtained from CLARC tables unless otherwise noted.

[c] MTCA A cleanup level for industrial properties was chosen because it is an ARAR. MTCA A cleanup levels are already adjusted for leaching and natural background concentrations.

BOLD & shaded - indicates that the concentration in the sample exceeds the most stringent cleanup level.

Table B-8
Soil Sample Metal Analytical Results
Phillips 66 Ferndale Refinery

Sample ID	Date	Sample Depth	EPA 6020B Arsenic	EPA 6020B Cadmium	EPA 6020B Chromium (VI)	- Chromium (III)	EPA 6020B Lead	EPA 6020B Nickel	EPA 6020B Zinc	EPA-7471B Mercury
		(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
MTCA Method C Direct Contact Cleanup Level[a]:			88	3,500	260	5,300,000	1000[d]	70,000	1,100,000	2[d]
Protection of Groundwater (Vadose)[b]:			20[d]	0.69	19[d]	480,000	3,000	130	6,000	2.1
Priority Contaminants of Ecological Concern[c]:			260	36	-	135	220	1850	-	9
SS-1	6/25/2024	8.0	5.7	0.100	ND(<0.477)	33.4	7.4	33.8	55.2	0.055
SS-2	6/25/2024	7.0	3.2	ND(<0.088)	ND(<0.529)	33.7	4.5	32.8	48.7	0.030
SS-3	6/27/2024	7.0	4.7	0.130	ND(<0.672)	31.1	3.8	31.7	46.2	0.041
SS-4	7/2/2024	7.0	5.2	0.097	**42.5**	42.5	10.8	42.0	60.6	0.029
SS-5	7/2/2024	7.0	5.8	ND(<0.089)	**36.1**	36.1	4.7	36.3	47.8	0.062

[a] Method C cleanup levels obtained from CLARC tables calculated from WAC 173-370-745, Equation 745-2 (carcinogens) based on soil direct contact. If no carcinogenic value was listed then the non-carcinogenic value was applied.

[b] Protection of groundwater values obtained from CLARC tables unless otherwise noted.

[c] Values obtained from WAC 173-340-900, Table 749-2 for industrial or commercial sites.

[d] MTCA A cleanup level for industrial properties was chosen because it is an ARAR. MTCA A cleanup levels are already adjusted for leaching and natural background concentrations.

BOLD & shaded - indicates that the concentration in the sample exceeds the most stringent cleanup level.

ND - indicates analyte was not detected at level above reporting limit (shown in parentheses)

Table B-9
Soil Sample cPAH Analytical Results
Phillips 66 Ferndale Refinery

Sample ID		MTCA Method C Direct Contact Cleanup Level[a]:	Priority Contaminants of Ecological Concern[b]:	Protection of Groundwater (Vadose)[c]:	Toxicity Equivalency Factor (TEF):	SS-1	SS-2	SS-3	SS-4	SS-5
Sample Depth (feet)						**8.0**	**7.0**	**7.0**	**7.0**	**7.0**
Date						**6/25/2024**	**6/25/2024**	**6/27/2024**	**7/2/2024**	**7/2/2024**
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) (EPA-8270 SIM)										
Benzo[A]Anthracene	mg/kg	-	-	0.72[d]	0.1	0.0131	0.0212	ND(<0.012)	0.113	ND(<0.011)
Benzo[A]Pyrene	mg/kg	130	300	3.9	1	ND(<0.0117)	ND(<0.012)	ND(<0.012)	0.0211	ND(<0.011)
Benzo[B]Fluoranthene	mg/kg	-	-	2.46[d]	0.1	0.0123	ND(<0.012)	ND(<0.012)	0.0127	ND(<0.011)
Benzo[K]fluoranthene	mg/kg	-	-	2.46[d]	0.1	ND(<0.0117)	ND(<0.012)	ND(<0.012)	ND(<0.012)	ND(<0.011)
Chrysene	mg/kg	-	-	0.8[d]	0.01	0.0287	0.0154	ND(<0.012)	0.065	ND(<0.011)
Dibenz[A,H]Anthracene	mg/kg	-	-	3.57[d]	0.1	ND(<0.0117)	ND(<0.012)	ND(<0.012)	ND(<0.012)	ND(<0.011)
Indeno[1,2,3-Cd]Pyrene	mg/kg	-	-	6.94[d]	0.1	ND(<0.0117)	ND(<0.012)	ND(<0.012)	ND(<0.012)	ND(<0.011)
Total cPAH Equivalent (TEq)[e]	mg/kg	130	-	-	-	0.012	0.012	0.011	0.036	0.011
Polycyclic Aromatic Hydrocarbons (PAHs) (EPA-8270 SIM)										
Naphthalenes[f]	mg/kg	70,000	-	5[g]	-	**16.65**	**13.230**	0.409	**45.93**	0.229

[a] Method C cleanup levels obtained from CLARC tables calculated from WAC 173-370-745, Equation 745-2 (carcinogens) based on soil direct contact. If no carcinogenic value was listed then the non-carcinogenic value was applied.

[b] Values obtained from WAC 173-340-900, Table 749-2 for industrial or commercial sites.

[c] Protection of groundwater values obtained from CLARC tables unless otherwise noted.

[d] Values calculated from WAC 173-340-747, Equation 747-1. cPAHs were calculated using the MTCA Method A groundwater cleanup level for benzo[a]pyrene.

[e] cPAH level calculated using Toxicity equivalency methodology provided in WAC 173-340-708(8)

[f] Sum of naphthalene, 1-methylnaphthalene and 2-methylnaphthalene.

[g] MTCA A cleanup level for industrial properties was chosen because it is an ARAR. MTCA A cleanup levels are already adjusted for leaching and natural background concentrations.

BOLD & shaded - indicates that the concentration in the sample exceeds the most stringent cleanup level.

ND - indicates analyte was not detected at level above reporting limit (shown in parentheses)

For ND values, the TEF was multiplied by one half the reporting limit

TEF - Toxicity Equivalency Factor (WAC 173-340-900 table 708.2)

TEq - Toxicity Equivalency to benzo(a)pyrene, calculated by multiplying result by appropriate TEF.

Table B-10
Soil Sample Chlorinated Volatile Organic Compounds Analytical Results
Phillips 66 Ferndale Refinery

Sample ID		MTCA Method C Direct Contact Cleanup Level[a]:	Protection of Groundwater (Vadose)[b]:	SS-1	SS-2	SS-3	SS-4	SS-5
Sample Depth (feet)				8.0	7.0	7.0	7.0	7.0
Date		(mg/kg)	(mg/kg)	6/25/2024	6/25/2024	6/27/2024	7/2/2024	7/2/2024
Chlorinated Volatile Organic Compounds (EPA-8260)								
Acetone	mg/kg	3,200,000	29	ND(<76.5)	ND(<73.5)	ND(<1.89)	ND(<38.0)	ND(<2.1)
Allyl Chloride	mg/kg	6,300	0.011	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
Bromobenzene	mg/kg	28,000	0.56	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Bromochloromethane	mg/kg	-	-	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Bromodichloromethane	mg/kg	2,100	0.033	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Bromoform	mg/kg	17,000	0.36	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Bromomethane	mg/kg	4,900	0.051	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
n-Butylbenzene	mg/kg	180,000	14	3.23	3.03	ND(<0.0378)	4.2	0.346
sec-Butylbenzene	mg/kg	350,000	25	1.81	1.48	ND(<0.0378)	2.69	0.123
tert-Butylbenzene	mg/kg	350,000	20	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Carbon Tetrachloride	mg/kg	1,900	0.041	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Chlorobenzene	mg/kg	70,000	0.86	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Dibromochloromethane	mg/kg	1,600	0.024	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Chloroethane	mg/kg	-	-	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
Chloroform	mg/kg	4,200	0.074	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
Chloromethane	mg/kg	-	-	ND(<3.83)	ND(<3.068)	ND(<0.0945)	ND(<1.9)	ND(<0.105)
2-Chlorotoluene	mg/kg	70,000	1.9	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
4-Chlorotoluene	mg/kg	-	-	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,2-Dibromoethane (EDB)	mg/kg	66	0.00027	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,2-Dibromo-3-chloropropane	mg/kg	160	0.00091	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
Dibromomethane	mg/kg	35,000	0.36	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,2-Dichlorobenzene	mg/kg	320,000	7	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)

Sample ID		MTCA Method C Direct Contact Cleanup Level[a]:	Protection of Groundwater (Vadose)[b]:	SS-1	SS-2	SS-3	SS-4	SS-5
Sample Depth (feet)				8.0	7.0	7.0	7.0	7.0
Date		(mg/kg)	(mg/kg)	6/25/2024	6/25/2024	6/27/2024	7/2/2024	7/2/2024
1,3-Dichlorobenzene	mg/kg	-	-	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,4-Dichlorobenzene	mg/kg	24,000	1.2	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Dichlorodifluoromethane	mg/kg	700,000	38	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
Dichlorofluoromethane	mg/kg	-	-	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
1,1-Dichloroethane	mg/kg	23,000	0.041	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,2-Dichloroethane	mg/kg	1,400	0.023	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,1-Dichloroethene	mg/kg	180,000	0.046	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
cis-1,2-Dichloroethene	mg/kg	7,000	0.079	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
trans-1,2-dichloroethene	mg/kg	70,000	0.52	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,2-Dichloropropane	mg/kg	3,500	0.025	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,3-Dichloropropane	mg/kg	70,000	0.88	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
2,2-Dichloropropane	mg/kg	-	-	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,1-Dichloropropene	mg/kg	-	-	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
cis-1,3-Dichloropropene	mg/kg	-	-	ND(<1.53)	ND(<1.47)	ND(<0.0378)	1.51	ND(<0.042)
trans-1,3-Dichloropropene	mg/kg	-	-	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Diethyl ether	mg/kg	700,000	6.8	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Hexachloro-1,3-butadiene	mg/kg	1,700	0.012	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Cumene	mg/kg	350,000	15	2.60	1.88	ND(<0.0378)	3.4	0.0459
p-Isopropyltoluene	mg/kg	-	-	ND(<1.53)	ND(<1.47)	ND(<0.0378)	1.51	ND(<0.042)
2-Butanone (MEK)	mg/kg	2,100,000	20	ND(<15.3)	ND(<14.7)	ND(<0.378)	ND(<0.76)	ND(<0.42)
Methylene Chloride	mg/kg	66,000	0.022	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
4-Methyl-2-pentanone (MIBK)	mg/kg	280,000	2.7	ND(<15.3)	ND(<14.7)	ND(<0.378)	ND(<7.6)	ND(<0.42)
Methyl-tert-butyl ether (MTBE)	mg/kg	73,000	0.1	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
n-Propylbenzene	mg/kg	350,000	16	11.8	8.96	0.0968	3.4	0.174
Styrene	mg/kg	700,000	2.2	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,1,1,2-Tetrachloroethane	mg/kg	5,000	0.0098	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,1,2,2-Tetrachloroethane	mg/kg	660	0.0012	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)

Sample ID		MTCA Method C Direct Contact Cleanup Level[a]:	Protection of Groundwater (Vadose)[b]:	SS-1	SS-2	SS-3	SS-4	SS-5
Sample Depth (feet)				8.0	7.0	7.0	7.0	7.0
Date		(mg/kg)	(mg/kg)	6/25/2024	6/25/2024	6/27/2024	7/2/2024	7/2/2024
Tetrachloroethene	mg/kg	63,000	0.05	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Tetrahydrofuran	mg/kg	3,200,000	30	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
1,2,3-Trichlorobenzene	mg/kg	2,800	0.2	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,2,4-Trichlorobenzene	mg/kg	4,500	0.56	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,2,4-Trimethylbenzene	mg/kg	35,000	1.3	**71.1**	**51.2**	0.458	3.4	ND(<0.042)
1,3,5-Trimethylbenzene	mg/kg	35,000	1.3	**19.0**	**13.8**	0.132	3.4	ND(<0.042)
1,1,1-Trichloroethane	mg/kg	7,000,000	1.5	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,1,2-Trichloroethane	mg/kg	2,300	0.017	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Trichloroethene	mg/kg	2,900	0.025	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
Trichlorofluoromethane	mg/kg	1,100,000	23	ND(<7.65)	ND(<7.35)	ND(<0.189)	ND(<3.8)	ND(<0.21)
1,1,2-Trichlorotrifluoroethane	mg/kg	110,000,000	7,600	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)
1,2,3-Trichloropropane	mg/kg	4	0.0000024	ND(<3.83)	ND(<3.68)	ND(<0.0945)	ND(<1.9)	ND(<0.105)
Vinyl chloride	mg/kg	88	0.0017	ND(<1.53)	ND(<1.47)	ND(<0.0378)	ND(<0.76)	ND(<0.042)

[a] Method C cleanup levels obtained from CLARC tables calculated from WAC 173-340-745, Equation 745-2 (carcinogens) based on soil direct contact. If no carcinogenic value was listed then the non-carcinogenic value
was applied.

[b] Protection of groundwater values obtained from CLARC tables unless otherwise noted.

ND - indicates analyte was not detected at level above reporting limit (shown in parentheses)

APPENDIX C-
MOTIVO - PHASE III REMOTE VISUAL INSPECTION AND REHABILITATION REPORT

Motivo Group - Knowing What's Ahead

MOTIVO
37607 Lee Lake Ave
Windsor CO 80550

REMOTE VISUAL INSPECTION & REHABILITATION

P66 Agreed Order Environmental Phase III

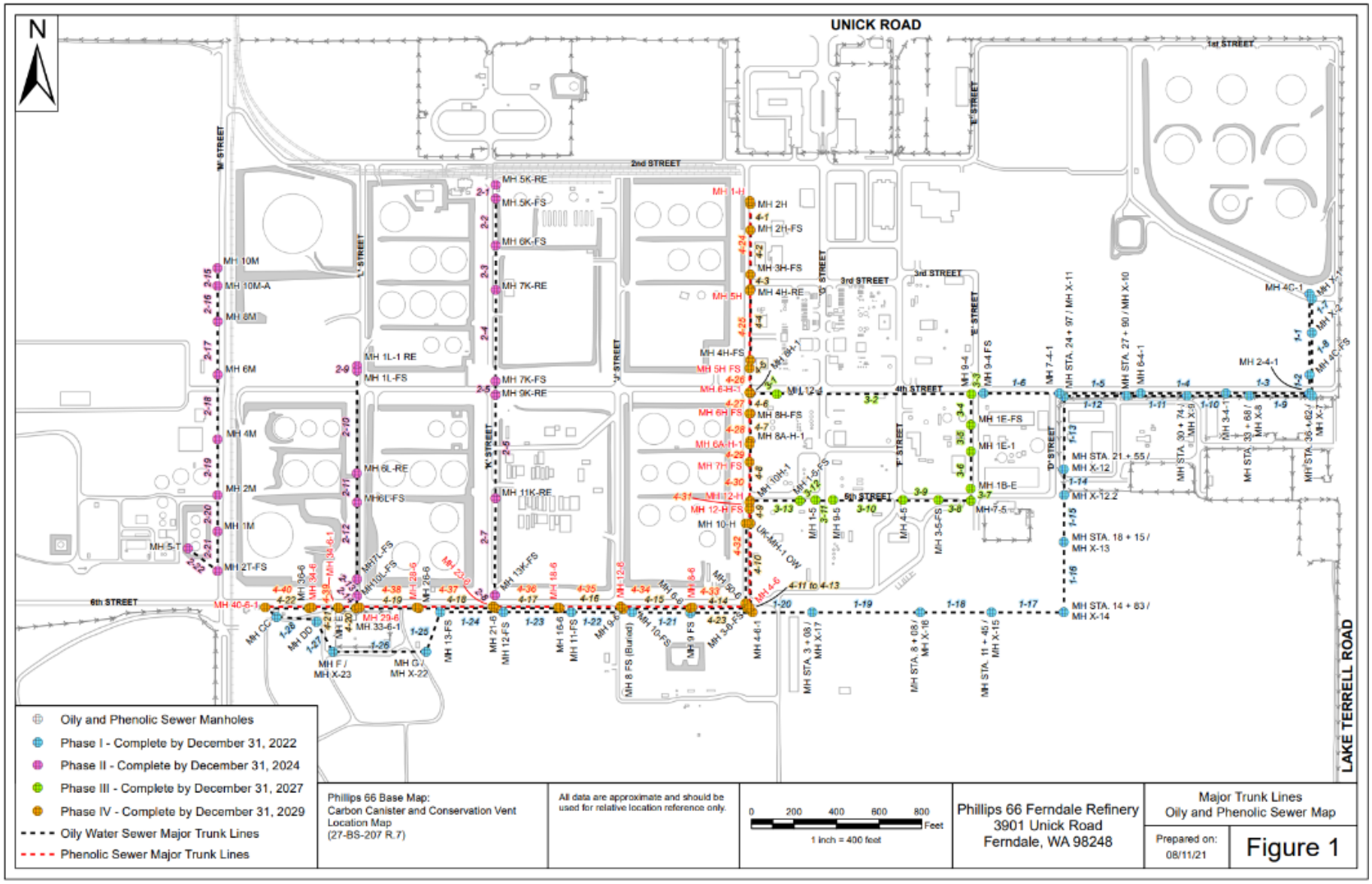


FACILITY:

Ferndale Washington

King Todd	RVI Technician	Kelly Caillier	Reliability Engineer #34446		
Inspector	Title/Certification Level	Report Prepared By	Title		
		King Todd	9.2025		
Inspector	Title/Certification Level	Inspector Sign Off	Date		
		Client Sign Off	Date		

Inspection Type:	Remote Visual Inspection	Inspection Date:	6.2025 -7.2025	Inspector:	King Todd
Analysis:	Inspection & Rehab	Report Revision:	1		


N
UNICK ROAD
LAKE TERRELL ROAD
W STREET
1st STREET
2nd STREET
3rd STREET
4th STREET
5th STREET
6th STREET
I STREET
J STREET
K STREET
F STREET
E STREET
D STREET
MH 10M
MH 10M-A
MH 8M
MH 6M
MH 4M
MH 2M
MH 1M
MH 5-T
MH 2T-FS
MH 40-6-1
MH 1L-1 RE
MH 1L-FS
MH 6L-RE
MH6L-FS
MH7L-FS
MH10L-FS
MH 5K-RE
MH 5K-FS
MH 6K-FS
MH 7K-RE
MH 7K-FS
MH 9K-RE
MH 11K-RE
MH 13K-FS
MH 1-H
MH 2H
MH 2H-FS
MH 3H-FS
MH 4H-RE
MH 5H
MH 4H-FS
MH 5H FS
MH 6H-1
MH 6H FS
MH 8H-FS
MH 6A-H-1
MH 7H FS
MH 10H-1
MH 12-H
MH 12-H FS
MH 10-H
MH 8H-1
MH 12-4
MH 8A-H-1
MH 1-5-FS
MH 9-5
MH 4-5
MH 3-5-FS
MH 9-4
MH 9-4 FS
MH 1E-FS
MH 1E-1
MH 1B-E
MH-7-5
MH 7-4-1
MH STA. 24 + 97 / MH X-11
MH STA. 27 + 60 / MH X-10
MH 8-4-1
MH STA. 21 + 55 / MH X-12
MH X-12.2
MH STA. 18 + 15 / MH X-13
MH STA. 14 + 83 / MH X-14
MH 4C-1
MH 2-4-1
MH 4C-FS
MH STA. 30 + 74 / MH X-9
MH STA. 33 + 68 / MH X-8
MH STA. 36 + 62 / MH X-7
MH 3-4-1
MH 39-6
MH 34-6
MH 33-6-1
MH 29-6
MH 28-6
MH 26-6
MH 23-6
MH 18-6
MH 12-6
MH 9-6
MH 50-6
MH 4-6-1
MH 4-6
MH CC
MH DD
MH E
MH F / MH X-23
MH G / MH X-22
MH 13-FS
MH 21-6
MH 12-FS
MH 16-6
MH 11-FS
MH 8 FS (Buried)
MH 10-FS
MH 9 FS
MH 3-6-FS
MH STA. 3 + 08 / MH X-17
MH STA. 8 + 08 / MH X-16
MH STA. 11 + 45 / MH X-15
Unk-MH-1 OW
4-11 to 4-13
Oily and Phenolic Sewer Manholes
Phase I - Complete by December 31, 2022
Phase II - Complete by December 31, 2024
Phase III - Complete by December 31, 2027
Phase IV - Complete by December 31, 2029
Oily Water Sewer Major Trunk Lines
Phenolic Sewer Major Trunk Lines
Phillips 66 Base Map:
Carbon Canister and Conservation Vent Location Map
(27-BS-207 R.7)
All data are approximate and should be used for relative location reference only.
0 200 400 600 800 Feet
1 inch = 400 feet
Phillips 66 Ferndale Refinery
3901 Unick Road
Ferndale, WA 98248
Major Trunk Lines
Oily and Phenolic Sewer Map
Prepared on:
08/11/21
Figure 1

MOTIVO™
Knowing What's Ahead.

RVI INSPECTION CAMPAIGN
P66 Ferndale Washington

PHILLIPS 66

Component Type	Component Identification	Findings Overview	Campaign Date Month/Year	Rehab Date	Phase Maturity	Actions
Clay	MH-10-4 to FCC Box	During the RVI, cracks, separated joints and fractures located. Rehab Complete.	7.2025	7.2025	Rehab	Rehabilitation Complete See Commentary
Clay	MH-12-4 to FCC Box	During the RVI, cracking and separated joints were located throughout the asset. Rehab Complete.	7.2025	7.2025	Rehab	Rehabilitation Complete See Commentary
Clay	MH-12-4 to MH-8H-1	Several areas of joint separation and vertical offsets, severe displacements at 109'. Multiple cracking in joints. Rehab Complete.	7.2025	7.2025	Rehab	Rehabilitation Complete See Commentary
Clay	MH-1B-E to MH-7-5	Voids and several areas of offset joints located during the inspection. Rehab Complete.	6.2025	6.2025	Rehab	Rehabilitation Complete See Commentary
Clay	MH-1E-1 to MH-1B-E	Holes, fractures, voids, cracks and offset joints were found throughout the asset Rehab Complete.	6.2025	6.2025	Rehab	Rehabilitation Complete See Commentary
Clay	MH-1E-FS to MH-1E-1	Holes, fractures, voids, cracks and offset joints found throughout the asset. Rehab Complete.	6.2025	6.2025	Rehab	Rehabilitation Complete See Commentary
Clay	MH-3-5FS to MH-4-5	Holes, fractures, cracks and offset joints found throughout the asset. Rehab Complete.	7.2025	7.2025	Rehab	Rehabilitation Complete See Commentary

PHASE MATURITY INDEX

Phase 1	Clean & Inspect Required	Phase 3	Asset needs 20K & RHD with Lining Rehab
Phase 2	Asset requires 20K & RHD cleaning	*	Asset not Inspected

MOTIVO™
Knowing What's Ahead.

RVI INSPECTION CAMPAIGN
P66 Ferndale Washington

Component Type	Component Identification	Findings Overview	Campaign Date Month/Year	Rehab Date	Phase Maturity	Actions
Clay	MH-7-5 to MH-3-5FS	Hard material, fractures and cracks found throughout the asset. Rehab complete.	6.2025	6.2025	Rehab	Rehabilitation Complete See Commentary
Clay	MH-9-4 to MH-1E-FS	Cracks, holes and separated joints found throughout the asset. Rehab complete.	6.2025	6.2025	Rehab	Rehabilitation Complete See Commentary
Clay	MH-9-4FS to MH-9-4	Cracks, holes and separated joints found throughout the asset. Rehab complete.	6.2025	6.2025	Rehab	Rehabilitation Complete See Commentary

PHASE MATURITY INDEX

Phase 1	Clean & Inspect Required	Phase 3	Asset needs 20K & RHD with Lining Rehab
Phase 2	Asset requires 20K & RHD cleaning	*	Asset not Inspected

LEGEND

COLLAPSE ×

CRACK

HOLE □

TAP FACTORY

ROOTS

DEPOSITS

GRADE

JOINT

FLOW →

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: N/A.

VIDEO OBSERVATONS: The pipe was clean, but had a crack at 10.25' & joint separation at 14.33'.

MISCELLANEOUS COMMENTS

Damaged segment of line has been rehabilitated.

ACTIVITY SEQUENCE

- ☐ PRE-INSPECTION
- ☐ MID-INSPECTION
- ☒ FINAL INSPECTION

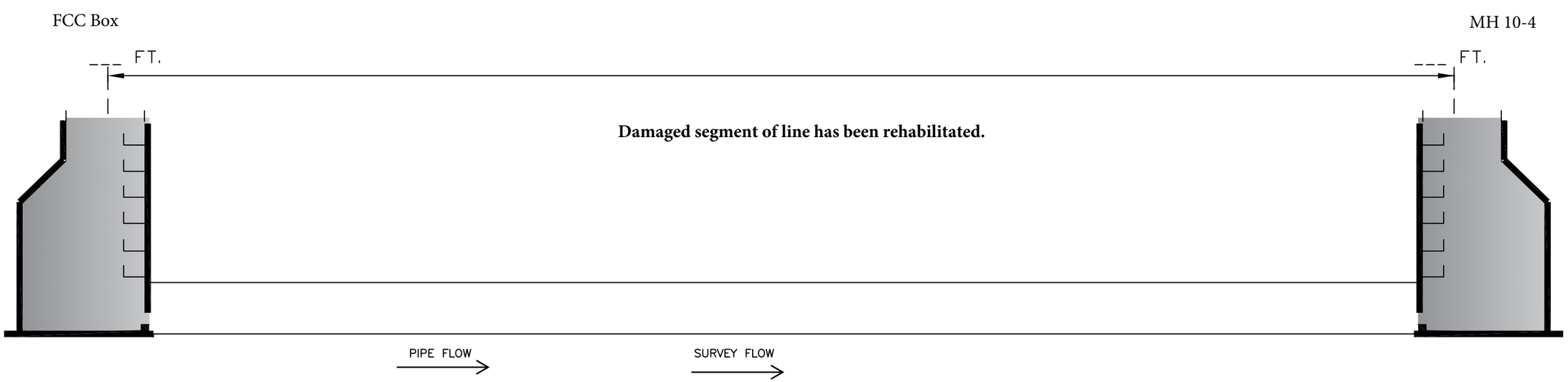
KEY ELEMENTS OF PROCESS

- ☐ OIL SLICK
- ☐ HEAT TRACE
  - ☐ Permanent
  - ☐ Temporary
- ☐ STEAM
- ☐ OTHER

If Other Please List:

ASSET SPECS

Pipe Size	24"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential
Other	Oily Water System



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH 10-4 to FCC Box	MH 10-4 to FCC Box	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

ASSET LOCATION: Ferndale Facility

ASSET NAME: MH 10-4 to FCC Box

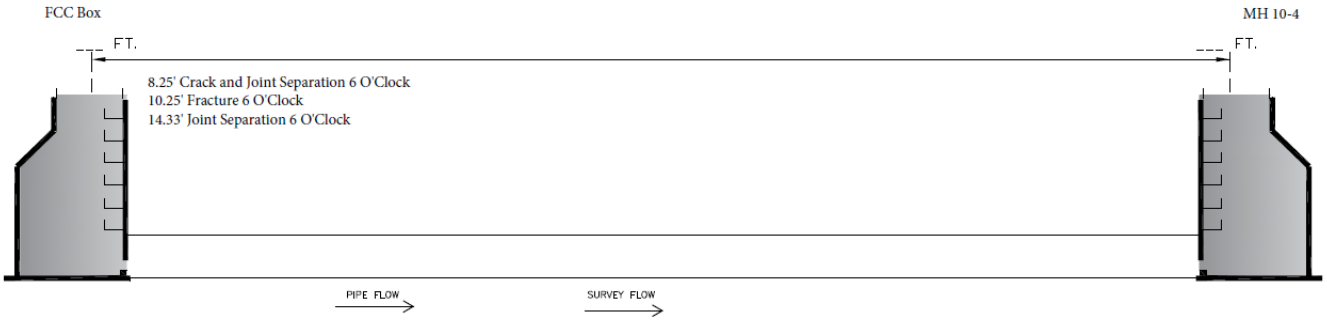
DATE OF SURVEY: 7.2025

SURVEY COMPANY: Motivo Group

INSPECTOR: King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:



RECOMMENDATIONS:

9.2025 Damaged segment of line has been rehabilitated.

COMMENTS





MH10-4 to FCC Box Rehabilitation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 10-4 to FCC Box	Oily Water System	INSPECTOR: King Todd



MH 10-4 to FCC Box
8.25' Crack and Joint Separation 6 O'Clock



MH 10-4 to FCC Box
10.25' Fracture 6 O'Clock



MH 10-4 to FCC Box
14.33' Joint Separation 6 O'Clock

LEGEND

COLLAPSE | CRACK | HOLE

TAP FACTORY | ROOTS | DEPOSITS

GRADE | JOINT | FLOW

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: Moderate to heavy debris and buildup were encountered at several joints and pipe sections. Buildup around service connects and a long pipe. Several areas had moderate cracking. Joints showed early signs of severe separation. Foreign objects, debris and heavy deposits were removed.

VIDEO OBSERVATONS: Numerous joint separations, offsets, cracks, and signs of deterioration were observed throughout the run. Several joints showed early signs of severe separation with noticeable separation at 254.3'. Cracking, corrosion, and gaps at multiple clock positions suggest structural wear.

MISCELLANEOUS COMMENTS

RECOMMENDATIONS: Line has been rehabilitated.

ACTIVITY SEQUENCE

- [ ] PRE-INSPECTION
- [ ] MID-INSPECTION
- [X] FINAL INSPECTION

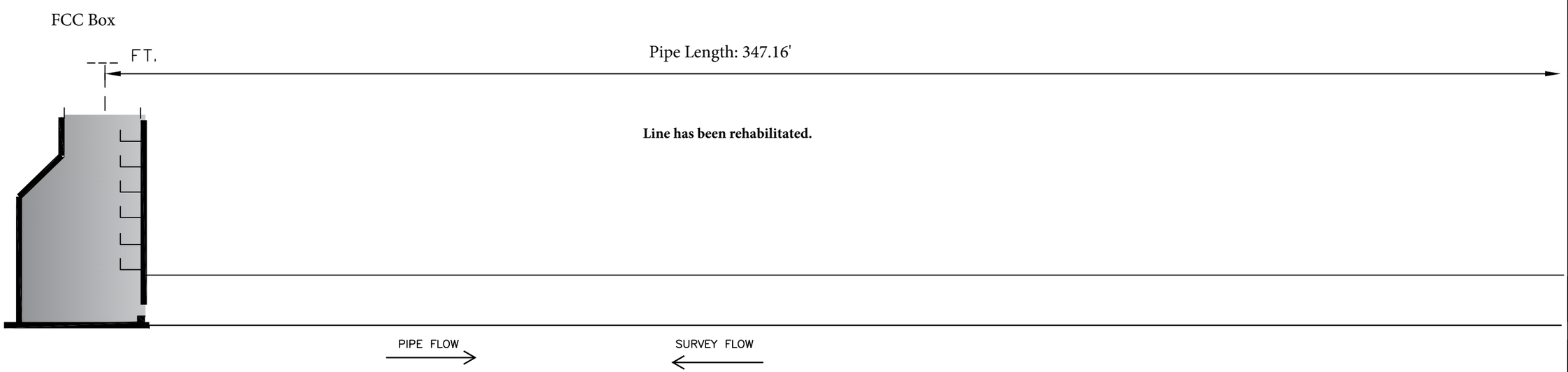
KEY ELEMENTS OF PROCESS

- [ ] OIL SLICK
- [ ] HEAT TRACE
  - [ ] Permanent
  - [ ] Temporary
- [ ] STEAM
- [ ] OTHER

If Other Please List:

ASSET SPECS

Pipe Size	18"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential
Other	Storm Water System Capacity of Line: 20%



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH 12-4 to FCC Box	MH 12-4 to FCC Box	9.2025

LEGEND

COLLAPSE ×

CRACK

HOLE □

TAP FACTORY

ROOTS

DEPOSITS

GRADE

JOINT

FLOW →

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: See Previous Page.

VIDEO OBSERVATONS: See Previous Page.

MISCELLANEOUS COMMENTS

RECOMMENDATIONS: See Previous Page.

ACTIVITY SEQUENCE

- ☐ PRE-INSPECTION
- ☐ MID-INSPECTION
- ☒ FINAL INSPECTION

KEY ELEMENTS OF PROCESS

- ☐ OIL SLICK
- ☐ HEAT TRACE
  - ☐ Permanent
  - ☐ Temporary
- ☐ STEAM
- ☐ OTHER

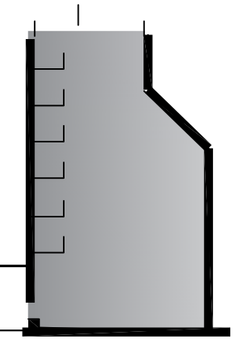
If Other Please List:

ASSET SPECS

Pipe Size	18"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential
Other	Storm Water System Capacity of Line: 20%

MH 12-4

FT. Pipe Length: 347.16' FT.



Line has been rehabilitated.

PIPE FLOW →

SURVEY FLOW ←

CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH 12-4 to FCC Box	MH 12-4 to FCC Box	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

ASSET LOCATION: Ferndale Facility

ASSET NAME: MH 12-4 to FCC Box

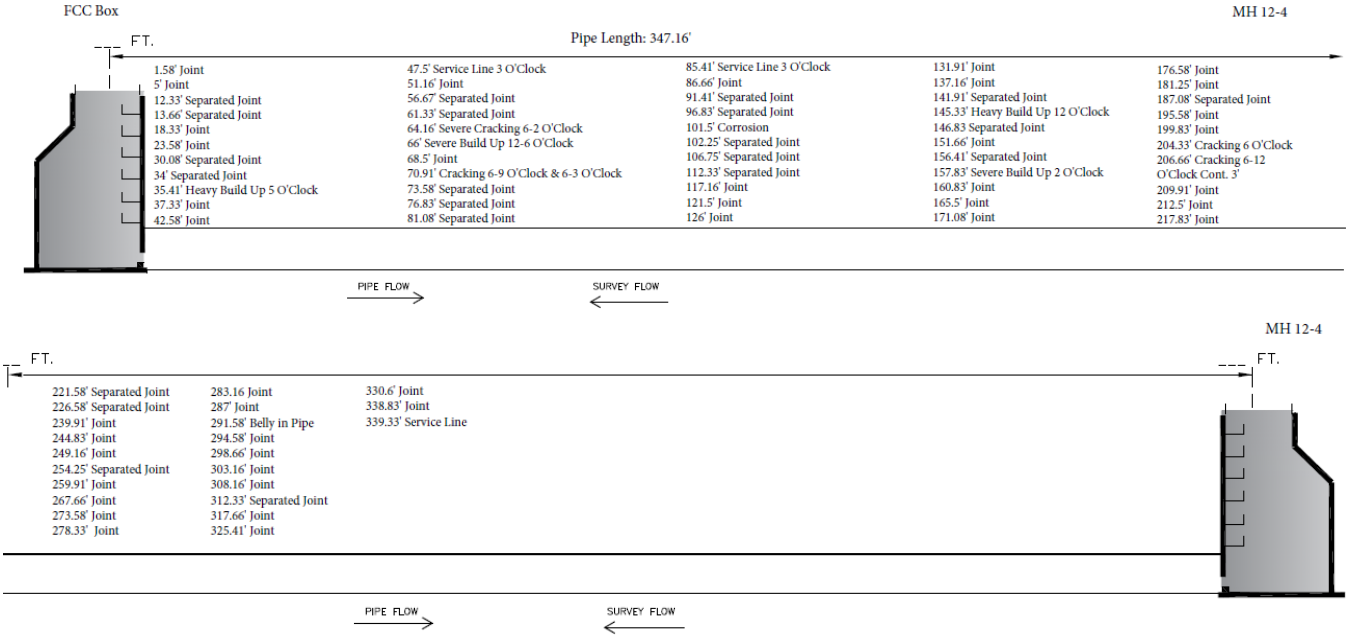
DATE OF SURVEY: 7.2025

SURVEY COMPANY: Motivo Group

INSPECTOR: King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:



RECOMMENDATIONS:

9.2025 - Line has been rehabilitated.

COMMENTS



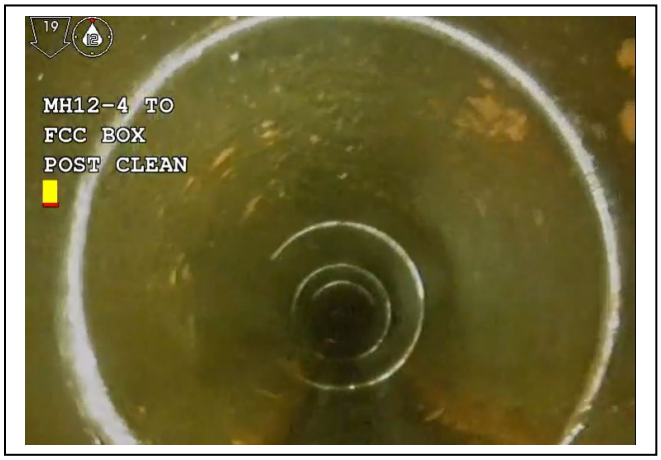


MH 12-4 to FCC Box Rehabilitation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to FCC Box	Storm Water System	INSPECTOR: King Todd



MH 12-4 to FCC Box
12.33' Separated Joint



MH 12-4 to FCC Box
13.66' Separated Joint



MH 12-4 to FCC Box
30.08' Separated Joint

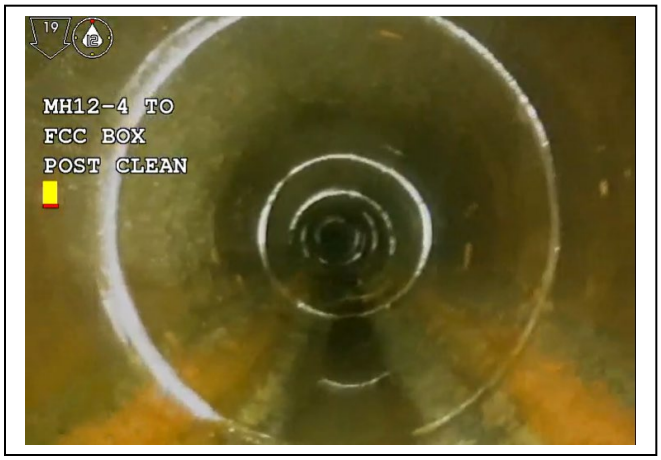


MH 12-4 to FCC Box
34' Separated Joint

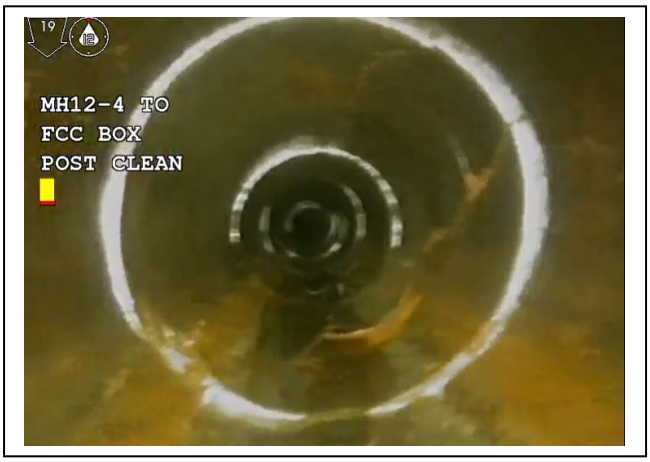
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to FCC Box	Storm Water System	INSPECTOR: King Todd



MH 12-4 to FCC Box
35.41' Heavy Build Up 5 O'Clock



MH 12-4 to FCC Box
56.67' Separated Joint



MH 12-4 to FCC Box
61.33' Separated Joint



MH 12-4 to FCC Box
64.16' Severe Cracking 6-2 O'Clock

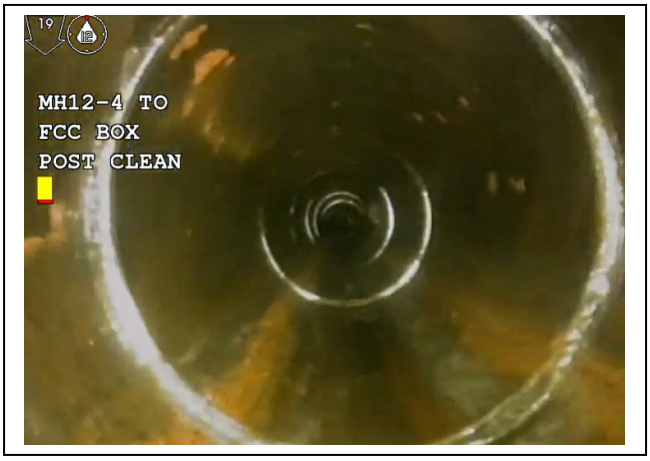
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to FCC Box	Storm Water System	INSPECTOR: King Todd



MH 12-4 to FCC Box
66' Severe Build Up 12-6 O'Clock



MH 12-4 to FCC Box
70.91' Cracking 6-9 O'Clock & 6-3 O'Clock

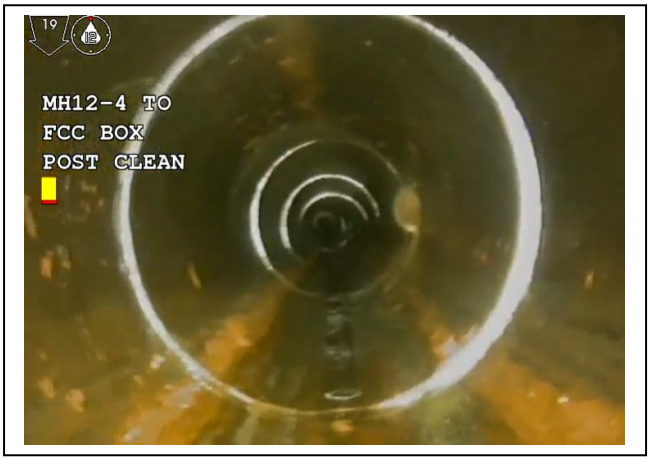


MH 12-4 to FCC Box
73.58' Separated Joint



MH 12-4 to FCC Box
76.83' Separated Joint

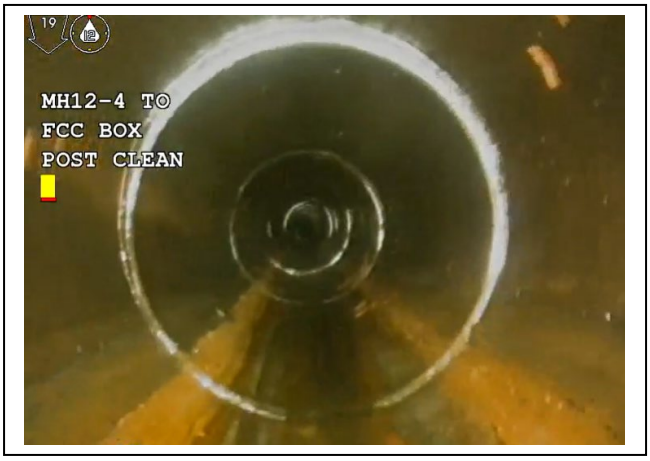
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to FCC Box	Storm Water System	INSPECTOR: King Todd



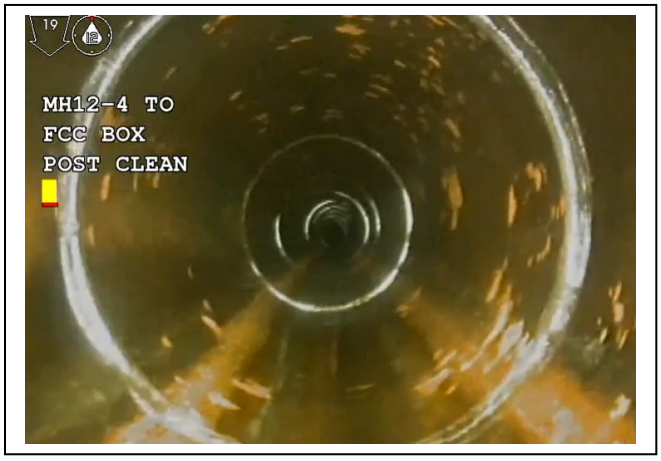
MH 12-4 to FCC Box
81.08' Separated Joint



MH 12-4 to FCC Box
91.41' Separated Joint



MH 12-4 to FCC Box
96.83' Separated Joint

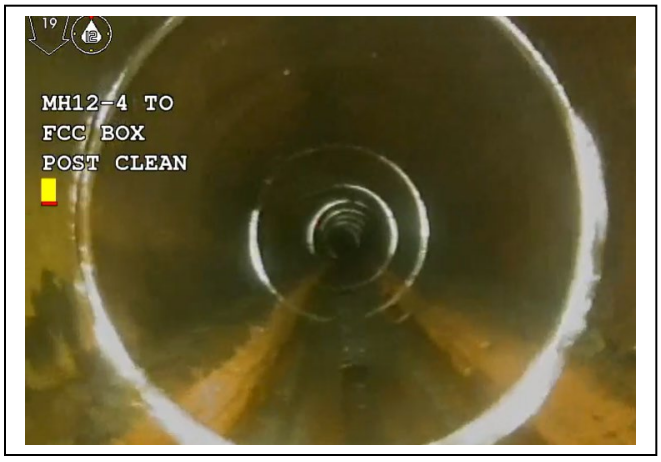


MH 12-4 to FCC Box
101.5' Corrosion

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to FCC Box	Storm Water System	INSPECTOR: King Todd



MH 12-4 to FCC Box
102.25' Separated Joint



MH 12-4 to FCC Box
106.75' Separated Joint



MH 12-4 to FCC Box
112.33' Separated Joint



MH 12-4 to FCC Box
141.91' Separated Joint

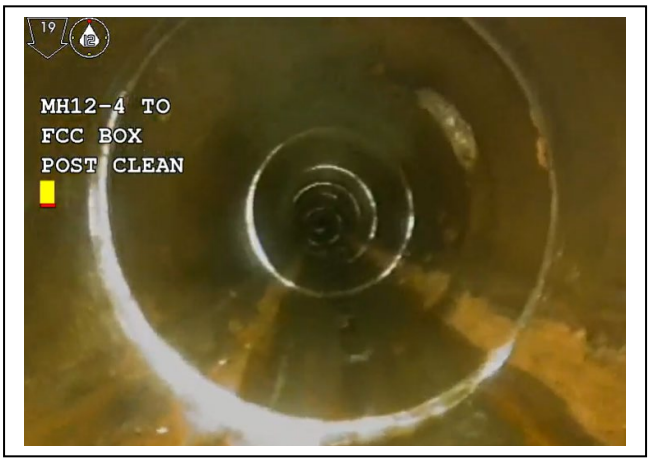
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to FCC Box	Storm Water System	INSPECTOR: King Todd



MH 12-4 to FCC Box
145.33' Heavy Build Up 12 O'Clock



MH 12-4 to FCC Box
146.83' Separated Joint



MH 12-4 to FCC Box
156.41' Separated Joint

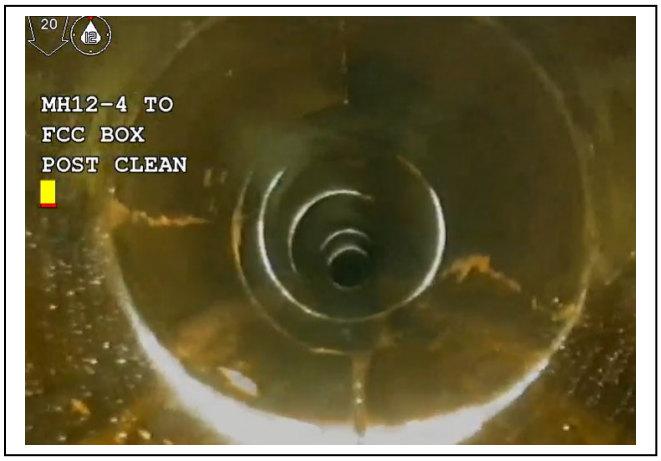


MH 12-4 to FCC Box
157.83' Severe Build Up 2 O'Clock

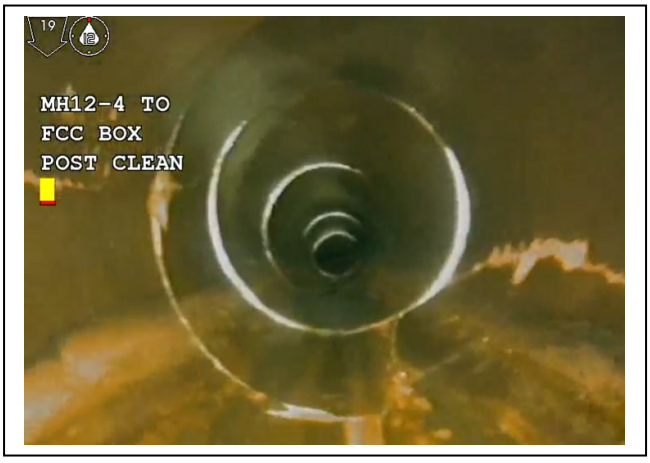
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to FCC Box	Storm Water System	INSPECTOR: King Todd



MH 12-4 to FCC Box
187.08' Separated Joint



MH 12-4 to FCC Box
204.33' Cracking 6 O'Clock

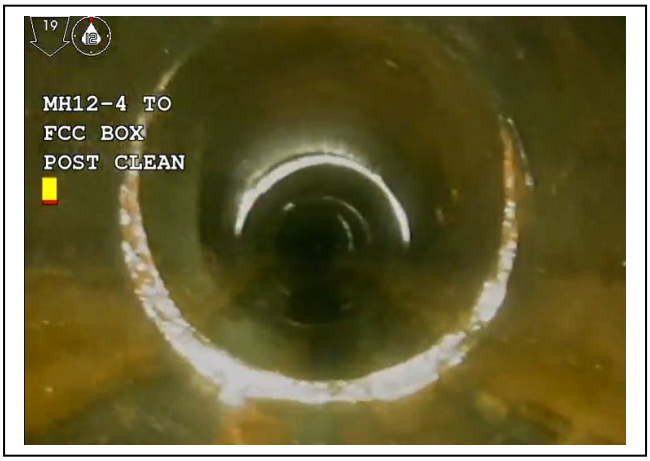


MH 12-4 to FCC Box
206.66' Cracking 6-12 O'Clock Cont. 3'

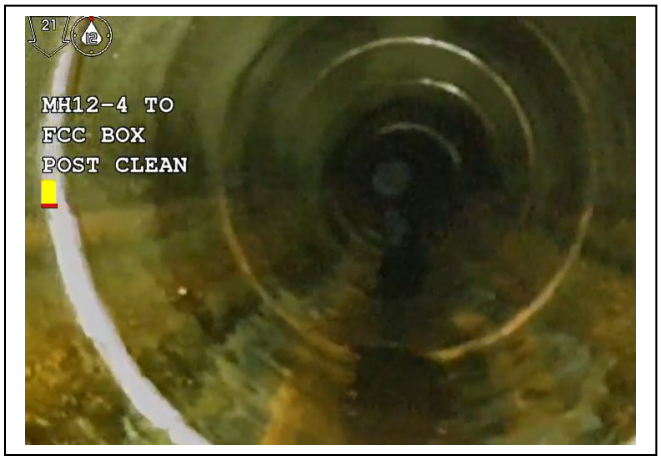


MH 12-4 to FCC Box
221.58' Separated Joint

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to FCC Box	Storm Water System	INSPECTOR: King Todd



MH 12-4 to FCC Box
226.58' Separated Joint



MH 12-4 to FCC Box
254.25' Separated Joint



MH 12-4 to FCC Box
291.58' Belly in Pipe



MH 12-4 to FCC Box
312.33' Separated Joint

LEGEND

COLLAPSE | CRACK | HOLE

TAP FACTORY | ROOTS | DEPOSITS

GRADE | JOINT | FLOW

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: Heavy debris and build up throughout multiple sections of the pipe. Multiple areas required aggressive cleaning, particularly near joints. Noticeable hard build up and corrosion present at several points. Significant foreign objects and hard deposits were removed from the line.

VIDEO OBSERVATONS: Frequent joint separation and vertical offsets - severe displacement at 109.4'. Multiple joints showed cracking, corrosion, and debris buildup. Severe structural concerns.

MISCELLANEOUS COMMENTS

RECOMMENDATIONS: Line has been rehabilitated.

ACTIVITY SEQUENCE

- [ ] PRE-INSPECTION
- [ ] MID-INSPECTION
- [X] FINAL INSPECTION

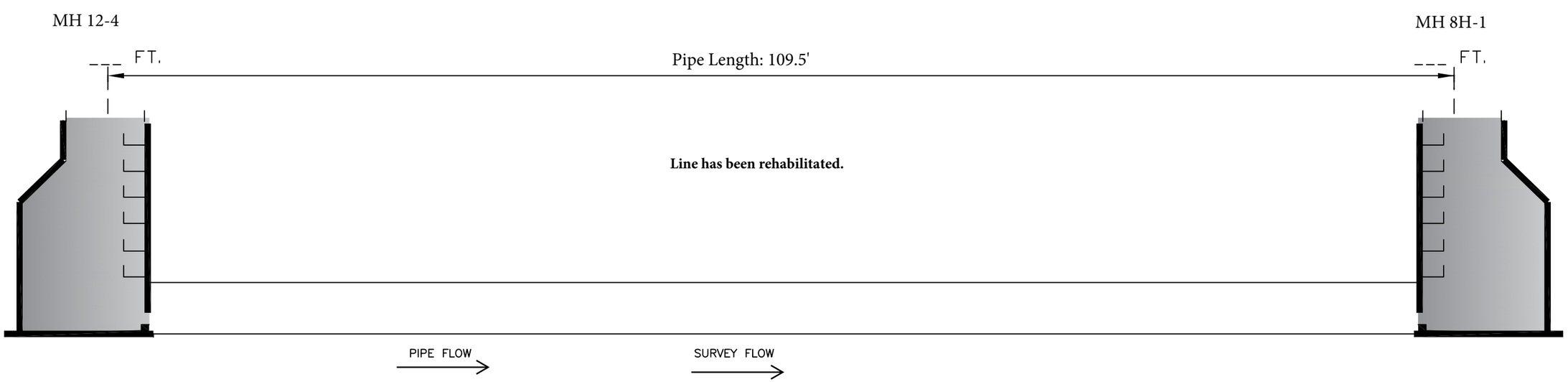
KEY ELEMENTS OF PROCESS

- [X] OIL SLICK
- [ ] HEAT TRACE
  - [ ] Permanent
  - [ ] Temporary
- [ ] STEAM
- [ ] OTHER

If Other Please List:

ASSET SPECS

Pipe Size	18"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential Oily
Other	Storm Water System Capacity of Line: 20%



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH 12-4 to MH 8H-1	MH 12-4 to MH 8H-1	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

ASSET LOCATION: Ferndale Facility

ASSET NAME: MH 12-4 to MH 8H-1

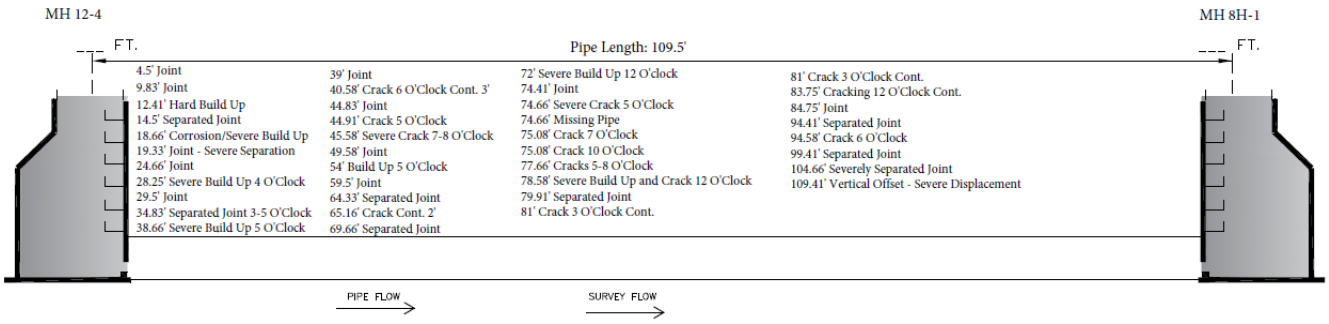
DATE OF SURVEY: 7.2025

SURVEY COMPANY: Motivo Group

INSPECTOR: King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:



RECOMMENDATIONS:

9.2025 - Line has been rehabilitated.

COMMENTS





MH-12-4 to MH8H-1 Rehabilitation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to MH 8H-1	Storm Water System	INSPECTOR: King Todd



MH 12-4 to MH 8H-1
12.41' Hard Build Up



MH 12-4 to MH 8H-1
14.5' Separated Joint



MH 12-4 to MH 8H-1
18.66' Corrosion/Severe Build Up



MH 12-4 to MH 8H-1
19.33' Joint - Severe Separation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to MH 8H-1	Storm Water System	INSPECTOR: King Todd



MH 12-4 to MH 8H-1
28.25' Severe Build Up 4 O'Clock



MH 12-4 to MH 8H-1
34.83' Separated Joint 3-5 O'Clock



MH 12-4 to MH 8H-1
38.66' Severe Build Up 5 O'Clock



MH 12-4 to MH 8H-1
40.58' Crack 6 O'Clock Cont. 3'

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to MH 8H-1	Storm Water System	INSPECTOR: King Todd



MH 12-4 to MH 8H-1
44.91' Crack 5 O'Clock



MH 12-4 to MH 8H-1
45.58' Severe Crack 7-8 O'Clock



MH 12-4 to MH 8H-1
54' Build Up 5 O'Clock



MH 12-4 to MH 8H-1
64.33' Separated Joint

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to MH 8H-1	Storm Water System	INSPECTOR: King Todd



MH 12-4 to MH 8H-1
65.16' Crack Cont. 2'



MH 12-4 to MH 8H-1
69.66' Separated Joint



MH 12-4 to MH 8H-1
72' Severe Build Up 12 O'clock



MH 12-4 to MH 8H-1
74.66' Severe Crack 5 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to MH 8H-1	Storm Water System	INSPECTOR: King Todd



MH 12-4 to MH 8H-1
74.66' Missing Pipe



MH 12-4 to MH 8H-1
75.08' Crack 7 O'Clock

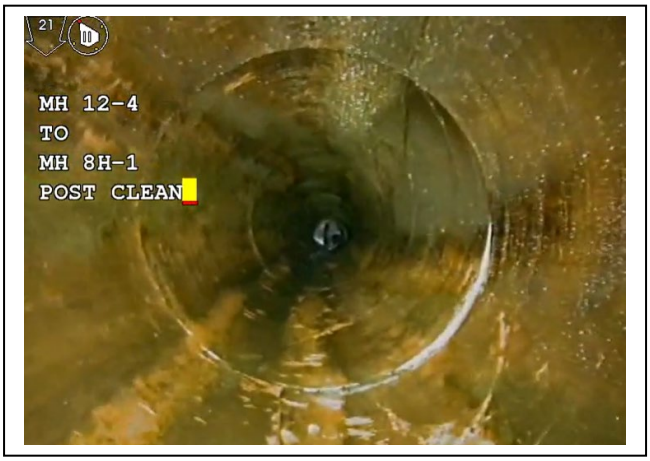


MH 12-4 to MH 8H-1
75.08' Crack 10 O'Clock



MH 12-4 to MH 8H-1
77.66' Cracks 5-8 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to MH 8H-1	Storm Water System	INSPECTOR: King Todd



MH 12-4 to MH 8H-1
78.58' Severe Build Up and Crack 12 O'Clock



MH 12-4 to MH 8H-1
79.91' Separated Joint

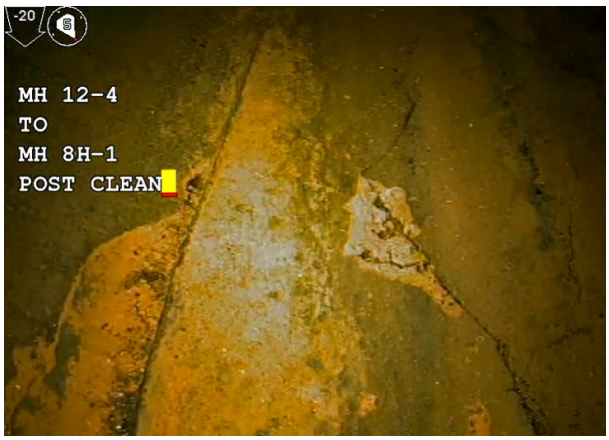


MH 12-4 to MH 8H-1
81' Crack 3 O'Clock Cont.



MH 12-4 to MH 8H-1
81' Crack 3 O'Clock Cont.

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to MH 8H-1	Storm Water System	INSPECTOR: King Todd



MH 12-4 to MH 8H-1
83.75' Cracking 12 O'Clock Cont.



MH 12-4 to MH 8H-1
94.41' Separated Joint



MH 12-4 to MH 8H-1
94.58' Crack 6 O'Clock



MH 12-4 to MH 8H-1
99.41' Separated Joint

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH 12-4 to MH 8H-1	Storm Water System	INSPECTOR: King Todd



MH 12-4 to MH 8H-1
104.66' Severely Separated Joint



MH 12-4 to MH 8H-1
109.41' Vertical Offset - Severe

LEGEND

COLLAPSE | CRACK | HOLE

TAP FACTORY | ROOTS | DEPOSITS

GRADE | JOINT | FLOW

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: Need to clean the line using the jetter and pull back nozzle.

VIDEO OBSERVATONS: Separated joints, cracks and voids found.

MISCELLANEOUS COMMENTS

Line has been rehabilitated.

ACTIVITY SEQUENCE

- [ ] PRE-INSPECTION
- [ ] MID-INSPECTION
- [X] FINAL INSPECTION

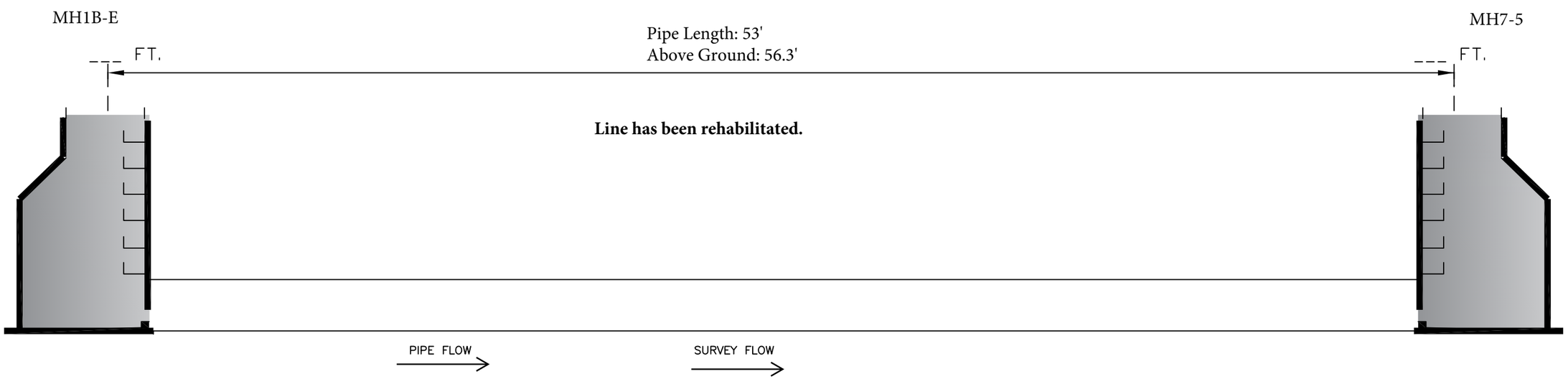
KEY ELEMENTS OF PROCESS

- [X] OIL SLICK
- [ ] HEAT TRACE
  - [ ] Permanent
  - [ ] Temporary
- [ ] STEAM
- [ ] OTHER

If Other Please List:

ASSET SPECS

Pipe Size	8"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential Oily
Other	Oily Water System Capacity of Line: 51% Major Path Paved: 4



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH1B-E to MH7-5	MH1B-E to MH7-5	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

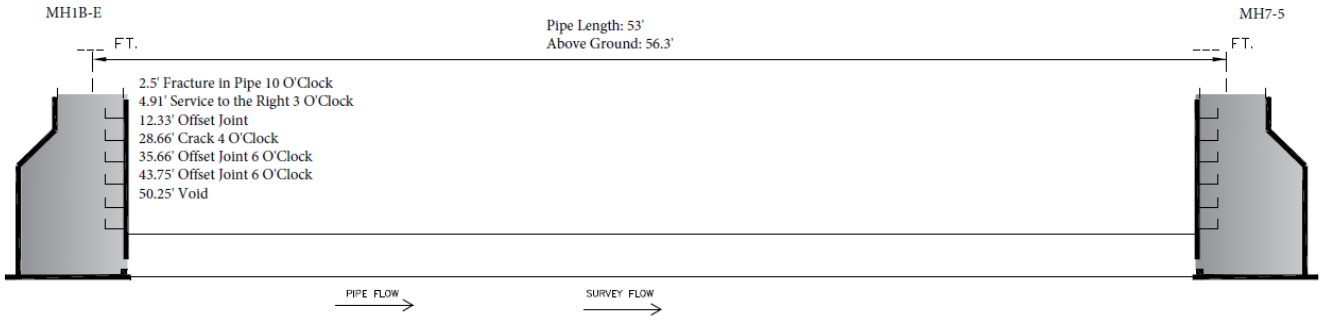
ASSET LOCATION: Ferndale Facility

ASSET NAME: MH1B-E to MH7-5 **DATE OF SURVEY**: 6.2025

SURVEY COMPANY: Motivo Group **INSPECTOR:** King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:



RECOMMENDATIONS:

9.2025 - Line has been rehabilitated.

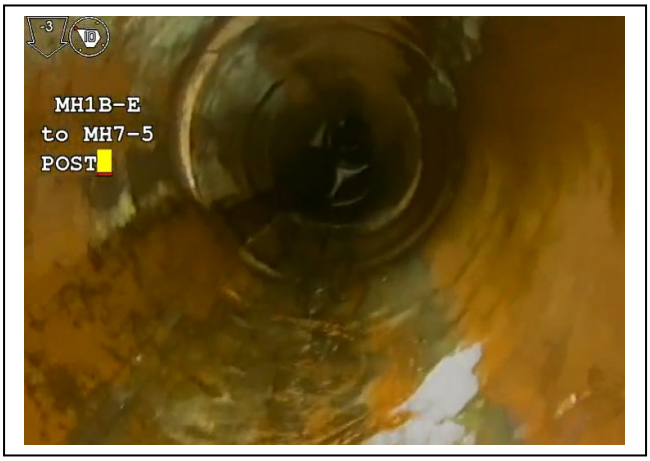
COMMENTS





MH1B-E to MH7-5Rehabilitation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1B-E to MH7-5	Oily Water System	INSPECTOR: King Todd



MH1B-E to MH7-5
2.5' Fracture in Pipe 10 O'Clock



MH1B-E to MH7-5
4.91' Service to the Right 3 O'Clock

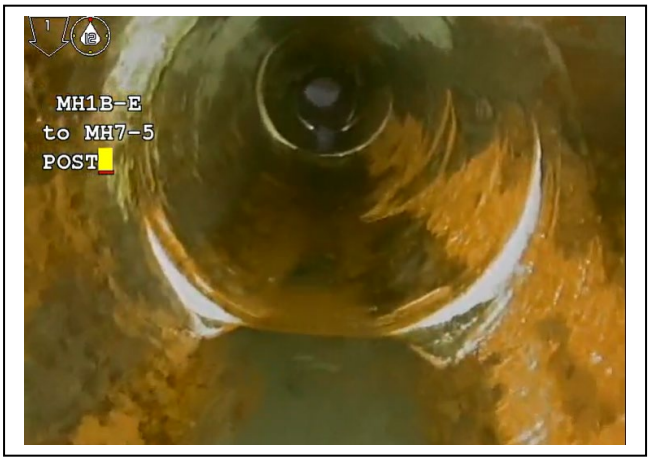


MH1B-E to MH7-5
12.33' Offset Joint



MH1B-E to MH7-5
28.66' Crack 4 O'Clock

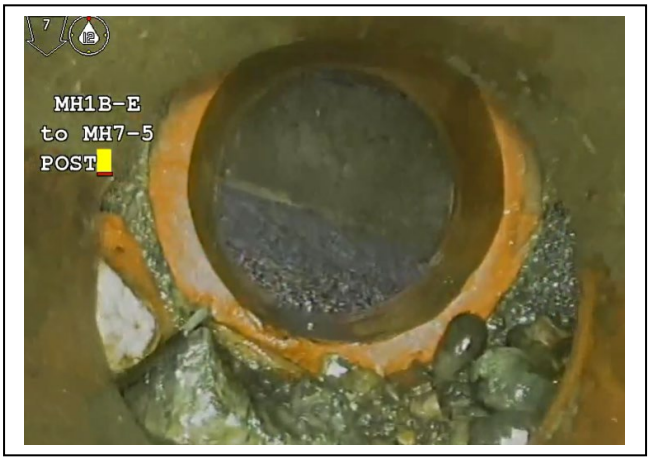
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1B-E to MH7-5	Oily Water System	INSPECTOR: King Todd



MH1B-E to MH7-5
35.66' Offset Joint 6 O'Clock



MH1B-E to MH7-5
43.75' Offset Joint 6 O'Clock



MH1B-E to MH7-5
50.25' Void

LEGEND

COLLAPSE | CRACK | HOLE

TAP FACTORY | ROOTS | DEPOSITS

GRADE | JOINT | FLOW

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: Heavy grime, hard build up, hard material, and rocks were removed from the line using the pull back nozzle.

VIDEO OBSERVATONS: Voids, separated joints, and cracks were found.

MISCELLANEOUS COMMENTS

Line has been rehabilitated.

ACTIVITY SEQUENCE

- [ ] PRE-INSPECTION
- [ ] MID-INSPECTION
- [X] FINAL INSPECTION

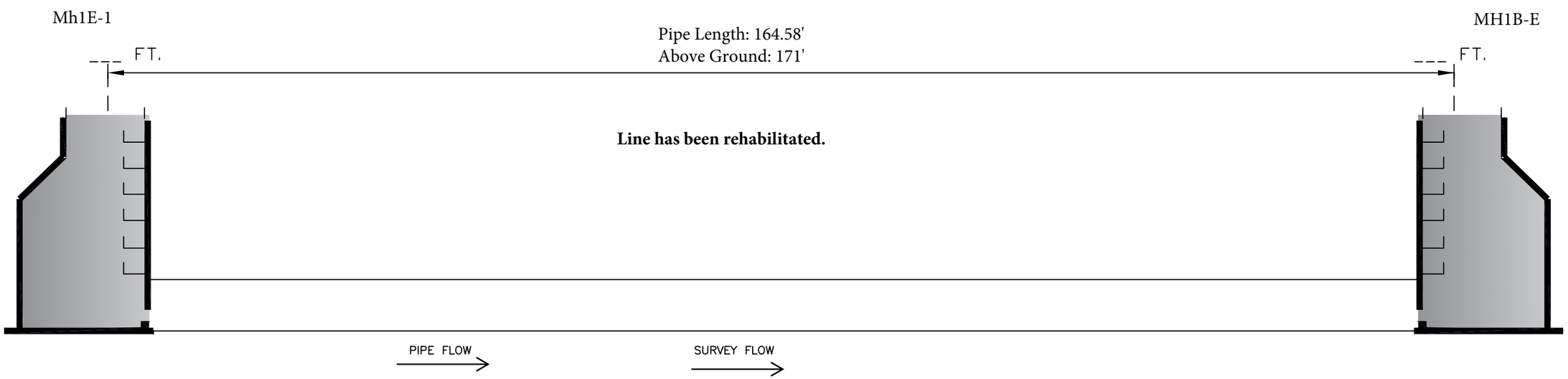
KEY ELEMENTS OF PROCESS

- [X] OIL SLICK
- [ ] HEAT TRACE
  - [ ] Permanent
  - [ ] Temporary
- [ ] STEAM
- [ ] OTHER

If Other Please List:

ASSET SPECS

Pipe Size	8"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential
Other	Oily Water System Capacity of Line: 57% Major Path Paved: 4



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH1E-1 to MH1B-E	MH1E-1 to MH1B-E	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

ASSET LOCATION: Ferndale Facility

ASSET NAME: Mh1E-1 to MH1B-E

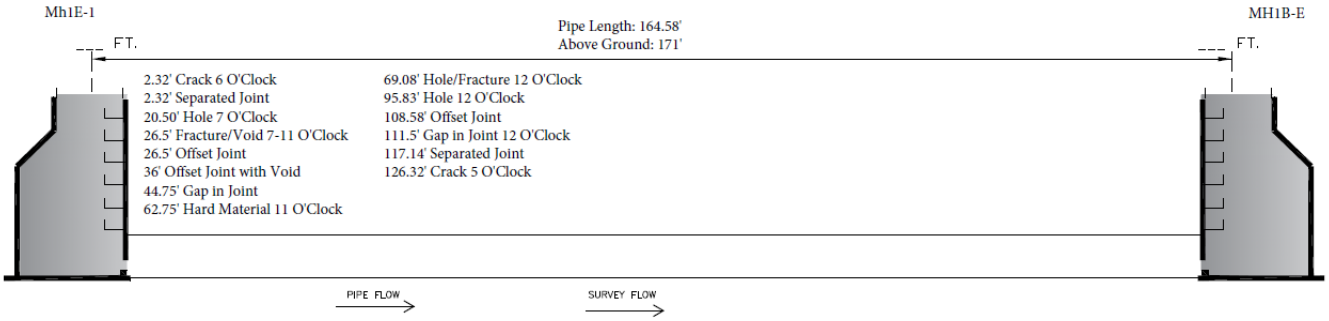
DATE OF SURVEY: 6.2025

SURVEY COMPANY: Motivo Group

INSPECTOR: King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:

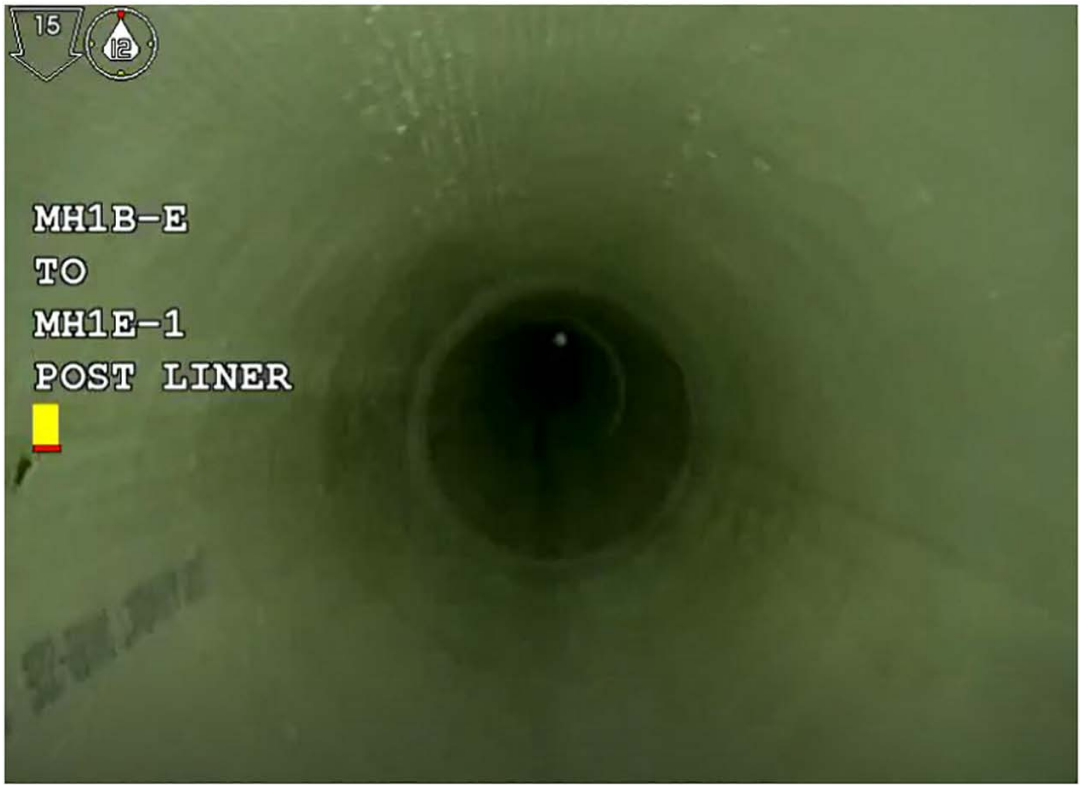


RECOMMENDATIONS:

9.2025 - Line has been rehabilitated.

COMMENTS





MH1E-1 to MH1B-E Rehabilitation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh1E-1 to MH1B-E	Oily Water System	INSPECTOR: King Todd



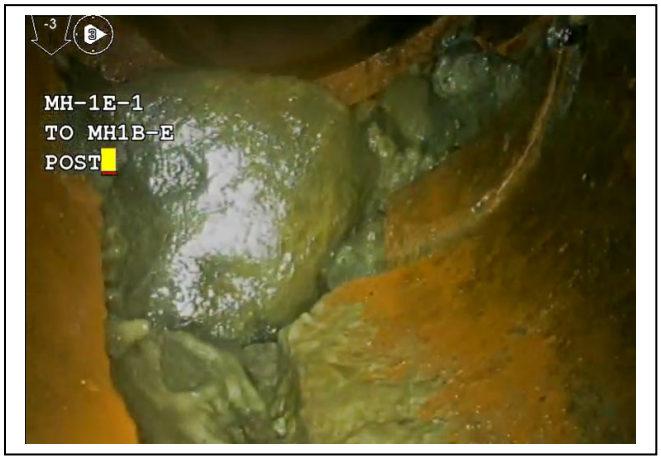
Mh1E-1 to MH1B-E
2.32' Crack 6 O'Clock



Mh1E-1 to MH1B-E
2.32' Separated Joint



Mh1E-1 to MH1B-E
20.50' Hole 7 O'Clock



Mh1E-1 to MH1B-E
26.5' Fracture/Void 7-11 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh1E-1 to MH1B-E	Oily Water System	INSPECTOR: King Todd



Mh1E-1 to MH1B-E
26.5' Offset Joint



Mh1E-1 to MH1B-E
36' Offset Joint with Void



Mh1E-1 to MH1B-E
44.75' Gap in Joint

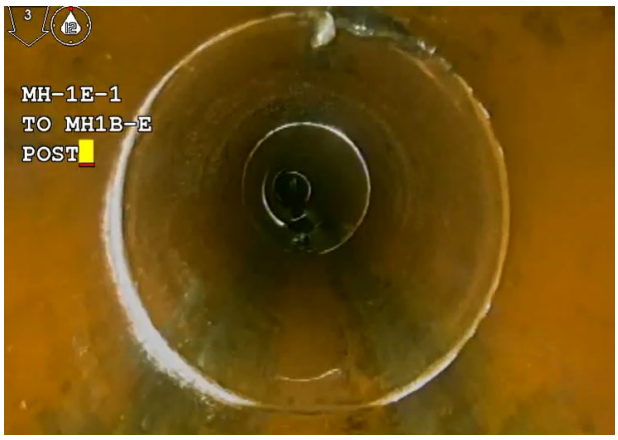


Mh1E-1 to MH1B-E
62.75' Hard Material 11 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh1E-1 to MH1B-E	Oily Water System	INSPECTOR: King Todd



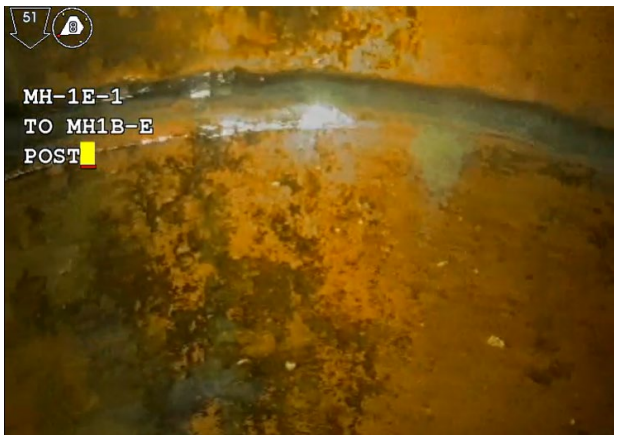
Mh1E-1 to MH1B-E
69.08' Hole/Fracture 12 O'Clock



Mh1E-1 to MH1B-E
95.83' Hole 12 O'Clock



Mh1E-1 to MH1B-E
108.58' Offset Joint

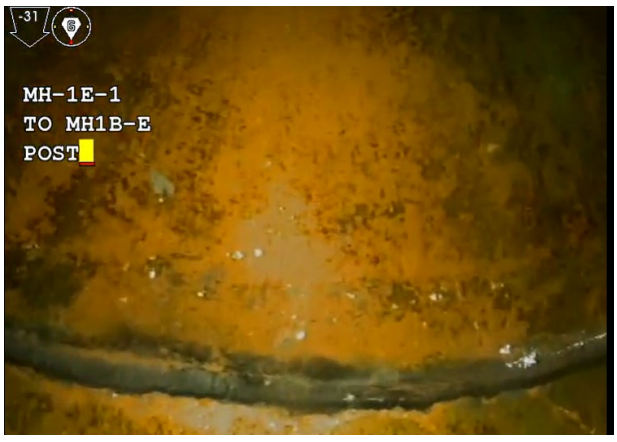


Mh1E-1 to MH1B-E
111.5' Gap in Joint 12 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh1E-1 to MH1B-E	Oily Water System	INSPECTOR: King Todd



Mh1E-1 to MH1B-E
117.14' Separated Joint



Mh1E-1 to MH1B-E
126.32' Crack 5 O'Clock

LEGEND

COLLAPSE | CRACK | HOLE

TAP FACTORY | ROOTS | DEPOSITS

GRADE | JOINT | FLOW

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: This line was cleaned with the jetter to remove build up, extensive water, and rocks.

VIDEO OBSERVATONS: Fractures, possible voids, cracks, and offset joints were found throughout the line.

MISCELLANEOUS COMMENTS

Line has been rehabilitated.

ACTIVITY SEQUENCE

- [ ] PRE-INSPECTION
- [ ] MID-INSPECTION
- [X] FINAL INSPECTION

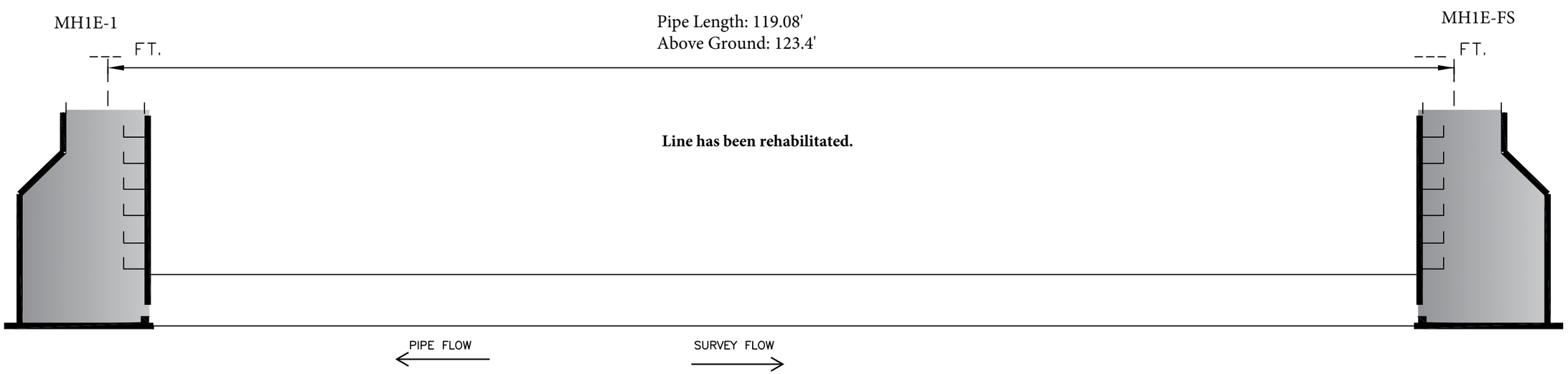
KEY ELEMENTS OF PROCESS

- [X] OIL SLICK
- [ ] HEAT TRACE
  - [ ] Permanent
  - [ ] Temporary
- [ ] STEAM
- [ ] OTHER

If Other Please List:

ASSET SPECS

Pipe Size	8"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential Oily
Other	Oily Water System Capacity of Line: 55% Major Path Paved: 4



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH1E-FS To MH1E-1	MH1E-FS To MH1E-1	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

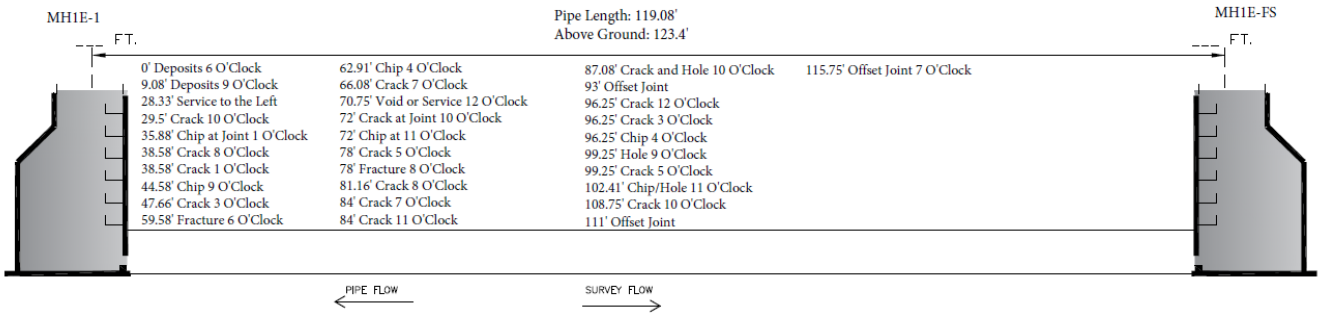
ASSET LOCATION: Ferndale Facility

ASSET NAME: MH1E-FS To MH1E-1 **DATE OF SURVEY**: 6.2025

SURVEY COMPANY: Motivo Group **INSPECTOR:** King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:



RECOMMENDATIONS:

9.2025 - Line has been rehabilitated.

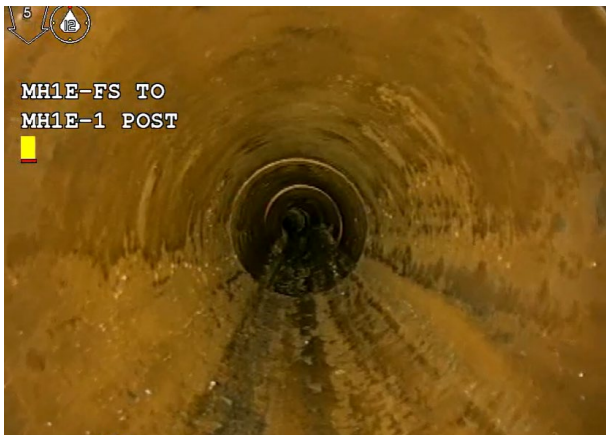
COMMENTS





MH1E-FS To MH1E-1 Rehabilitation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1E-FS To MH1E-1	Oily Water System	INSPECTOR: King Todd



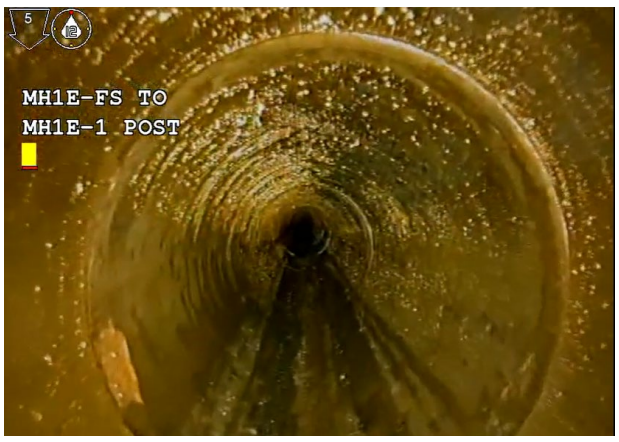
MH1E-FS To MH1E-1
0' Deposits 6 O'Clock



MH1E-FS To MH1E-1
9.08' Deposits 9 O'Clock

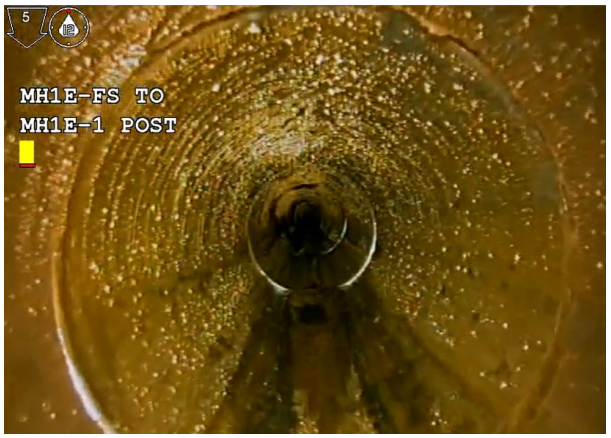


MH1E-FS To MH1E-1
28.33' Service to the Left



MH1E-FS To MH1E-1
29.5' Crack 10 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1E-FS To MH1E-1	Oily Water System	INSPECTOR: King Todd



MH1E-FS To MH1E-1
35.88' Chip at Joint 1 O'Clock



MH1E-FS To MH1E-1
38.58' Crack 8 O'Clock



MH1E-FS To MH1E-1
38.58' Crack 1 O'Clock



MH1E-FS To MH1E-1
44.58' Chip 9 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1E-FS To MH1E-1	Oily Water System	INSPECTOR: King Todd



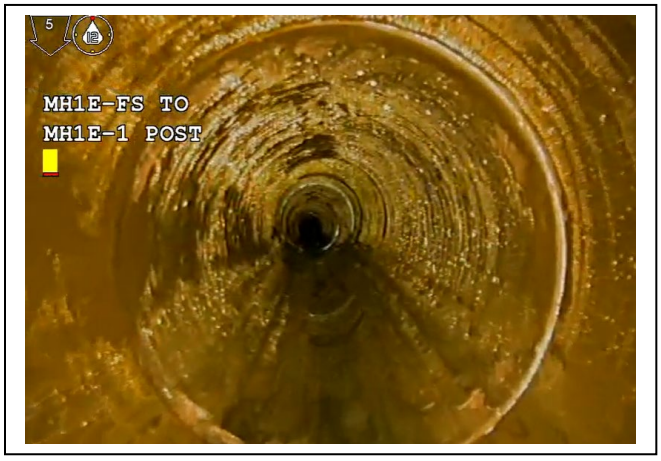
MH1E-FS To MH1E-1
47.66' Crack 3 O'Clock



MH1E-FS To MH1E-1
59.58' Fracture 6 O'Clock



MH1E-FS To MH1E-1
62.91' Chip 4 O'Clock



MH1E-FS To MH1E-1
66.08' Crack 7 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1E-FS To MH1E-1	Oily Water System	INSPECTOR: King Todd



MH1E-FS To MH1E-1
70.75' Void or Service 12 O'Clock



MH1E-FS To MH1E-1
72' Crack at Joint 10 O'Clock



MH1E-FS To MH1E-1
72' Chip at 11 O'Clock



MH1E-FS To MH1E-1
78' Crack 5 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1E-FS To MH1E-1	Oily Water System	INSPECTOR: King Todd



MH1E-FS To MH1E-1
78' Fracture 8 O'Clock



MH1E-FS To MH1E-1
81.16' Crack 8 O'Clock



MH1E-FS To MH1E-1
84' Crack 7 O'Clock



MH1E-FS To MH1E-1
84' Crack 11 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1E-FS To MH1E-1	Oily Water System	INSPECTOR: King Todd



MH1E-FS To MH1E-1
87.08' Crack and Hole 10 O'Clock



MH1E-FS To MH1E-1
93' Offset Joint



MH1E-FS To MH1E-1
96.25' Crack 12 O'Clock

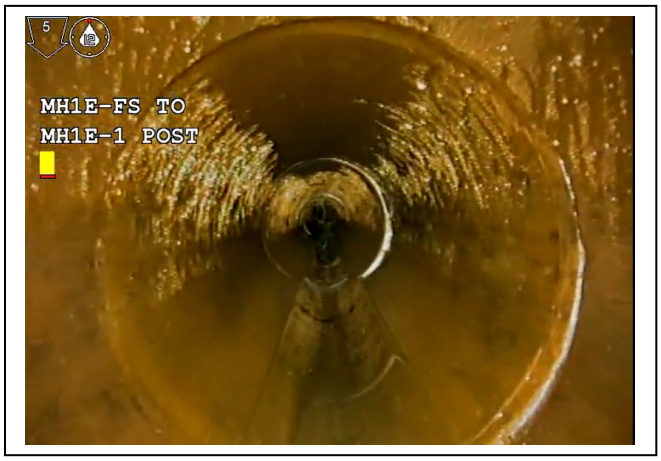


MH1E-FS To MH1E-1
96.25' Crack 3 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1E-FS To MH1E-1	Oily Water System	INSPECTOR: King Todd



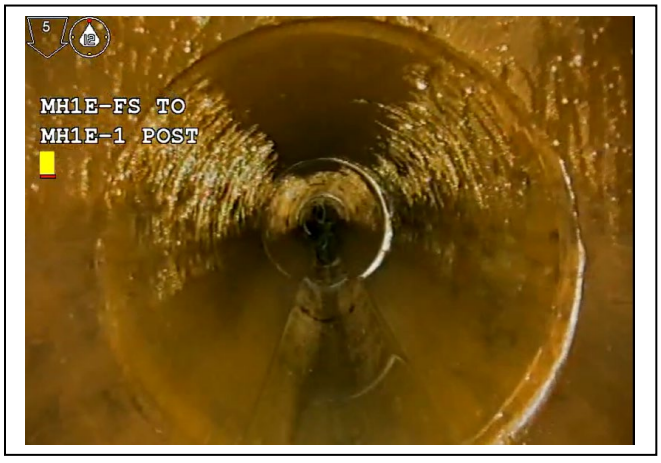
MH1E-FS To MH1E-1
96.25' Chip 4 O'Clock



MH1E-FS To MH1E-1
99.25' Hole 9 O'Clock



MH1E-FS To MH1E-1
99.25' Crack 5 O'Clock

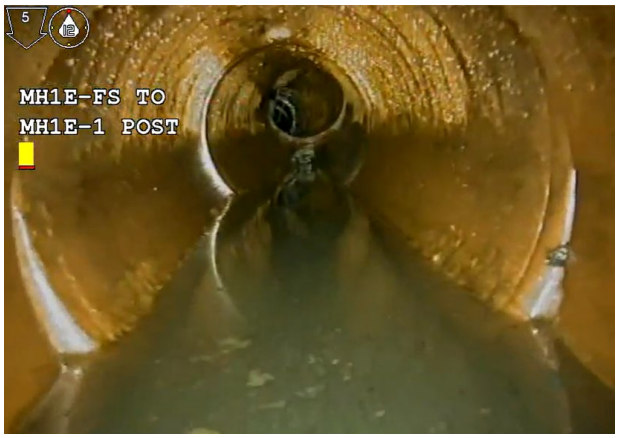


MH1E-FS To MH1E-1
102.41' Chip/Hole 11 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH1E-FS To MH1E-1	Oily Water System	INSPECTOR: King Todd



MH1E-FS To MH1E-1
108.75' Crack 10 O'Clock



MH1E-FS To MH1E-1
111' Offset Joint



MH1E-FS To MH1E-1
115.75' Offset Joint 7 O'Clock

LEGEND

COLLAPSE | CRACK | HOLE

TAP FACTORY | ROOTS | DEPOSITS

GRADE | JOINT | FLOW

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: Cleaned with the jetter using the pullback nozzle.

VIDEO OBSERVATONS: Offset joints, fractures, and hard material found throughout.

MISCELLANEOUS COMMENTS

Line has been rehabilitated.

ACTIVITY SEQUENCE

- [ ] PRE-INSPECTION
- [ ] MID-INSPECTION
- [X] FINAL INSPECTION

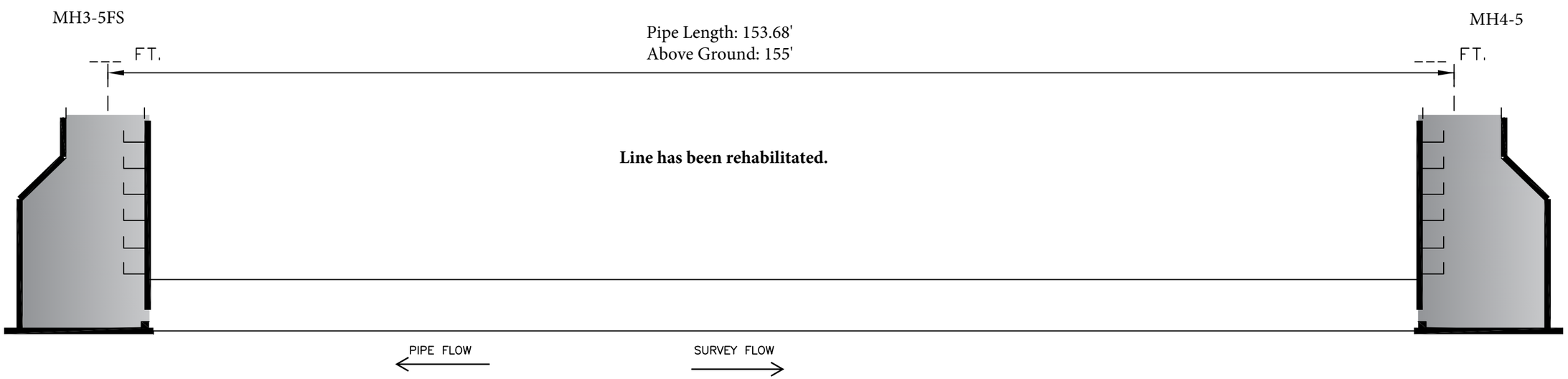
KEY ELEMENTS OF PROCESS

- [X] OIL SLICK
- [ ] HEAT TRACE
  - [ ] Permanent
  - [ ] Temporary
- [ ] STEAM
- [ ] OTHER

If Other Please List:

ASSET SPECS

Pipe Size	10"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential Oily
Other	Oily Water System Capacity of Line: 53% Major Path Paved: 4



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH3-5FS to MH4-5	MH3-5FS to MH4-5	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

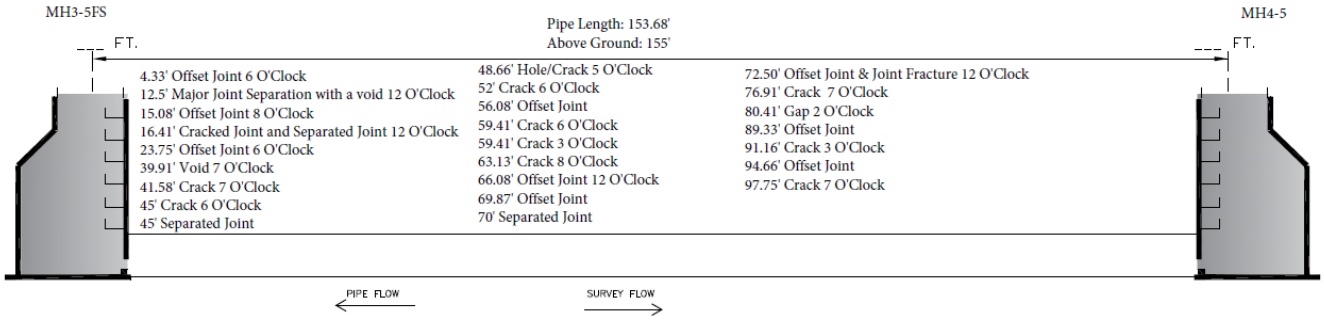
ASSET LOCATION: Ferndale Facility

ASSET NAME: MH3-5FS to MH4-5 **DATE OF SURVEY**: 7.2025

SURVEY COMPANY: Motivo Group **INSPECTOR:** King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:



RECOMMENDATIONS:

9.2025 - Line has been rehabilitated.

COMMENTS



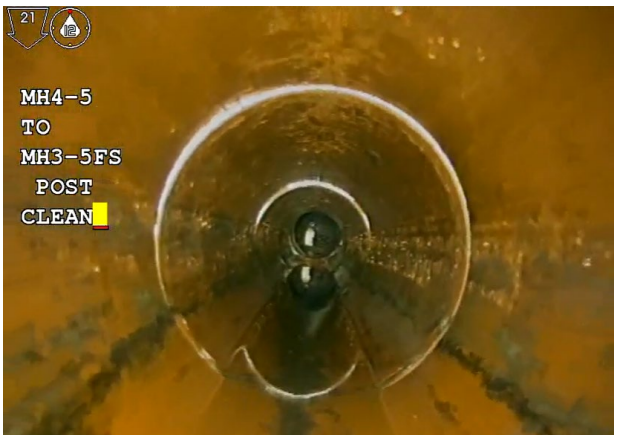


MH3-5FS to MH4-5 Rehabilitation

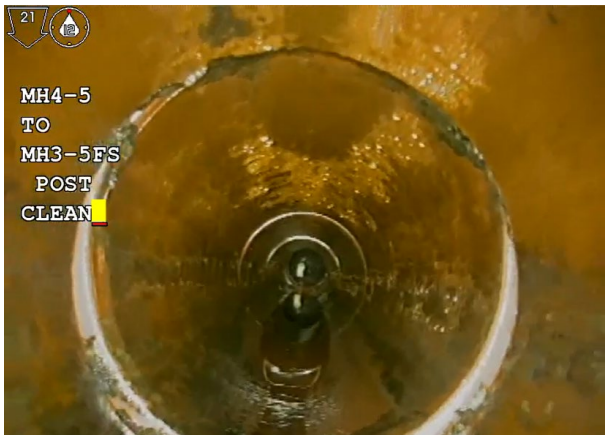
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH3-5FS to MH4-5	Oily Water System	INSPECTOR: King Todd



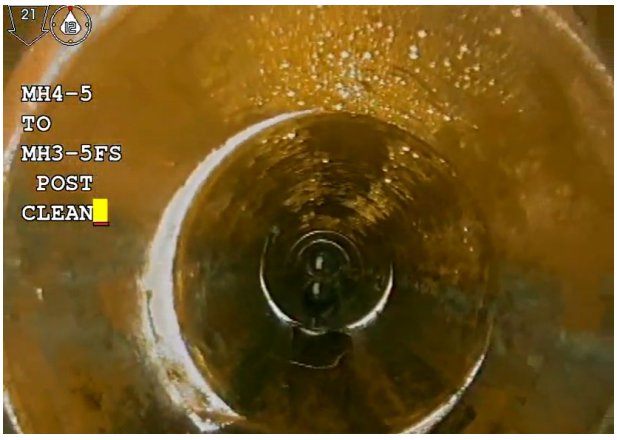
MH3-5FS to MH4-5
4.33' Offset Joint 6 O'Clock



MH3-5FS to MH4-5
12.5' Major Joint Separation with a void 12 O'Clock



MH3-5FS to MH4-5
15.08' Offset Joint 8 O'Clock



MH3-5FS to MH4-5
16.41' Cracked Joint and Separated Joint 12 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH3-5FS to MH4-5	Oily Water System	INSPECTOR: King Todd



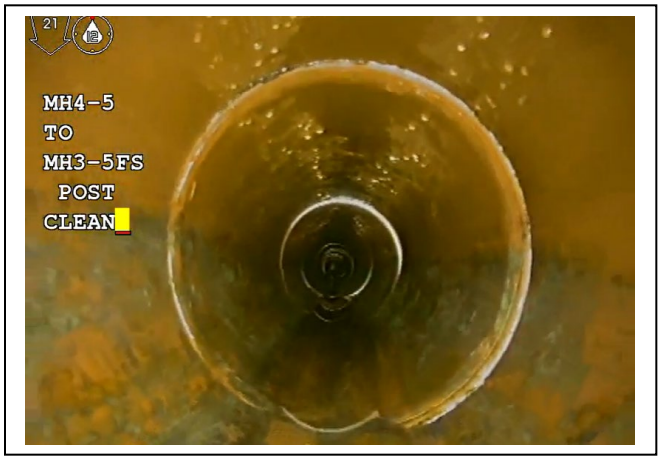
MH3-5FS to MH4-5
23.75' Offset Joint 6 O'Clock



MH3-5FS to MH4-5
39.91' Void 7 O'Clock



MH3-5FS to MH4-5
41.58' Crack 7 O'Clock

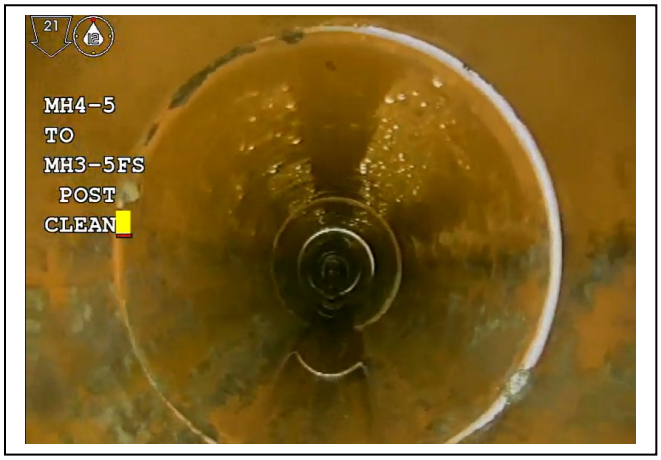


MH3-5FS to MH4-5
45' Crack 6 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH3-5FS to MH4-5	Oily Water System	INSPECTOR: King Todd



MH3-5FS to MH4-5
45' Separated Joint



MH3-5FS to MH4-5
48.66' Hole/Crack 5 O'Clock



MH3-5FS to MH4-5
52' Crack 6 O'Clock



MH3-5FS to MH4-5
56.08' Offset Joint

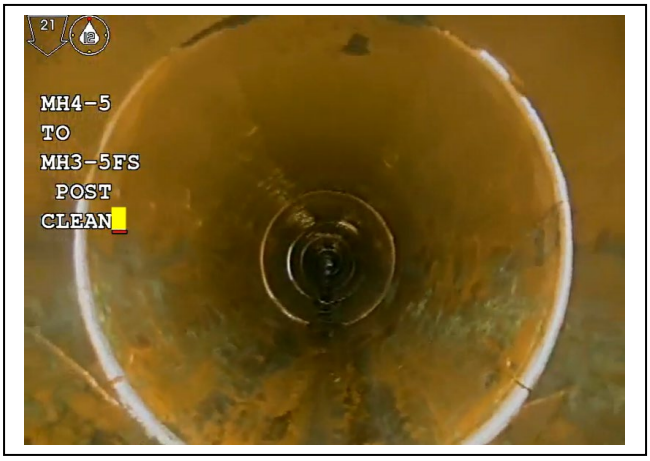
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH3-5FS to MH4-5	Oily Water System	INSPECTOR: King Todd



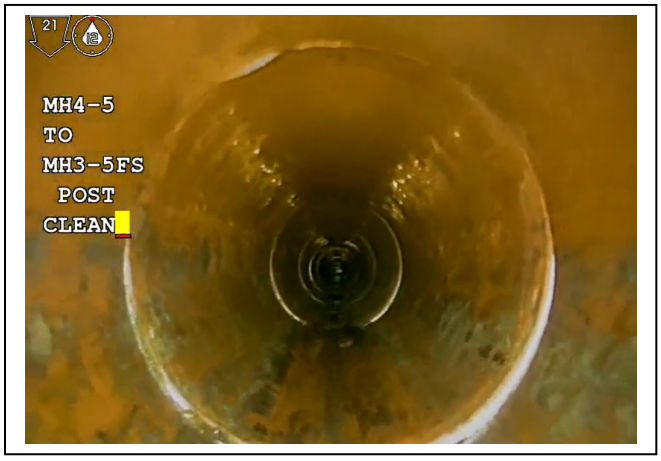
MH3-5FS to MH4-5
59.41' Crack 6 O'Clock



MH3-5FS to MH4-5
59.41' Crack 3 O'Clock

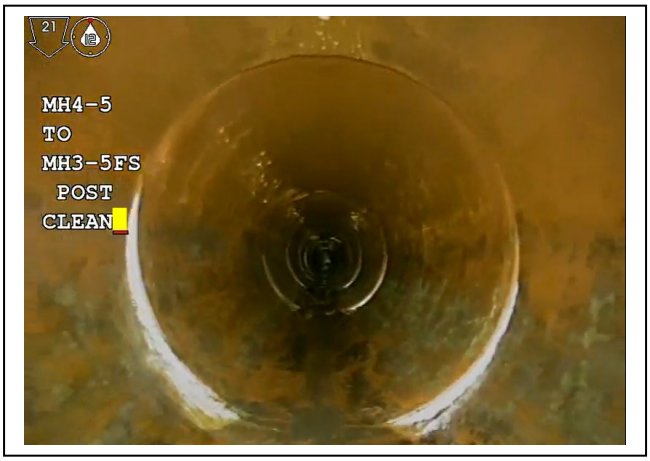


MH3-5FS to MH4-5
63.13' Crack 8 O'Clock



MH3-5FS to MH4-5
66.08' Offset Joint 12 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH3-5FS to MH4-5	Oily Water System	INSPECTOR: King Todd



MH3-5FS to MH4-5
69.87' Offset Joint



MH3-5FS to MH4-5
70' Separated Joint

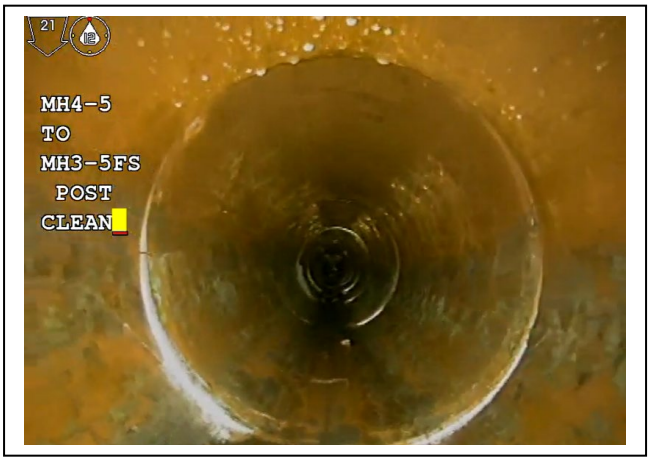


MH3-5FS to MH4-5
72.50' Offset Joint & Joint Fracture 12 O'Clock

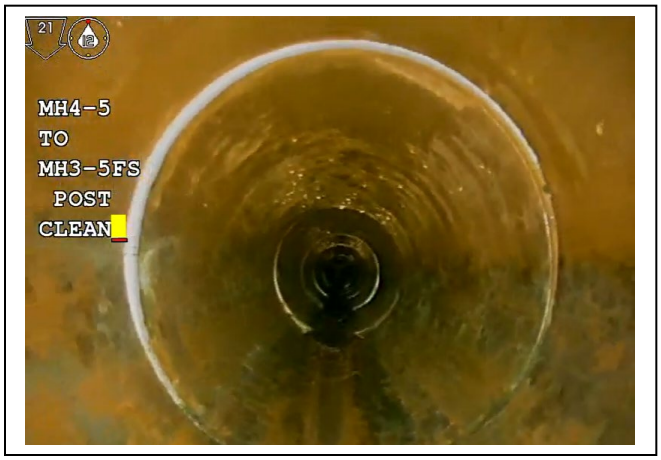


MH3-5FS to MH4-5
76.91' Crack 7 O'Clock

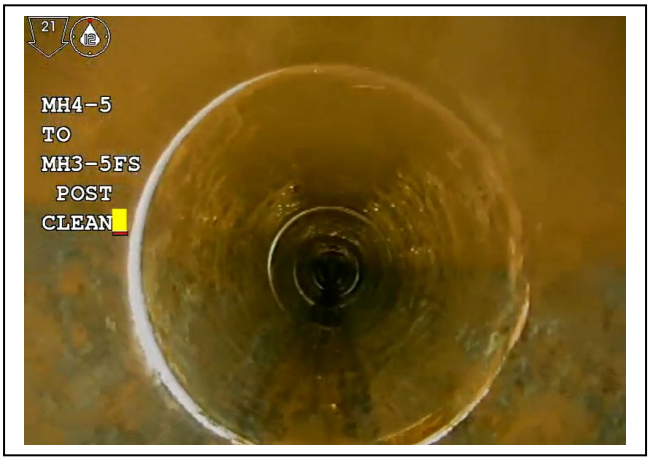
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH3-5FS to MH4-5	Oily Water System	INSPECTOR: King Todd



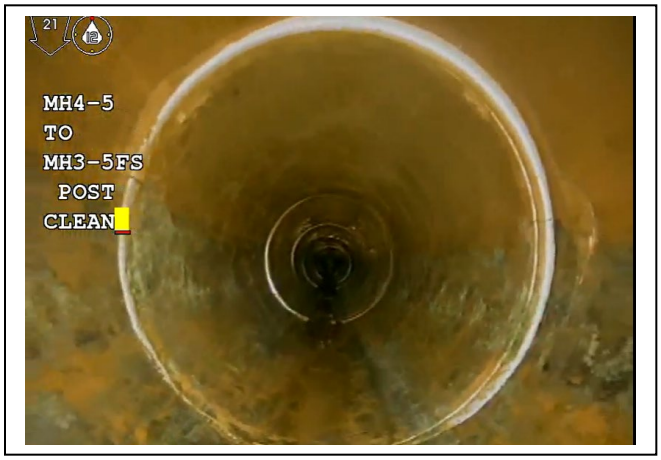
MH3-5FS to MH4-5
80.41' Gap 2 O'Clock



MH3-5FS to MH4-5
89.33' Offset Joint



MH3-5FS to MH4-5
91.16' Crack 3 O'Clock



MH3-5FS to MH4-5
94.66' Offset Joint

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH3-5FS to MH4-5	Oily Water System	INSPECTOR: King Todd



MH3-5FS to MH4-5
97.75' Crack 7 O'Clock

LEGEND

COLLAPSE | CRACK | HOLE

TAP FACTORY | ROOTS | DEPOSITS

GRADE | JOINT | FLOW

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: Rocks, water, hard material, were removed from the line.

VIDEO OBSERVATONS: Hard material, fractures, and cracks found throughout the line.

MISCELLANEOUS COMMENTS

Line has been rehabilitated.

ACTIVITY SEQUENCE

- [ ] PRE-INSPECTION
- [ ] MID-INSPECTION
- [X] FINAL INSPECTION

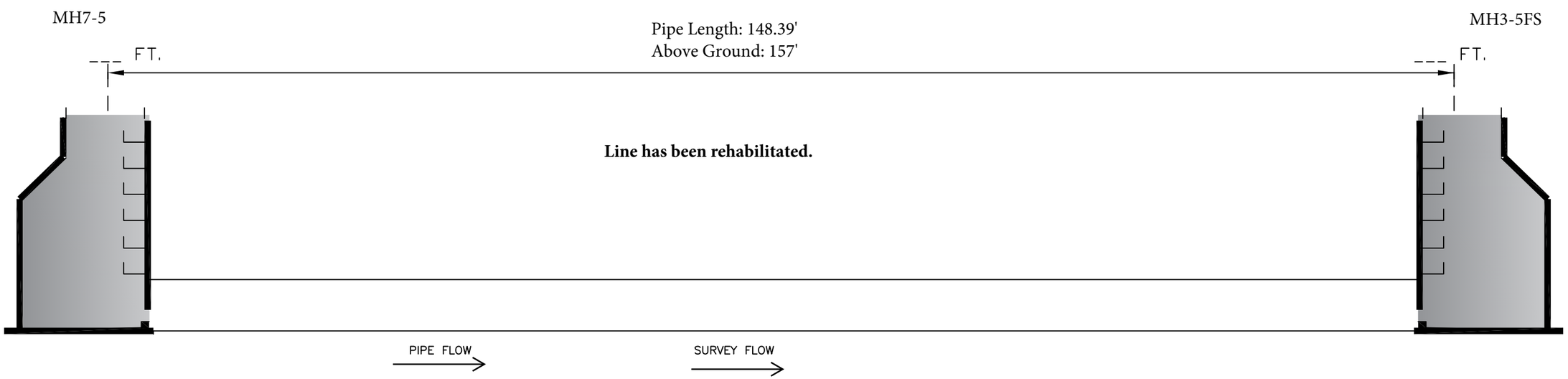
KEY ELEMENTS OF PROCESS

- [X] OIL SLICK
- [ ] HEAT TRACE
  - [ ] Permanent
  - [ ] Temporary
- [ ] STEAM
- [ ] OTHER

If Other Please List:

ASSET SPECS

Pipe Size	8"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential Oily
Other	Oily Water System Capacity of Line: 85% Major Path Paved: 4



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH7-5 to MH3-5FS	MH7-5 to MH3-5FS	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

ASSET LOCATION: Ferndale Facility

ASSET NAME: MH7-5 to MH3-5FS

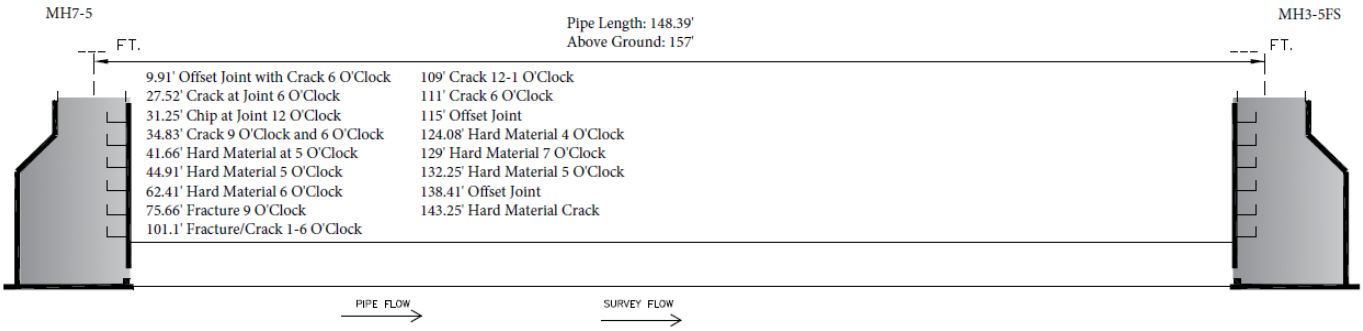
DATE OF SURVEY: 6.2025

SURVEY COMPANY: Motivo Group

INSPECTOR: King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:



RECOMMENDATIONS:

9.2025 - Line has been rehabilitated.

COMMENTS



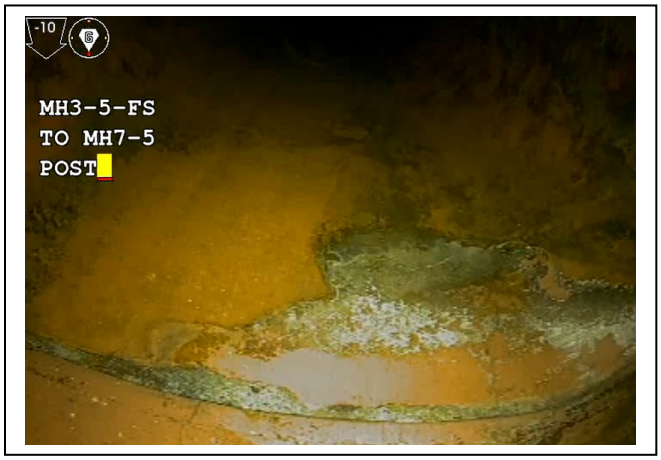


MH7-5 to MH3-5FS Rehabilitation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH7-5 to MH3-5FS	Oily Water System	INSPECTOR: King Todd



MH7-5 to MH3-5FS
9.91' Offset Joint with Crack 6 O'Clock



MH7-5 to MH3-5FS
27.52' Crack at Joint 6 O'Clock



MH7-5 to MH3-5FS
31.25' Chip at Joint 12 O'Clock



MH7-5 to MH3-5FS
34.83' Crack 9 O'Clock and 6 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH7-5 to MH3-5FS	Oily Water System	INSPECTOR: King Todd



MH7-5 to MH3-5FS
41.66' Hard Material at 5 O'Clock



MH7-5 to MH3-5FS
44.91' Hard Material 5 O'Clock

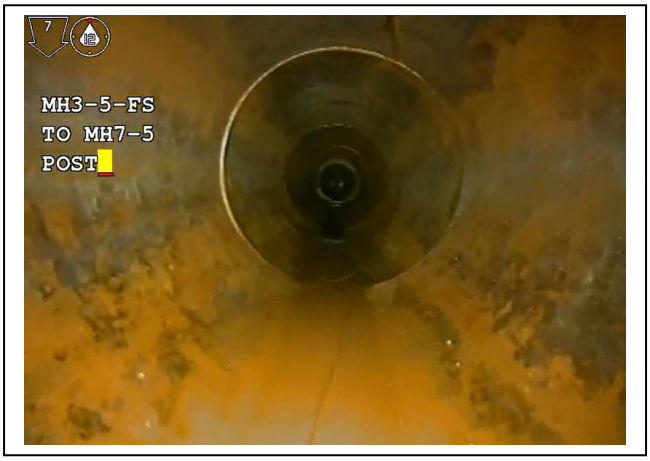


MH7-5 to MH3-5FS
62.41' Hard Material 6 O'Clock



MH7-5 to MH3-5FS
75.66' Fracture 9 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH7-5 to MH3-5FS	Oily Water System	INSPECTOR: King Todd



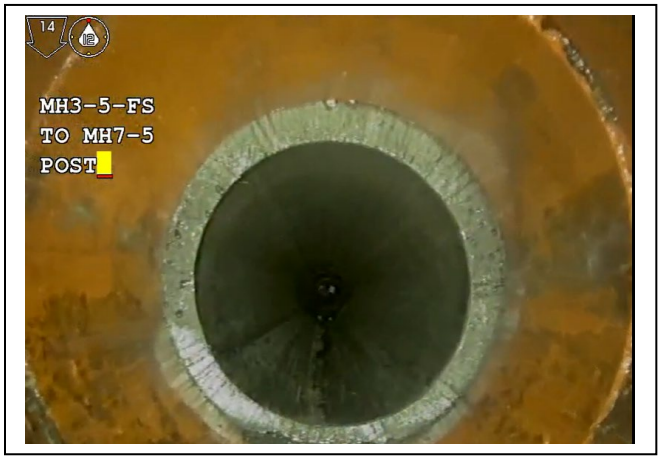
MH7-5 to MH3-5FS
101.1' Fracture/Crack 1-6 O'Clock



MH7-5 to MH3-5FS
109' Crack 12-1 O'Clock



MH7-5 to MH3-5FS
111' Crack 6 O'Clock



MH7-5 to MH3-5FS
115' Offset Joint

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH7-5 to MH3-5FS	Oily Water System	INSPECTOR: King Todd



MH7-5 to MH3-5FS
124.08' Hard Material 4 O'Clock



MH7-5 to MH3-5FS
129' Hard Material 7 O'Clock



MH7-5 to MH3-5FS
132.25' Hard Material 5 O'Clock



MH7-5 to MH3-5FS
138.41' Offset Joint

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH7-5 to MH3-5FS	Oily Water System	INSPECTOR: King Todd



MH7-5 to MH3-5FS
143.25' Hard Material Blockage

LEGEND

COLLAPSE | CRACK | HOLE

TAP FACTORY | ROOTS | DEPOSITS

GRADE | JOINT | FLOW

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: Grime and buildup were removed using the jetter with the pull back nozzle.

VIDEO OBSERVATONS: Deposits, cracks, and separated joints found throughout the line.

MISCELLANEOUS COMMENTS

Line has been rehabilitated.

ACTIVITY SEQUENCE

- [ ] PRE-INSPECTION
- [ ] MID-INSPECTION
- [X] FINAL INSPECTION

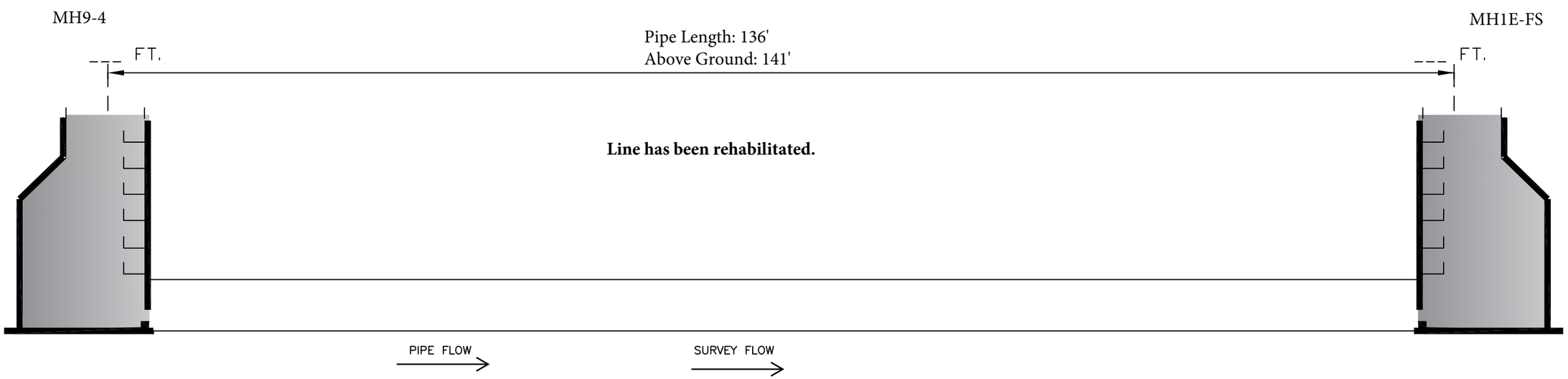
KEY ELEMENTS OF PROCESS

- [ ] OIL SLICK
- [ ] HEAT TRACE
  - [ ] Permanent
  - [ ] Temporary
- [ ] STEAM
- [ ] OTHER

If Other Please List:

ASSET SPECS

Pipe Size	8"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential Oily
Other	Oily Water System Capacity of Line: 55% Major Path Paved: 4



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH9-4 to MH1E-FS	MH9-4 to MH1E-FS	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

ASSET LOCATION: Ferndale Facility

ASSET NAME: MH9-4 to MH1E-FS

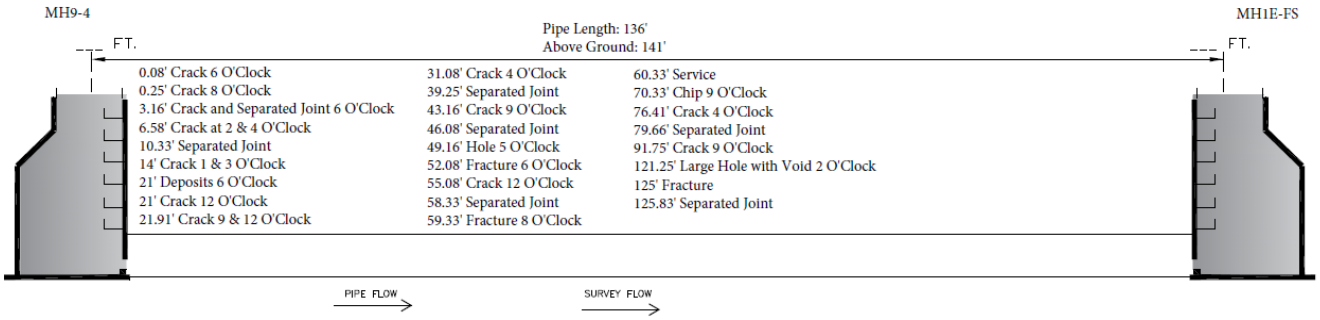
DATE OF SURVEY: 6.2025

SURVEY COMPANY: Motivo Group

INSPECTOR: King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:



RECOMMENDATIONS:

9.2025 Line has been rehabilitated.

COMMENTS



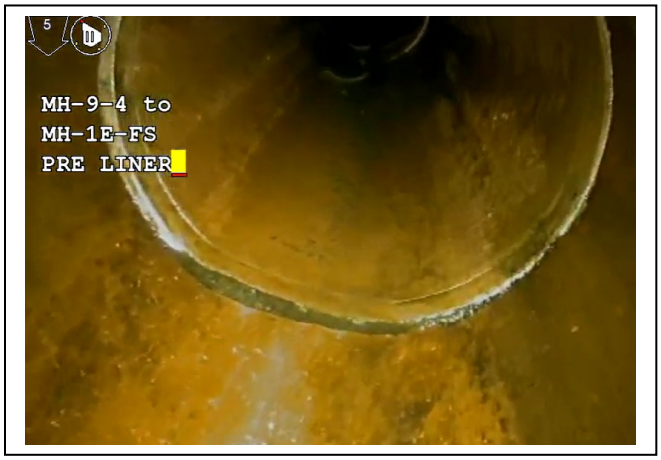


MH-9-4 to MH 1E-FS Rehabilitation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH9-4 to MH1E-FS	Oily Water System	INSPECTOR: King Todd



MH9-4 to MH1E-FS
0.08' Crack 6 O'Clock



MH9-4 to MH1E-FS
0.25' Crack 8 O'Clock



MH9-4 to MH1E-FS
3.16' Crack and Separated Joint 6 O'Clock

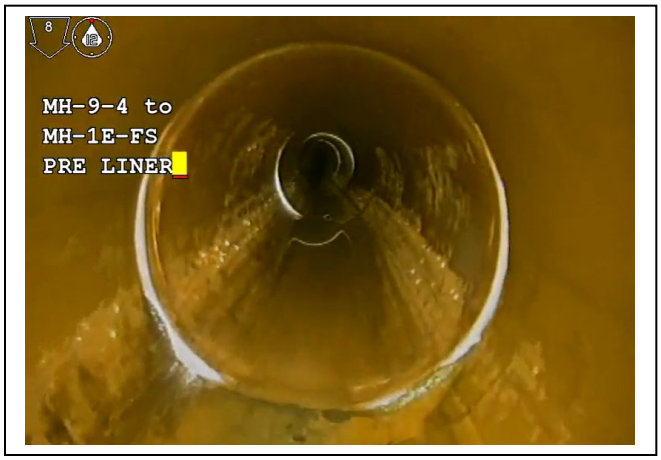


MH9-4 to MH1E-FS
6.58' Crack at 2 & 4 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH9-4 to MH1E-FS	Oily Water System	INSPECTOR: King Todd



MH9-4 to MH1E-FS
10.33' Separated Joint



MH9-4 to MH1E-FS
14' Crack 1 & 3 O'Clock

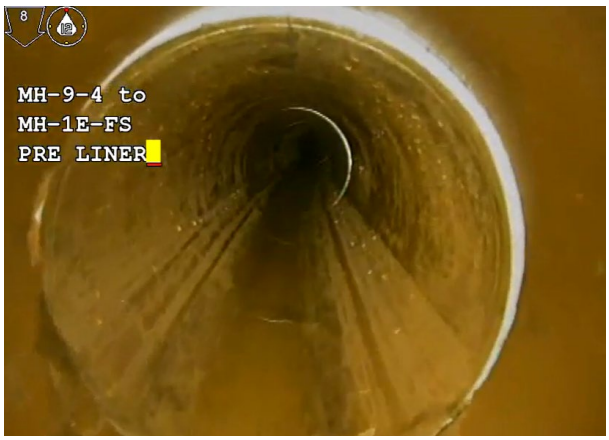


MH9-4 to MH1E-FS
21' Deposits 6 O'Clock

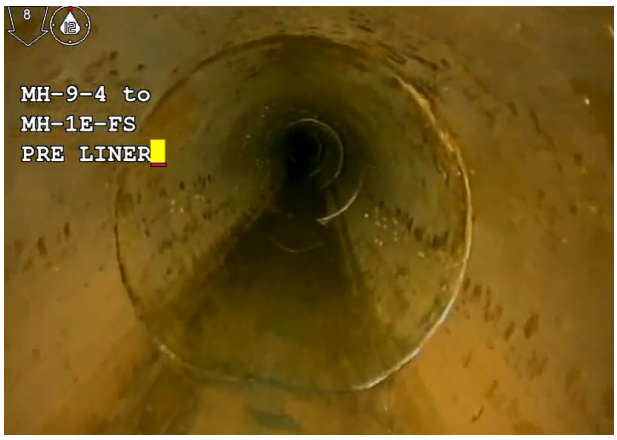


MH9-4 to MH1E-FS
21' Crack 12 O'Clock

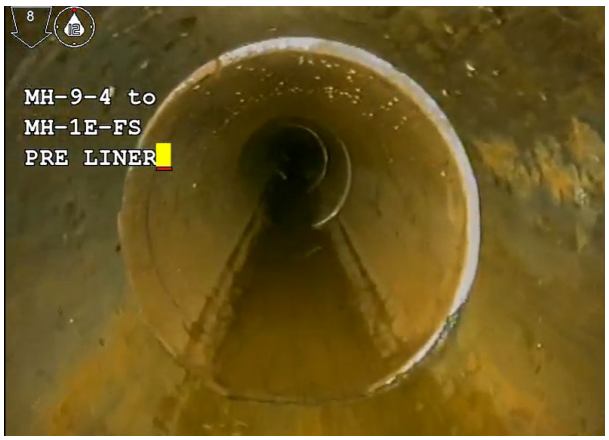
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH9-4 to MH1E-FS	Oily Water System	INSPECTOR: King Todd



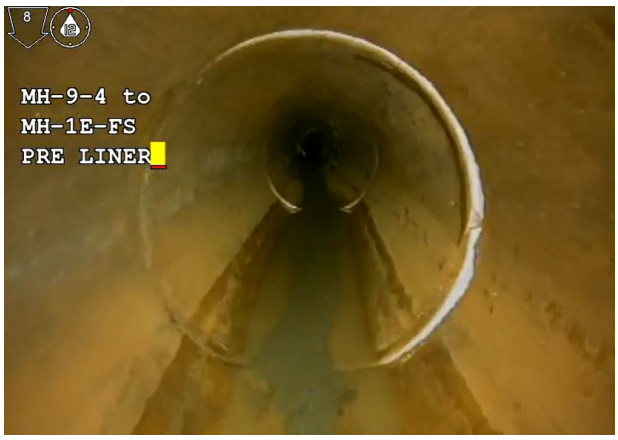
MH9-4 to MH1E-FS
21.91' Crack 9 & 12 O'Clock



MH9-4 to MH1E-FS
31.08' Crack 4 O'Clock

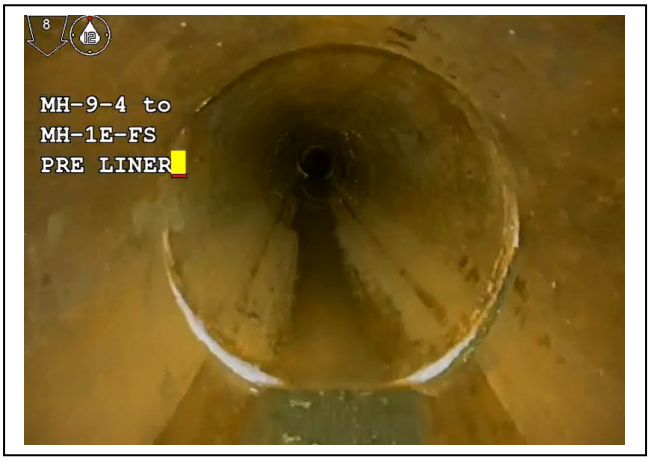


MH9-4 to MH1E-FS
39.25' Separated Joint

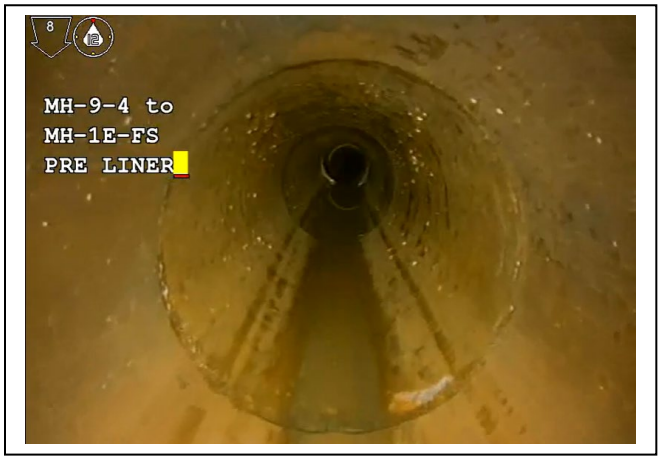


MH9-4 to MH1E-FS
43.16' Crack 9 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH9-4 to MH1E-FS	Oily Water System	INSPECTOR: King Todd



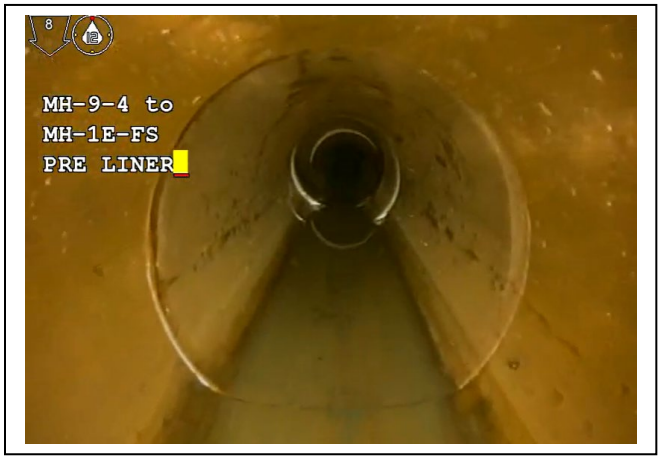
MH9-4 to MH1E-FS
46.08' Separated Joint



MH9-4 to MH1E-FS
49.16' Hole 5 O'Clock



MH9-4 to MH1E-FS
52.08' Fracture 6 O'Clock

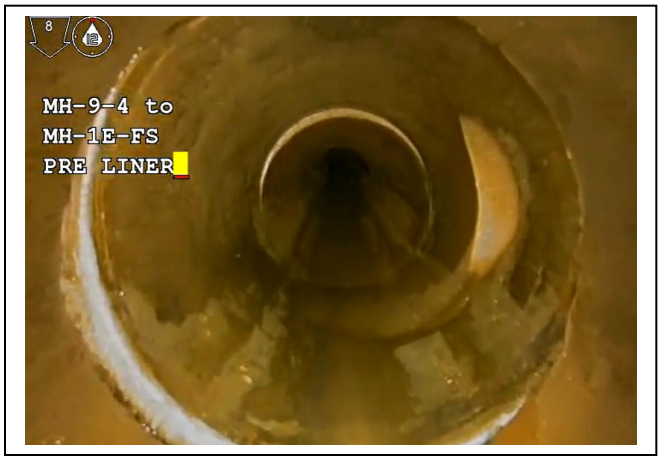


MH9-4 to MH1E-FS
55.08' Crack 12 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH9-4 to MH1E-FS	Oily Water System	INSPECTOR: King Todd



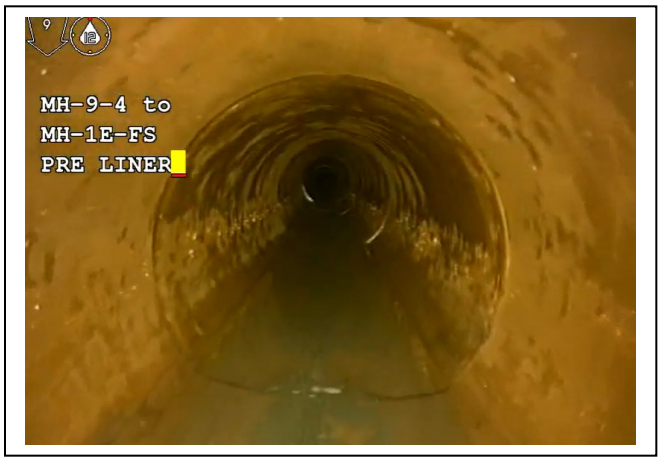
MH9-4 to MH1E-FS
58.33' Separated Joint



MH9-4 to MH1E-FS
59.33' Fracture 8 O'Clock



MH9-4 to MH1E-FS
70.33' Chip 9 O'Clock

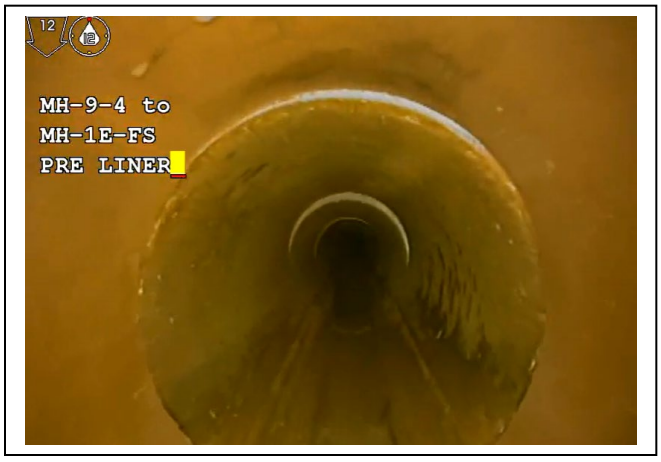


MH9-4 to MH1E-FS
76.41' Crack 4 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH9-4 to MH1E-FS	Oily Water System	INSPECTOR: King Todd



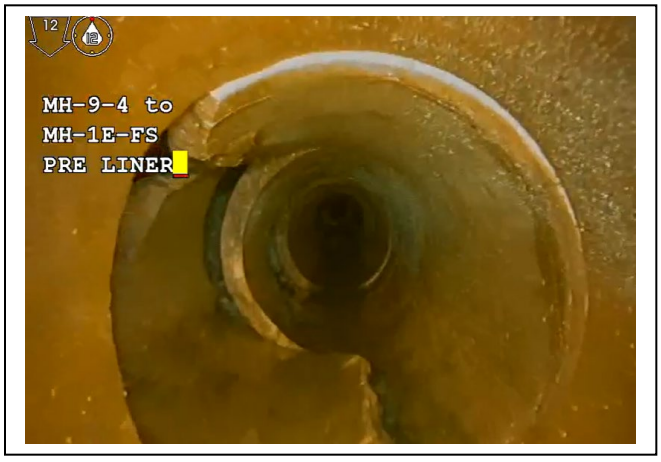
MH9-4 to MH1E-FS
79.66' Separated Joint



MH9-4 to MH1E-FS
91.75' Crack 9 O'Clock



MH9-4 to MH1E-FS
121.25' Large Hole with Void 2 O'Clock



MH9-4 to MH1E-FS
125' Fracture

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# MH9-4 to MH1E-FS	Oily Water System	INSPECTOR: King Todd



MH9-4 to MH1E-FS
125.83' Separated Joint

LEGEND

COLLAPSE | CRACK | HOLE

TAP FACTORY | ROOTS | DEPOSITS

GRADE | JOINT | FLOW

STRUCTURAL DEFECT CODING
*ABBREVIATION + STRUCT. DEFECT TYPE + SIZE OF DEFECT

C	CRACK
F	FRACTURE
B	BROKEN
H	HOLE
J	JOINT
D	DEFORMED
X	COLLAPSE
LF	LINING FEATURES
WF	WELD FAILURE
RP	POINT REPAIR
A	ACCESS POINT
V	VISIBLE
S	SURFACE DAMAGE
COR	CORROSION MISC
UDC	CORROSION UD

	ROOTS
F	FINE
M	MEDIUM
T	TAP
B	BALL
	JOINTS
JOS	OFFSET SMALL
JOM	OFFSET MEDIUM
JOL	OFFSET LARGE
	CRACKS
CL	LONGITUDINAL
CC	CIRCUMFERENTIAL
CM	MULTIPLE
CS	SPIRAL
CH	HINGE

SEQUENCE OF EVENTS (Note any Significant Work on this Asset with Dates)

CLEANING OBSERVATIONS: Build up of hard materials, rocks, and debris were removed from the line.

VIDEO OBSERVATONS: Cracks in the pipe and separating joints were found.

MISCELLANEOUS COMMENTS

RECOMMENDATIONS: The line needs to be cleaned and rehabilitated.

ACTIVITY SEQUENCE

- [ ] PRE-INSPECTION
- [ ] MID-INSPECTION
- [x] FINAL INSPECTION

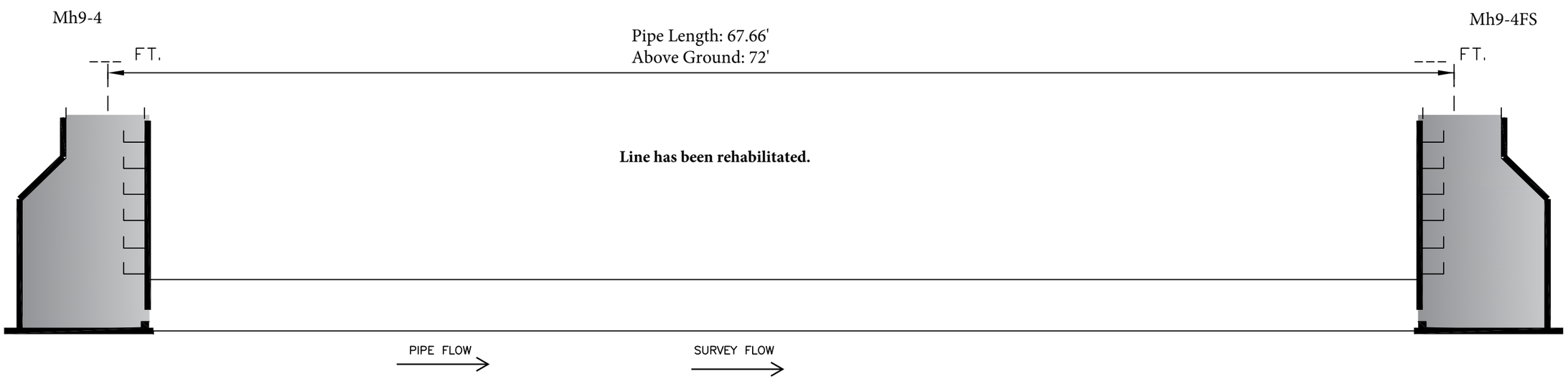
KEY ELEMENTS OF PROCESS

- [ ] OIL SLICK
- [ ] HEAT TRACE
  - [ ] Permanent
  - [ ] Temporary
- [ ] STEAM
- [ ] OTHER

If Other Please List:

ASSET SPECS

Pipe Size	8"
Pipe Depth	
Material	Clay Pipe
Geometry	Circumferential Oily
Other	Oily Water System Capacity of Line: 95% Major Path Paved: 4



CLIENT:	FACILITY:	ASSET NAME:	VIDEO FILE NAME:	DWG. DATE:
Phillips 66	Ferndale	MH9-4FS To MH9-4	MH9-4FS To MH9-4	9.2025

MOTIVO™
Knowing What's Ahead.

COMMENTARY REPORT

CLIENT: Phillips 66

ASSET LOCATION: Ferndale Facility

ASSET NAME: Mh9-4FS To MH9-4

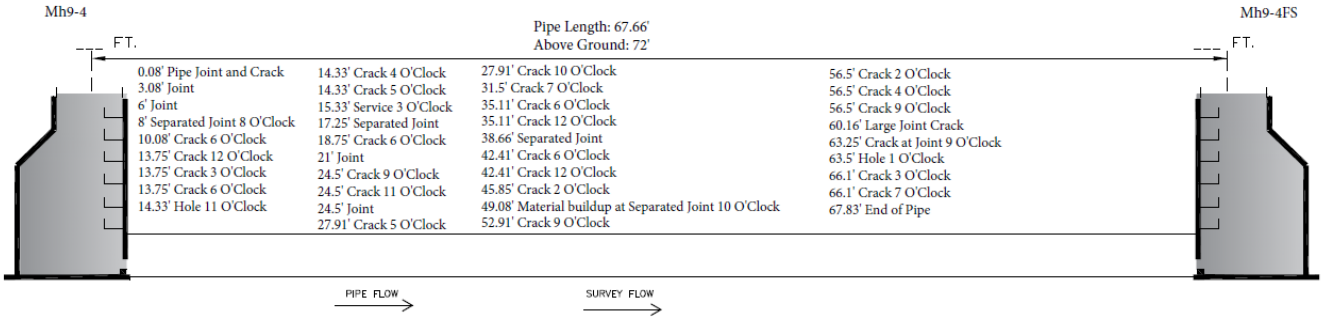
DATE OF SURVEY: 6.2025

SURVEY COMPANY: Motivo Group

INSPECTOR: King Todd

SUMMARY OF FINDINGS:

9.2025 – At the time of the remote visual inspection, the following findings were located and reported:



RECOMMENDATIONS:

9.2025 - Line has been rehabilitated.

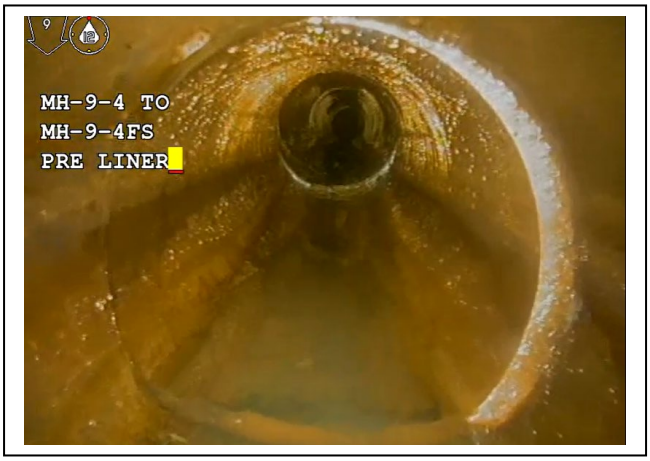
COMMENTS



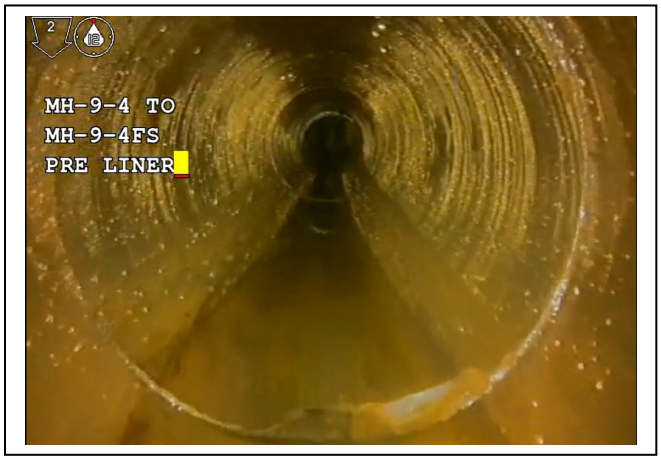


MH-9-4FS to MH-9-4 Rehabilitation

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh9-4FS To MH9-4	Oily Water System	INSPECTOR: King Todd



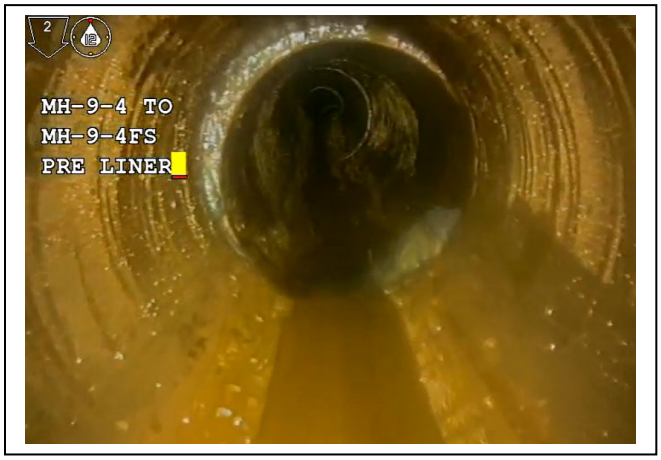
Mh9-4FS To MH9-4
0.08' Pipe Joint and Crack



Mh9-4FS To MH9-4
8' Separated Joint 8 O'Clock

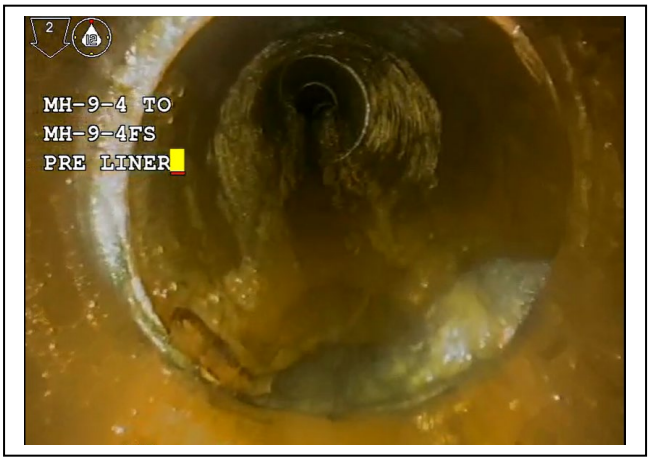


Mh9-4FS To MH9-4
10.08' Crack 6 O'Clock

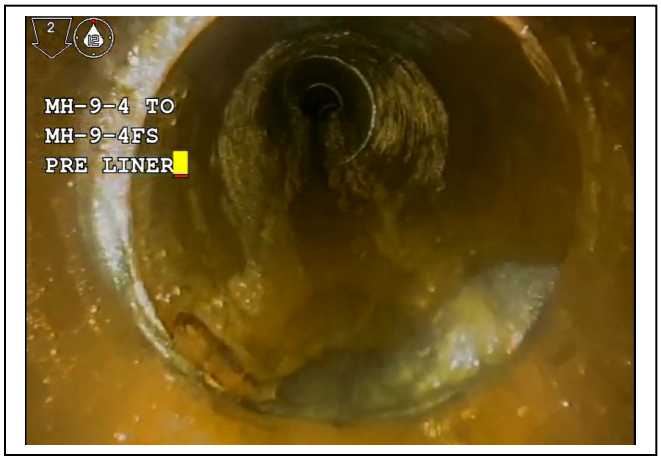


Mh9-4FS To MH9-4
13.75' Crack 12 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh9-4FS To MH9-4	Oily Water System	INSPECTOR: King Todd



Mh9-4FS To MH9-4
13.75' Crack 3 O'Clock



Mh9-4FS To MH9-4
13.75' Crack 6 O'Clock



Mh9-4FS To MH9-4
14.33' Hole 11 O'Clock

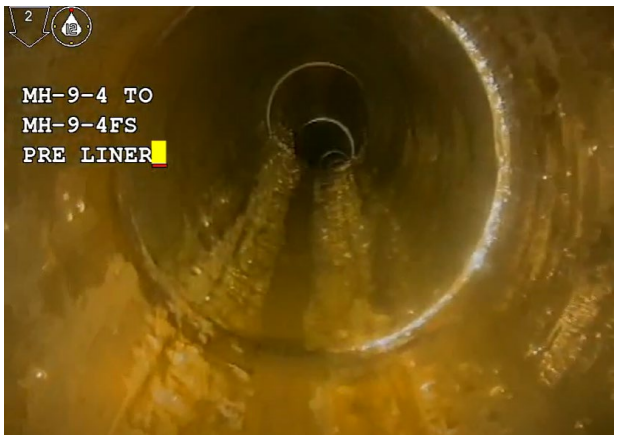


Mh9-4FS To MH9-4
14.33' Crack 4 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh9-4FS To MH9-4	Oily Water System	INSPECTOR: King Todd



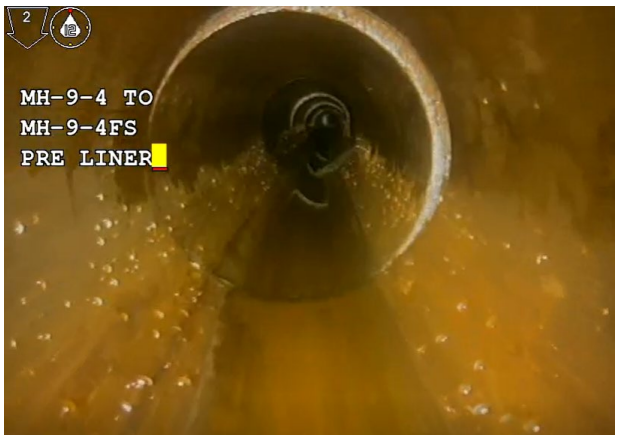
Mh9-4FS To MH9-4
14.33' Crack 5 O'Clock



Mh9-4FS To MH9-4
17.25' Separated Joint



Mh9-4FS To MH9-4
18.75' Crack 6 O'Clock

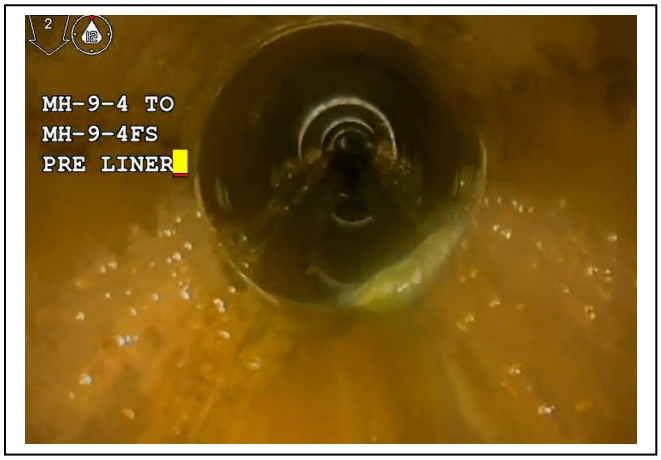


Mh9-4FS To MH9-4
24.5' Crack 9 O'Clock

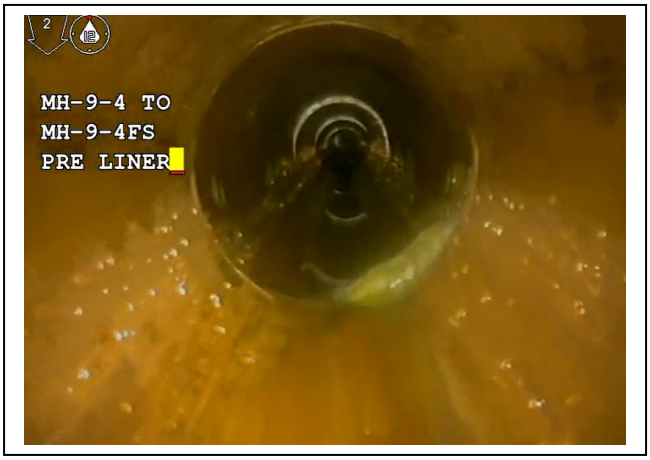
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh9-4FS To MH9-4	Oily Water System	INSPECTOR: King Todd



Mh9-4FS To MH9-4
24.5' Crack 11 O'Clock



Mh9-4FS To MH9-4
27.91' Crack 5 O'Clock



Mh9-4FS To MH9-4
27.91' Crack 10 O'Clock



Mh9-4FS To MH9-4
31.5' Crack 7 O'Clock

MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh9-4FS To MH9-4	Oily Water System	INSPECTOR: King Todd



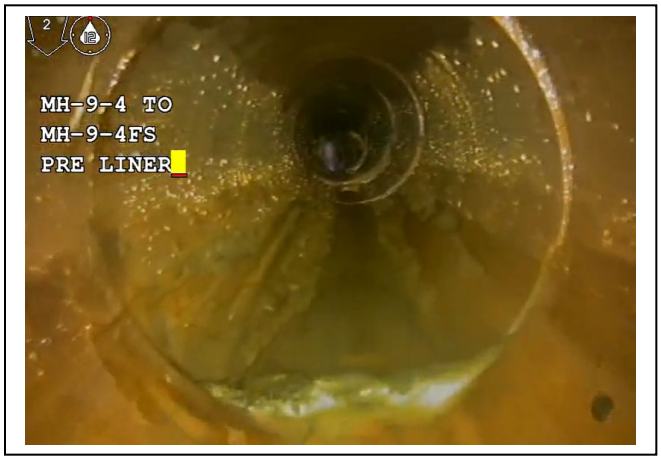
Mh9-4FS To MH9-4
35.11' Crack 6 O'Clock



Mh9-4FS To MH9-4
35.11' Crack 12 O'Clock

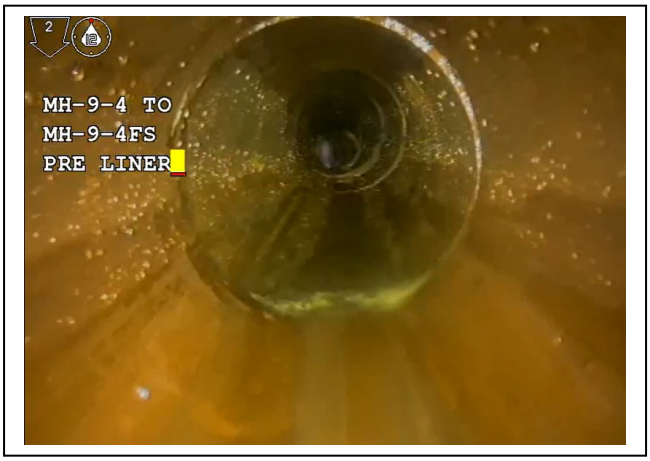


Mh9-4FS To MH9-4
38.66' Separated Joint

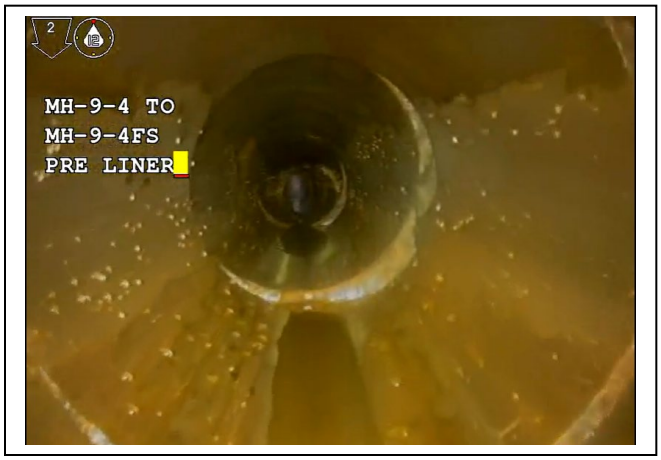


Mh9-4FS To MH9-4
42.41' Crack 6 O'Clock

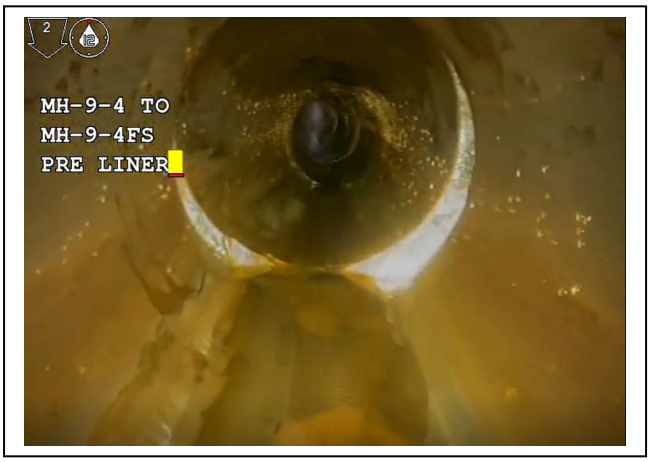
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh9-4FS To MH9-4	Oily Water System	INSPECTOR: King Todd



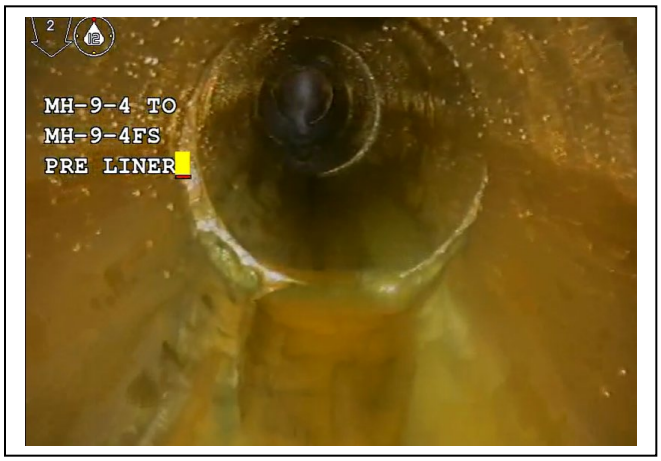
Mh9-4FS To MH9-4
42.41' Crack 12 O'Clock



Mh9-4FS To MH9-4
45.85' Crack 2 O'Clock

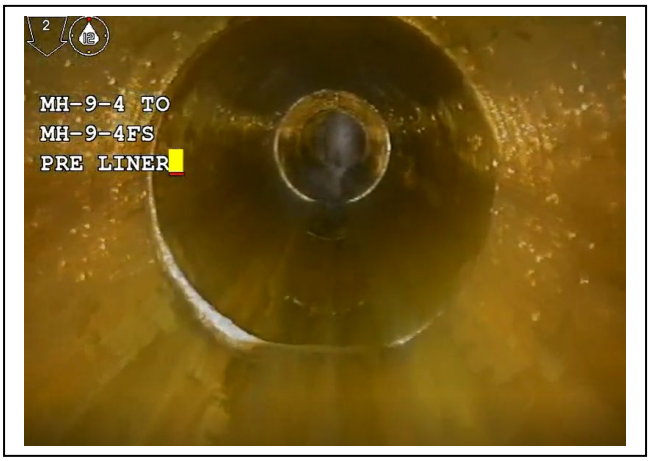


Mh9-4FS To MH9-4
49.08' Material buildup at Separated Joint 10 O'Clock

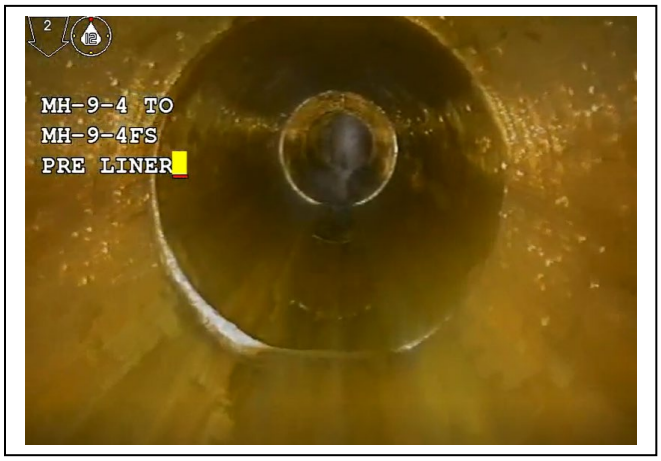


Mh9-4FS To MH9-4
52.91' Crack 9 O'Clock

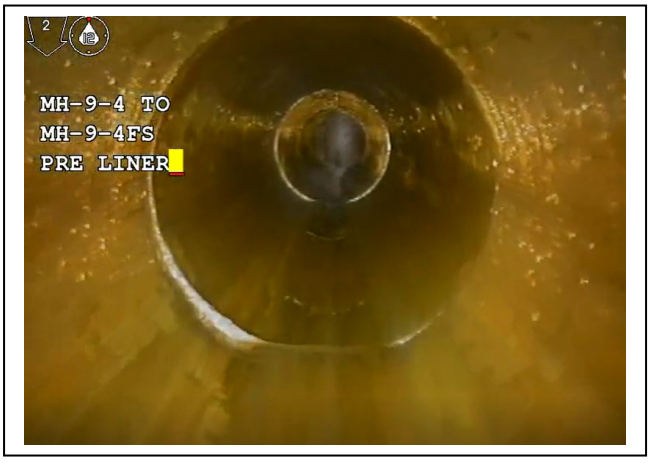
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CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh9-4FS To MH9-4	Oily Water System	INSPECTOR: King Todd



Mh9-4FS To MH9-4
56.5' Crack 2 O'Clock



Mh9-4FS To MH9-4
56.5' Crack 4 O'Clock

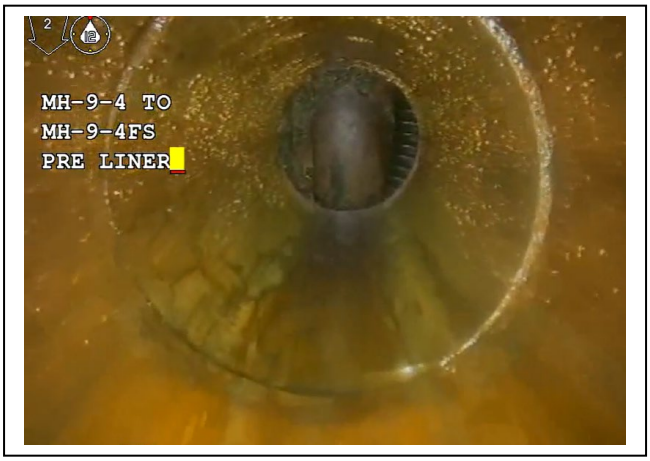


Mh9-4FS To MH9-4
56.5' Crack 9 O'Clock

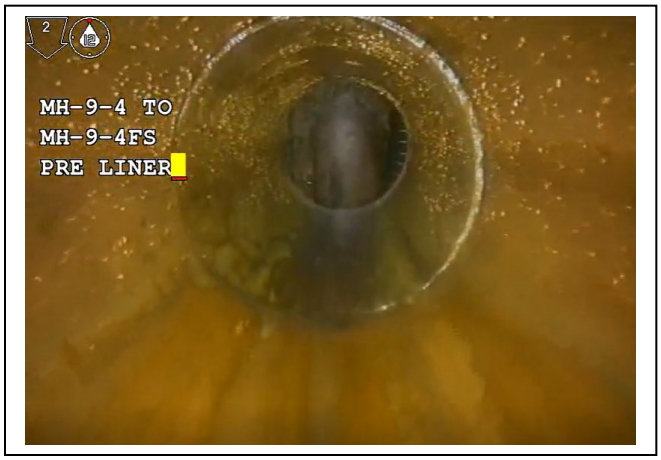


Mh9-4FS To MH9-4
60.16' Large Joint Crack

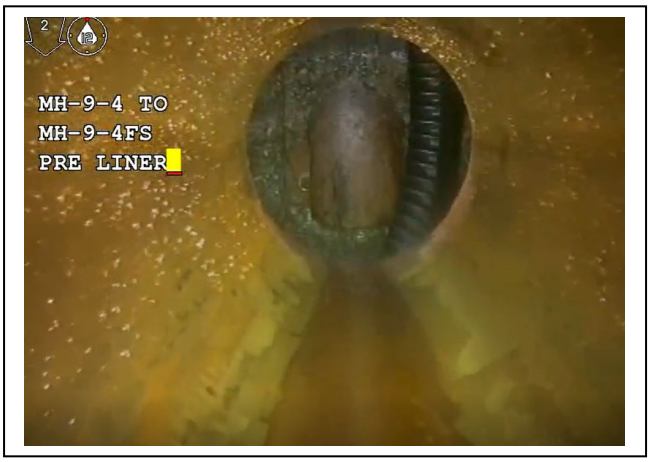
MOTIVO™ Knowing What's Ahead.	Remote Visual Inspection and Remediation	
CLIENT: Phillips 66	FACILITY: Ferndale	DATE: 9.2025
ID# Mh9-4FS To MH9-4	Oily Water System	INSPECTOR: King Todd



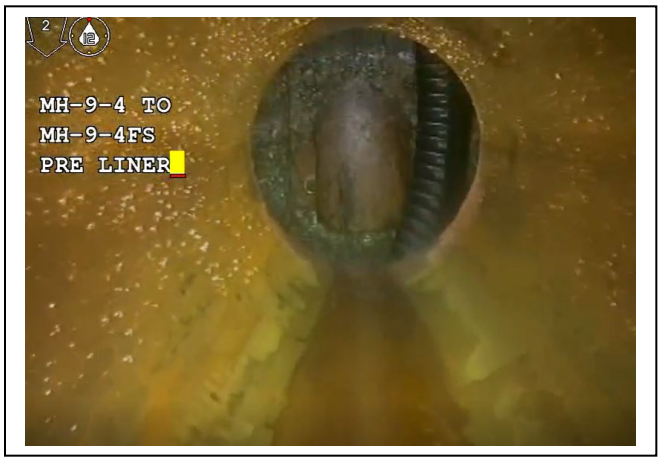
Mh9-4FS To MH9-4
63.25' Crack at Joint 9 O'Clock



Mh9-4FS To MH9-4
63.5' Hole 1 O'Clock



Mh9-4FS To MH9-4
66.1' Crack 3 O'Clock



Mh9-4FS To MH9-4
66.1' Crack 7 O'Clock

APPENDIX D-
PHASE II OWS SOIL AND GROUNDWATER INVESTIGATION

Phase II Soil and Groundwater Investigation Report

Phillips 66 Ferndale Refinery
3901 Unick Road
Ferndale, WA 98248

November 18, 2025

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ABBREVIATIONS AND ACRONYMS

Abbreviation/ Acronym	Definition
ALL4	ALL4 LLC
AO	Agreed Order
AOC	Area of Concern
bgs	Below ground surface
CUL	Cleanup level
DPT	Direct-push technology
DRO	Diesel-range organics
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ER	Environmental Rating of potential OWS release area
IRP	Investigation and Response Plan
mg/kg	Milligrams per kilogram
MTCA	Washington Model Toxics Control Act
OWS	Oily water sewer
PID	Photoionization detector
QA/QC	Quality assurance and quality control
RRO	Residual-range organics
SAP	Sampling and Analysis Plan
SVOCs	Semivolatile organic compounds
TRC	TRC Environmental Corporation
VOCs	Volatile organic compounds
WAC	Washington Administrative Code

1.0 INTRODUCTION

TRC Environmental Corporation (TRC) is pleased to present this *Phase II Soil and Groundwater Investigation Report* for the Phillips 66 Ferndale Refinery located at 3901 Unick Road in Ferndale, Washington (Subject Property). Figure 1 shows the location and general vicinity of the Subject Property.

The work presented herein was performed on behalf of Phillips 66 to document the assessment of soil and groundwater in the locations described in the following sections. This report is intended to meet the requirements of the Model Toxics Control Act (70.105D Revised Code of Washington [RCW]) and its implementing regulation (Washington Administrative Code [WAC] 174-340, collectively known as "MTCA"). The Washington State Department of Ecology (Ecology) previously assigned the Facility Site ID Number (No.) 17Cleanup Site No. 4886 to the Subject Property.

1.1 Background and Regulatory Setting

In August 2020, Phillips 66 and Ecology signed Agreed Order Number DE 16297 (AO) for the Subject Property. The objective of the AO is to investigate the integrity of the oily water sewer (OWS) system on the subject property. The OWS was constructed in 1953 and consists of underground piping, drain hubs, manholes, hatches, and other access points. The OWS conveys process wastewater and drainage from Refinery operations to the facility's wastewater treatment plant.

An *Investigation and Response Plan* (IRP) was prepared by Phillips 66 in 2022 in accordance with the requirements in the AO. The IRP describes measures to investigate the integrity of the OWS and respond to any potential releases of contamination to soil and/or groundwater. The IRP outlined four phases of major OWS trunk line inspections to be completed by December 31, 2029 (Phillips 66 2022).

Per the IRP, if an indication of a potential release is discovered during the sewer inspections, the first step is to initiate site characterization at the potential release location(s). A potential release location includes a sewer defect, which indicates that the sewer has failed and there is the potential for contaminants from the OWS to impact soil or groundwater. Each potential release location was assigned an environmental rating (ER) from 1 to 5 based on the defect characteristics and the prioritization for follow-up actions and documentation. Defects with an ER of 3 or 4 are grouped together in numbered "Repair Areas."

TRC reported that Phase II inspections of the OWS performed in 2023 by Atlas Inspection and Ferndale Refinery Personnel identified nine Repair Areas (TRC 2024). ALL4 LLC (ALL4) reported that 11 potential release locations were identified during the Phase II inspections that required assessment of soil. ALL4 completed soil assessment activities at nine of the 11 Phase II potential release locations. Results of these assessment activities were presented in their *2023 Annual Progress Report SWMU-Oily Water Sewer, Phillips 66 Ferndale Refinery* dated March 28, 2024 (ALL4 2024a). Based on the findings of the soil assessment, ALL4 prepared a sampling and analysis plan (SAP) for Phillips 66 detailing additional proposed sampling activities described herein (ALL4 2024b).

1.2 Scope of Work

The scope of work in the SAP outlined the tasks to complete soil sampling near the Phase II OWS potential release location at manhole MH 11K-RE and to delineate soil impacts and groundwater in Area of Concern #2 (AOC-2). The area designated as AOC-2 was based on soil sample B-2-23 (7.0') that contained 0.0858 milligrams per kilogram (mg/kg) of benzene. This benzene concentration exceeded the MTCA Method A industrial soil cleanup level (CUL) of 0.03 mg/kg for protection of groundwater. The assessment activities proposed in the SAP are presented below:

- Install two soil borings (BH-2-6 and BH-2-7) and collect samples adjacent to OWS manhole location MH 11K-RE that was assigned an ER-4 rating during the Phase II OWS inspection. According to the Phase II inspection records MH 11K-RE has a bottom invert of 10.6 feet below ground surface (bgs). The OWS trunk line enters and exits MW 11K-RE at 9.6 feet bgs.

- Install and sample one soil boring, completed as a monitoring well (MW-OWS-4) as close as practicable and in an assumed downgradient direction from soil boring B-2-23.

- Develop monitoring well MW-OWS-4 and collect a groundwater sample for laboratory analysis.

The SAP described sample collection, handling, and analytical procedures in accordance with Table 6.4 of the Ecology's "Guidance for Remediation of Petroleum Contaminated Sites" (Ecology 2016). Soil boring and monitoring well locations are shown on Figures 2 and 3.

2.0 ASSESMENT SAMPLING PROCEDURES

On August 19, 2025, TRC mobilized to the Subject Property to advance the three soil borings (BH-2-6, BH-2-7, and MW-OWS-4) using direct-push technology (DPT) drilling and sampling methods. Prior to field mobilization TRC notified Washington One-Call on August 14, 2025, to identify publicly-owned subsurface utilities at the Subject Property. DIGSAFEWA verified that no public utilities exist in the areas of work. Each boring location was also checked for potential underground utility conflicts using Refinery underground utility plans provided by Phillips 66. Prior to initiating intrusive soil sampling activities, each boring location was physically cleared for utilities using a Vactor excavator operated by Western Refinery Services (WRS) to a depth of 5 feet bgs. All drilling was performed by a Washington-state licensed driller (Cascade Drilling) under the direction of an experienced environmental professional from TRC. Soil boring and monitoring well locations are shown on Figures 2 and 3.

2.1 Soil Investigation

After clearing for potential underground utilities at each boring location, a continuous soil core was collected from 5 feet bgs to the total depth using DPT. The soil cores were logged for soil characterization using the Unified Soil Classification System with visual-manual procedures (ASTM Method 2488D), and for any indications of potential chemicals using visual and olfactory

inspection. Soil cores were also screened in the field for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID). Soil conditions and field screening data are shown on the soil boring logs in Appendix A.

2.2 Soil Sample Collection Procedures

Soil samples were collected during drilling from what appeared to be native soil at all locations. The direct-push soil cores from each interval were opened and inspected, logged, and samples were taken at selected depth intervals for PID field screening. A portion of the soil core was placed into a sealed plastic bag and allowed to equilibrate for at least 10 minutes. The PID probe was then inserted into the bag to measure the presence of any VOCs that might be present within the headspace. The PID reading in parts per million (ppm) was then recorded in the assessor's field notes.

Soil coring and other non-disposable sampling tools were decontaminated prior to each use. Decontamination procedures included a tap water wash containing Alconox followed by a tap water rinse and then a second rinse with deionized water.

Soil borings were advanced to total depths ranging from 14 to 15 feet bgs. Unless field-screening evidence in soil cores indicated potential environmental impacts, soil sampling depths targeted the terminal depths of the borings. Soil samples for VOC analyses were collected using a disposable measured core volume tool and placed into 40-milliliter (mL) glass sample containers supplied by the laboratory. All samples were collected using U.S. Environmental Protection Agency (EPA) Method 5035A kits. Samples for other compound analyses were placed directly into new laboratory-provided glass sample jars. Each sample container was then labeled with a unique sample number, date, time, requested analysis, and sampler's initials. Samples were placed directly into an iced cooler for transportation to the laboratory.

Samples were transported under standard chain-of-custody procedures to Pace Analytical National Laboratory, a Washington State certified laboratory located in Mt. Juliet, Tennessee. Samples were submitted under standard turnaround times for one or more of the following analyses:

- Extractable petroleum hydrocarbons (EPH) by Northwest Total Petroleum Hydrocarbons (Method NWTPH) as EPH.
- Volatile petroleum hydrocarbons (VPH) by Method VPHWA.
- VOCs by EPA Method 8260D.
- SVOCs and cPAHs by EPA Method 8270E-SIM.
- Arsenic, cadmium, hexavalent chromium, chromium III, lead, nickel, mercury, and zinc by EPA Methods 6010D, 7471B, or 3060A/7196A.

Soil generated during drilling was placed into a 55-gallon drum and transferred by a Refinery contractor to the petroleum-contaminated soil storage location for temporary storage pending disposal.

2.3 Monitoring Well Installation

Boring MW-OWS-4 was installed across 'K' Street from where AOC-2 soil sample B-2-23 was collected. This location was as close as practicable due to underground utilities and aboveground product piping. Monitoring well MW-OWS-4 was constructed using 5 feet of 0.010-inch factory slotted pre-packed screen, a bentonite well seal, and a traffic-rated flush mount monument. Well MW-OWS-4 was originally proposed to be drilled to a total depth of 14 feet and screened from 4 to 14 feet bgs; however, field observations of the soil cores recovered during drilling indicated the presence of a shallower groundwater zone in this location underlain by very dense, dry soil conditions at increasing depth. TRC proposed to complete the well across the shallow water-bearing zone and not potentially create a vertical conduit for groundwater migration, therefore the deeper section of the boring was sealed by backfilling with bentonite chips and monitoring well MW-OWS-4 was screened from 3 to 8 feet bgs. The specific construction details of well MW-OWS-4 are documented in the boring logs (Appendix A). Following installation, approximately four wet well casing volumes of groundwater were agitated, purged, and removed from MW-OWS-4 during development.

A groundwater sample and a quality assurance/quality control (QA/QC) duplicate sample were collected from well MW-OWS-4 using low-flow purging and sampling techniques using a peristaltic pump equipped with new, single use polyethylene tubing. Prior to sampling MW-OWS-4, the depth to water was measured to the nearest 0.01 foot relative to the top of the well casing. Purging was accomplished by starting the pump system at a low-flow rate of approximately 100 milliliters per minute. Purge water was discharged through a flow cell for field parameter measurements and collected in a graduated 5-gallon bucket to measure purge volume.

2.4 Groundwater Sampling

During purging, discharge water was measured for field parameters including pH, specific conductivity, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP). The groundwater sample was collected when the discharge parameters had met the purge stabilization criteria. The purge stabilization criteria are based on three successive readings within the stabilization criteria. The stabilized field parameter measurement data were recorded in the field notes (Appendix A).

Groundwater samples were transferred directly from the pump discharge tubing into sample containers provided by the laboratory. The sample containers were placed in a cooler with ice and transported under standard chain-of-custody procedures to Pace Analytical National Laboratory, a Washington State certified laboratory located in Mt. Juliet, Tennessee. The samples were analyzed for the following parameters:

- EPH by NWTPH by EPH method;
- VPH by Method VPHWA;
- VOC by EPA Method 8260D;
- Naphthalenes and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270 SIM; and

- Arsenic, cadmium, hexavalent chromium, chromium III, lead, nickel, mercury, and zinc by EPA Methods 6010D, 7470A, and 3500Cr-C-2011.

Purge water was placed in a steel 55-gallon drum and stored on site pending treatment or disposal by the Refinery.

3.0 ASSESSMENT DATA EVALUATION

3.1 Soil Sample Analytical Results

Laboratory analytical results for soil samples BH-2-6:14, BH-2-7:14, and MW-OWS-4:14 are presented in Table 1. Analytical results were compared against applicable MTCA Method A Industrial, MTCA Method C (cancer), and MTCA Method C (non-cancer) CULs.

Specific analytes that were detected during analyses from these soil samples are shown in bold font in Table 1. Any analyte concentration that exceeded an applicable CUL for a soil sample is shaded gray. Copies of the laboratory analytical reports are provided in AppendixAppendix B. A summary of findings for the soil analytical testing is provided below.

There were no factors identified that may have compromised the quality or validity of the laboratory analytical results. All appropriate holding times were met, and all laboratory QA/QC results were within acceptable limits.

3.1.1 Metals

Apart from hexavalent chromium (which was not detected in any sample), concentrations of one or more metals (arsenic, cadmium, chromium III, lead, nickel, mercury, and zinc) were detected in all three soil samples. Arsenic was detected in soil samples BH-2-6:14 and BH-2-7:14 at concentrations of 5.77 mg/kg and 5.46 mg/kg, respectively, that slightly exceed the MTCA Method C Soil CUL – Direct Contact (Cancer) level of 4.1 mg/kg. The other detections of metals in the three soil samples were either at very low concentrations (less than applicable CULs) and/or are indicative of background metals concentrations in soils of Western Washington.

3.1.2 Volatile Organic Compounds

Concentrations of several VOCs were detected in each of the three soil samples analyzed at concentrations less than CULs. Benzene was detected in soil sample BH-2-7:14 at a concentration of 0.0446 mg/kg, which slightly exceeds the MTCA Method A Industrial CUL (0.03 mg/kg). Benzene in soil sample BH-2-7:14 was the only VOC CUL exceedance.

3.1.3 Semivolatile Organic Compounds

Several SVOCs were detected in soil sample MW-OWS-4:14 at low concentrations. None of the SVOC detections in this sample exceed the respective MTCA Method A Industrial or Method C CULs. Soil samples BH-2-6:14 and BH-2-7:14 did not contain any detectable concentrations of SVOC compounds.

3.1.4 Carcinogenic Polycyclic Aromatic Hydrocarbons

Concentrations of cPAHs were not detected in any of the three soil samples analyzed.

3.1.5 Extractable Petroleum Hydrocarbons

Concentrations of C12-C16 aliphatics, C16-C21 aliphatics, C12-C16 aromatics, and C16-C21 aromatics were detected in soil sample MW-OWS-4:14. The total of EPH detections was 82.5 mg/kg which is less than the MTCA Method A Industrial CUL of 2,000 mg/kg. Soil samples BH-2-6:14 and BH-2-7:14 did not contain any detectable concentrations of EPH compounds.

3.1.6 Volatile Petroleum Hydrocarbons

A concentration of C6-C8 aliphatics (0.723 mg/kg) was detected in soil sample BH-2-7:14. Concentrations of C6-C8 aliphatics (3.47 mg/kg), C8-C10 aliphatics (7.01 mg/kg), and C8-C10 aromatics (5.07 mg/kg) were detected in soil sample MW-OWS-4:14. Concentrations of VPH compounds were not detected in sample BH-2-6:14. The cumulative total of detected VPH concentrations in both soil samples were less than the MTCA Method A Industrial CUL of 30 mg/kg.

3.2 Groundwater Analytical Results

Laboratory analytical results for groundwater sample MW-OWS-4:14 are presented in Table 2. Analytical results were compared against applicable MTCA Method A, MTCA Method C (cancer) and MTCA Method C (non-cancer) groundwater CULs.

Specific analytes that were detected during analyses from these soil samples are shown in bold font in Table 2. Any analyte concentration that exceeded an applicable CUL for a groundwater sample is shaded gray. Copies of the laboratory analytical reports are provided in Appendix B. A summary of findings for the groundwater analytical testing is provided below.

There were no factors identified that may have compromised the quality or validity of the laboratory analytical results. All appropriate holding times were met, and all laboratory QA/QC results were within acceptable limits.

One blind duplicate sample was also analyzed for VOCs. Calculating the relative percent difference (RPD) between detected analyte concentrations in the two samples showed a RPD range of 4.9 percent to 14.2 percent between the two samples, which is within the acceptable limit of less than or equal to 20 percent.

Analytical results were compared against applicable MTCA Method A CULs. Copies of the laboratory analytical reports are provided in Appendix B. A summary of groundwater analytical results is provided below.

3.2.1 Total Petroleum Hydrocarbons – Gasoline-Range Organics

Gasoline-range organics (GRO) analyzed by Northwest Total Petroleum Hydrocarbons as Gasoline Extended (NWTPH-Gx) were detected in groundwater sample MW-OWS-4 at a concentration of 223 micrograms per liter (µg/L). This result is below the MTCA Method A CUL GRO of 800 µg/L.

3.2.2 Total Petroleum Hydrocarbons – Diesel-Range Organics and Residual-Range Organics

Diesel-range organics (DRO) analyzed by NWTPH as Diesel Extended (NWTPH-Dx) were detected in groundwater sample MW-OWS-4 at a concentration of 546 µg/L. Residual-range organics (RRO) were not detected in this sample. The combined DRO+RRO analytical result of 546 µg/L exceeds the MTCA Method A CUL for of 500 µg/L.

3.2.3 Metals

Concentrations of five metals (cadmium, chromium III, lead, nickel, and zinc) were detected in groundwater sample MW-OWS-4. None of the detections of metals exceeded the MTCA Method A or Method C groundwater CULs. The detection limit for arsenic exceeded the Method A and Method C CULs.

3.2.4 Volatile Organic Compounds

Concentrations of four VOCs were detected in groundwater sample MW-OWS-4 (isopropylbenzene, n-butylbenzene, n-propylbenzene, and sec-butylbenzene). None of these VOC detections exceeded applicable Method C groundwater CULs.

3.2.5 Semivolatile Organic Compounds

Seven SVOCs were detected in groundwater sample MW-OWS-4. Only the concentration of 1−methylnapthalene (30.2 µg/L) exceeded the Method C (cancer) groundwater CUL.

3.2.6 Carcinogenic Polycyclic Aromatic Hydrocarbons

Concentrations of cPAHs were not detected in groundwater sample MW-OWS-4.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on soil sampling results from this investigation, borings BH-2-6 and BH-2-7, installed near manhole location MH-11K-RE to assess potential environmental impacts from the OWS, did not identify any obvious or significant hydrocarbon impacts to soil based on core logging and PID field screening during direct-push sampling to a total depth of 14 feet bgs.

Soil samples BH-2-6:14 and BH-2-7:14 contained concentrations of arsenic that exceed the MTCA Method C Soil CUL – Direct Contact (Cancer). The exposure scenario for this CUL assumes ingestion of a dose of 50 milligrams (mg) of soil containing arsenic at a concentration exceeding the CUL and an exposure duration of 20 years. This is not a reasonably likely exposure pathway at the Refinery, because the area where these samples were collected is covered by pavement and is within the Refinery facility with multiple structures, storage tanks, and piping. It is within a secure area where all activities are controlled by operations.

The detection of benzene in soil sample BH-2-7:14 at a concentration of 0.0446 mg/kg slightly exceeds the MTCA Method A Soil CUL for Industrial Properties (0.03 mg/kg). Because the Method A Soil CUL is based on protection of groundwater, exceedance of this CUL in soil sample BH-2-7:14 indicates assessment of groundwater near boring BH-2-7 is required per Section 3.4 of the IRP and AO Section VII.A(8) (Phillips 66. 2022).

Boring MW-OWS-4 was installed to delineate potential soil impacts downgradient from soil boring B-2-23 in AOC-2. No obvious or significant hydrocarbon impacts to soil were observed during core logging and PID field screening during direct-push sampling to a total depth of 14 feet bgs.

Low concentrations of metals, VOCs, and SVOCs were detected in the soil sample collected from MW-OWS-4:14. All concentrations were less than applicable MTCA Method A Industrial or Method C Soil CULs and have delineated the extent of soil impacts southwest of B-2-23.

Groundwater sampled from monitoring well MW-OWS-4 contained detections of several metals, VOCs, GRO, and cPAHs that were all less than the MTCA Method A or Method C groundwater CULs. The combined concentration of DRO+RRO in groundwater (546 µg/L) exceeds the MTCA Method A Groundwater CUL of 500 µg/L. The concentration of SVOC 1−methylnapthalene (30.2 µg/L) exceeded the Method C Groundwater CUL (Cancer) of 8.6 µg/L.

TRC recommends that monitoring well MW-OWS-4 be resampled in November 2025 to monitor whether concentrations of DRO and 1-methylnapthalene detected in August 2025 are stable, decreasing, or increasing.

5.0 LIMITATIONS

To the extent that preparation of this report has required the application of best professional judgment and the application of scientific principles, certain results of this work have been based on subjective interpretation. TRC makes no warranties express or implied, including and without limitation, warranties as to merchantability or fitness for a particular purpose. The information provided in this report is not to be construed as legal advice.

This report was prepared solely for Phillips 66 Ferndale Refinery, and the contents herein may not be used or relied upon by any other person without the express written consent and authorization of TRC.

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Tables

Table 1
Soil Analytical Results
Phase II Soil and Groundwater Investigation
Phillips 66 Ferndale Refinery
Ferndale, Washington

Analytical Results					Cleanup Levels		
	Sample ID	**BH-2-6:14**	**BH-2-7:14**	**MW-OWS-4:14**	**MTCA Method A Soil Cleanup Level Industrial Properties[a]**	**MTCA Method C Soil Cleanup Level Direct Contact (Noncancer)[b]**	**MTCA Method C Soil Cleanup Level Direct Contact (Cancer)[b]**
	Sample Depth (feet)	**14**	**14**	**14**			
	Sample Date	**08/19/2025**	**08/19/2025**	**08/19/2025**			
Metals[c]	Arsenic	**5.77**	**5.46**	**3.67**	**20**	**210**	**4.1**
	Cadmium	**0.222 J**	**0.211 J**	**0.184 J**	**2**	**3,500**	NVE
	Chromium[m]	**41.7**	**42.6**	**49.9**	**NA[m]**	**NA[m]**	**NA[m]**
	Chromium (III)[d]	**41.7**	**42.6**	**49.9**	**2,000**	**5,300,000**	**NVE**
	Chromium, hexavalent[e]	<2.39	<2.48	<2.56	**19**	**3,200**	**820**
	Lead	**8.22**	**9.15**	**8.06**	**1,000**	**NVE**	**NVE**
	Mercury[f]	**0.0638**	**0.0354 J**	**0.0282 J**	**2**	**NVE**	**NVE**
	Nickel	**38.1**	**43.7**	**40.6**	NVE	**70,000**	**NVE**
	Zinc	**58.6**	**71.7**	**55.9**	**NVE**	**1,100,000**	**NVE**
Volatile Organic Compounds (VOCs)[g]	1,1,1,2-Tetrachloroethane	<0.00404	<0.00385	<0.00402	**NVE**	**110,000**	**5,000**
	1,1,1-Trichloroethane	<0.00404	<0.00385	<0.00402	**2**	**7,000,000**	**NVE**
	1,1,2,2-Tetrachloroethane	<0.00404	<0.00385	<0.00402	**NVE**	**70,000**	**660**
	1,1,2-Trichloroethane	<0.00404	<0.00385	<0.00402	**NVE**	**14,000**	**2,300**
	1,1-Dichloroethane	<0.00404	<0.00385	<0.00402	**NVE**	**700,000**	**23,000**
	1,1-Dichloroethene	<0.00404 C3	<0.00385 C3	<0.00402 C3	**NVE**	**180,000**	**NVE**
	1,1-Dichloropropene	<0.00809	<0.00771	<0.00804	**NVE**	**NVE**	**NVE**
	1,2,3-Trichlorobenzene	<0.0203	<0.0193	<0.0201	**NVE**	**2,800**	**NVE**
	1,2,3-Trichloropropane	<0.0203	<0.0193	<0.0201	**NVE**	**14,000**	**4.4**
	1,2,3-Trimethylbenzene	<0.00809	**0.0149**	<0.00804	**NVE**	**35,000**	**NVE**
	1,2,4-Trichlorobenzene	<0.0203	<0.0193	<0.0201	**NVE**	**35,000**	**4,500**
	1,2,4-Trimethylbenzene	<0.00809	**0.0894**	<0.00804	**NVE**	**35,000**	**NVE**
	1,2-Dibromo-3-chloropropane	<0.0404	<0.0385	<0.0402	**NVE**	**700**	**160**
	1,2-Dibromoethane	<0.00404	<0.00385	<0.00402	**0.005**	**32,000**	**66**
	1,2-Dichlorobenzene	<0.00809	<0.00771	<0.00804	**NVE**	**320,000**	**NVE**
	1,2-Dichloroethane	**0.00655**	<0.00385	<0.00402	**NVE**	**21,000**	**1,400**
	1,2-Dichloropropane	<0.00809	<0.00771	<0.00804	**NVE**	**140,000**	**3,500**
	1,3,5-Trimethylbenzene	<0.00809	**0.0376**	<0.00804	**NVE**	**35,000**	**NVE**
	1,3-Dichlorobenzene	<0.00809	<0.00771	<0.00804	**NVE**	**NVE**	**NVE**
	1,3-Dichloropropane	<0.00809	<0.00771	<0.00804	**NVE**	**70,000**	**NVE**
	1,4-Dichlorobenzene	<0.00809	<0.00771	<0.00804	**NVE**	**250,000**	**24,000**
	2,2-Dichloropropane	<0.00404	<0.00385	<0.00402	**NVE**	**NVE**	**NVE**
	2-Butanone	<0.162	<0.154	<0.161	**NVE**	**2,100,000**	**NVE**
	2-Chlorotoluene	<0.00404	<0.00385	<0.00402	**NVE**	**70,000**	**NVE**
	4-Chlorotoluene	<0.00809	<0.00771	<0.00804	**NVE**	**70,000**	**NVE**
	4-Isopropyltoluene	<0.00809	<0.00771	<0.00804	**NVE**	**14,000**	**NVE**
	4-Methyl-2-pentanone	<0.0404	<0.0385	<0.0402	**NVE**	**280,000**	**NVE**
	Acetone	<0.162	<0.154	<0.161	**NVE**	**3,200,000**	**NVE**
	Acrylonitrile	<0.0203	<0.0193	<0.0201	**NVE**	**3,500**	**240**
	Benzene	**0.0136**	**0.0446**	<0.00161	**0.03**	**14,000**	**2,400**
	Bromobenzene	<0.0203	<0.0193	<0.0201	**NVE**	**28,000**	**NVE**
	Bromodichloromethane	<0.00404	<0.00385	<0.00402	**NVE**	**70,000**	**2,100**
	Bromoform	<0.0404	<0.0385	<0.0402	**NVE**	**70,000**	**17,000**
	Bromomethane	<0.0203 C3	<0.0193 C3	<0.0201 C3	**NVE**	**4,900**	**NVE**
	Carbon tetrachloride	<0.00809	<0.00771	<0.00804	**NVE**	**14,000**	**1,900**
	Chlorobenzene	<0.00404	<0.00385	<0.00402	**NVE**	**70,000**	**NVE**
	Chloroethane	<0.0162 C3	<0.0154 C3	<0.0161 C3	**NVE**	**NVE**	**NVE**
	Chloroform	<0.00404	<0.00385	<0.00402	**NVE**	**35,000**	**4,200**
	Chloromethane	<0.0203 C3	<0.0193 C3	<0.0201 C3	**NVE**	**NVE**	**NVE**
	cis-1,2-Dichloroethene	<0.00404	<0.00385	<0.00402	**NVE**	**7,000**	**NVE**
	cis-1,3-Dichloropropene	<0.00404	<0.00385	<0.00402	**NVE**	**NVE**	**NVE**
	Chlorodibromomethane	<0.00404	<0.00385	<0.00402	**NVE**	**70,000**	**1,600**
	Dibromomethane	<0.00809	<0.00771	<0.00804	**NVE**	**35,000**	**NVE**
	Dichlorodifluoromethane (Freon 12)	<0.00809 C3	<0.00771 C3	<0.00804 C3	**NVE**	**700,000**	**NVE**
	Di-isopropyl ether	<0.00162	<0.00154	<0.00161	**NVE**	**NVE**	**NVE**
	Ethylbenzene	<0.00404	**0.0160**	<0.00402	**6**	**350,000**	**NVE**
	Hexachloro-1,3-butadiene	<0.0404	<0.0385	<0.0402	**NVE**	**3,500**	**1,700**
	Isopropylbenzene (Cumene)	<0.00404	**0.0202**	**0.0365**	**NVE**	**350,000**	**NVE**
	Methyl tert-butyl ether (MTBE)	<0.00162 C3	<0.00154 C3	<0.00161 C3	**0.1**	**NVE**	**73,000**
	Methylene chloride	<0.0404	<0.0385	<0.0402	**0.02**	**21,000**	**66,000**
	Naphthalene	<0.0203	**0.0259**	<0.0201	**5**	**70,000**	**NVE**
	n-Butylbenzene	<0.0203	<0.0193	**0.180**	**NVE**	**180,000**	**NVE**
	n-Propylbenzene	<0.00809	**0.0325**	**0.126**	**NVE**	**350,000**	**NVE**
	sec-Butylbenzene	<0.0203	**0.00641 J**	**0.138**	**NVE**	**350,000**	**NVE**
	Styrene	<0.0203	<0.0193	<0.0201	**NVE**	**700,000**	**NVE**
	tert-Butylbenzene	<0.00809	<0.00771	**0.0102**	**NVE**	**350,000**	**NVE**
	Tetrachloroethene	<0.00404	<0.00385	<0.00402	**0.05**	**21,000**	**63,000**
	Toluene	<0.00809	**0.0367**	<0.00804	**7**	**280,000**	**NVE**
	trans-1,2-Dichloroethene	<0.00809	<0.00771	<0.00804	**NVE**	**70,000**	**NVE**

Table 1
Soil Analytical Results
Phase II Soil and Groundwater Investigation
Phillips 66 Ferndale Refinery
Ferndale, Washington

Analytical Results					Cleanup Levels		
	Sample ID	**BH-2-6:14**	**BH-2-7:14**	**MW-OWS-4:14**	**MTCA Method A Soil Cleanup Level Industrial Properties[a]**	**MTCA Method C Soil Cleanup Level Direct Contact (Noncancer)[b]**	**MTCA Method C Soil Cleanup Level Direct Contact (Cancer)[b]**
	Sample Depth (feet)	**14**	**14**	**14**			
	Sample Date	**08/19/2025**	**08/19/2025**	**08/19/2025**			
Volatile Organic Compounds (VOCs)[g]	trans-1,3-Dichloropropene	<0.00809	<0.00771	<0.00804	**NVE**	**NVE**	**NVE**
	Trichloroethene	<0.00162	<0.00154	<0.00161	**0.03**	**1,800**	**2,900**
	Trichlorofluoromethane (Freon 11)	<0.00647 C3	<0.00617 C3	<0.00643 C3	**NVE**	**1,100,000**	**NVE**
	Trichlorotrifluoroethane (Freon 113)	<0.00809 C3	<0.00771 C3	<0.00804 C3	**NVE**	**110,000,000**	**NVE**
	Vinyl chloride	<0.00404 C3	<0.00385 C3	<0.00402 C3	**NVE**	**11,000**	**88**
	Xylenes, total	<0.0105	**0.0970**	<0.0105	**9**	**700,000**	**NVE**
Semivolatile Organic Compounds (SVOCs)[h]	1-Methylnaphthalene	<0.0239 J4	<0.0248 J4	**0.323 J4**	**NVE**	**250,000**	**2,600**
	2-Chloronaphthalene	<0.0239	<0.0248	<0.0256	**NVE**	**280,000**	**NVE**
	2-Methylnaphthalene	<0.0239	<0.0248	**0.104**	**NVE**	**14,000**	**NVE**
	Acenaphthene	<0.00718	<0.00744	**0.0752**	**NVE**	**210,000**	**NVE**
	Acenaphthylene	<0.00718	<0.00744	<0.00768	**NVE**	**NVE**	**NVE**
	Anthracene	<0.00718	<0.00744	<0.00768	**NVE**	**1,100,000**	**NVE**
	Benzo(g,h,i)perylene	<0.00718	<0.00744	<0.00768	**NVE**	**NVE**	**NVE**
	Fluoranthene	<0.00718 J4	<0.00744 J4	<0.00768 J4	**NVE**	**140,000**	**NVE**
	Fluorene	<0.00718	<0.00744	**0.0981**	**NVE**	**140,000**	**NVE**
	Naphthalene	<0.0239	<0.0248	<0.0256	**5**	**70,000**	**NVE**
	Phenanthrene	<0.00718	<0.00744	**0.251**	**NVE**	**NVE**	**NVE**
	Pyrene	<0.00718	<0.00744	**0.00638 J**	**NVE**	**110,000**	**NVE**
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)[h]	Benzo(a)pyrene	<0.00718	<0.00744	<0.00768	**See Cleanup Level for TEF-Adjusted Total cPAHs**	**See Cleanup Level for TEF-Adjusted Total cPAHs**	**See Cleanup Level for TEF-Adjusted Total cPAHs**
	Benzo(a)anthracene	<0.00718	<0.00744	<0.00768			
	Benzo(b)fluoranthene	<0.00718	<0.00744	<0.00768			
	Benzo(k)fluoranthene	<0.00718	<0.00744	<0.00768			
	Chrysene	<0.00718 J4	<0.00744 J4	<0.00768 J4			
	Dibenz(a,h)anthracene	<0.00718	<0.00744	<0.00768			
	Indeno(1,2,3-cd)pyrene	<0.00718	<0.00744	<0.00768			
TEF-Adjusted Total cPAHs[i]		ND	ND	ND	**2**	**1,100**	**130**
Extractable Petroleum Hydrocarbons[j]	C10-C12 Aliphatics	<17.6 J4	<18.5 J4	<19.0 J4	**2,000**	**NVE**	**NVE**
	C12-C16 Aliphatics	<17.6 J4	<18.5 J4	**19.5 J4**			
	C16-C21 Aliphatics	<17.6	<18.5	**17.3 J**			
	C21-C34 Aliphatics	<17.6	<18.5	<19.0			
	C10-C12 Aromatics	<17.6	<18.5	<19.0			
	C12-C16 Aromatics	<17.6	<18.5	**17.4 J**			
	C16-C21 Aromatics	<17.6	<18.5	**28.3**			
	C21-C34 Aromatics	<17.6	<18.5	<19.0			
Volatile Petroleum Hydrocarbons[k]	C5-C6 Aliphatics (Adjusted)	<8.09	<7.71	<8.04	**30**	**NVE**	**NVE**
	C5-C6 Aliphatics (Unadjusted)	<8.09	<7.71	<8.04			
	C6-C8 Aliphatics (Adjusted)	<8.09	<7.71	**3.47 J**			
	C6-C8 Aliphatics (Unadjusted)	<8.09	**0.723 J**	**3.47 J**			
	C8-C10 Aliphatics (Adjusted)	<8.09	<7.71	**7.01 J**			
	C8-C10 Aliphatics (Unadjusted)	<8.09	<7.71	**7.01 J**			
	C8-C10 Aromatics	<8.09	<7.71	**5.07 J**			
Total Solids[l]	Total Solids (TS)	**83.6**	**80.6**	**78.1**	**NVE**	**NVE**	**NVE**

Notes:

Total solids presented in percent, all other results presented in milligrams/kilogram (mg/kg).

Bold	Bold result exceeds the laboratory reporting limit.
	Shaded result exceeds the applicable MTCA Method A or Method C cleanup level.
<	Result is less than the laboratory reporting limit.
a	Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Industrial Properties, Table 745-1, Washington Administrative Code (WAC) 173-340-90, February 2025.
b	MTCA Method C Soil Cleanup Levels from Cleanup Levels and Risk Calculations (CLARC).
c	Analyzed by EPA Method 6010D unless otherwise indicated.
d	Chromium,Trivalent calculated by Pace Laboratories, Inc. = (Total Cr - Hexavalent Cr).
e	Analyzed by Method 3060A/7196A.
f	Analyzed by EPA Method 7471B.
g	Analyzed by EPA Method 8260D.
h	Analyzed by EPA Method 8270E SIM.
i	Toxicity Equivalency Factors (TEFs) calculated under WAC 173-340-708(e) in accordance with Table 708-2 (in WAC 173-340-900).
j	Analyzed by Method EPH.
k	Analyzed by Method VPHWA.
l	Analyzed by Method 2540 G-2011.
m	Total Chromium cleanup level assumes no verification of Hexavalent Chromium concentration performed. NA = Not applicable.
ND	None of the analyzed compounds were detected at a concentration exceeding the laboratory reporting limit.
NVE	No value established.

Qualifiers:

C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable, the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

Table 2
Groundwater Analytical Results
Phase II Soil and Groundwater Investigation
Phillips 66 Ferndale Refinery
Ferndale, Washington

Analytical Results			Cleanup Levels		
	Sample ID	MW-OWS-4	MTCA Method A Groundwater Cleanup Levels[a]	MTCA Method C Groundwater Cleanup Levels (Cancer)[b]	MTCA Method C Groundwater Cleanup Levels (Noncancer)[b]
	Sample Date	08/19/2025			
Total Petroleum Hydrocarbons	Gasoline-Range Organics (GRO)[c]	**223**	**800**	**NVE**	**NVE**
	Diesel-Range Organics (DRO)[d]	**546**	**500**	**NVE**	**NVE**
	Residual-Range Organics (RRO)[d]	<250	**500**	**NVE**	**NVE**
Metals[e]	Arsenic	<10.0	**5**	**0.027**	**2.1**
	Cadmium	**0.900 J**	**5**	**NVE**	**18**
	Chromium[l]	**11.4**	**50**	**NVE**	**NVE**
	Chromium (III)[f]	**11.4**	**NVE**	**NVE**	**53,000**
	Chromium, hexavalent[g]	<0.500	**NVE**	**5.5**	**32**
	Lead	**10.2**	**15**	**NVE**	**NVE**
	Mercury[h]	<0.200	**2**	**NVE**	**NVE**
	Nickel	**14.2**	**NVE**	**NVE**	**700**
	Zinc	**54.3**	**NVE**	**NVE**	**11,000**
Volatile Organic Compounds (VOCs)[i]	1,1,1,2-Tetrachloroethane	<1.00	**NVE**	**17**	**530**
	1,1,1-Trichloroethane	<1.00	**200**	**NVE**	**35,000**
	1,1,2,2-Tetrachloroethane	<1.00	**NVE**	**2.2**	**350**
	1,1,2-Trichloroethane	<1.00	**NVE**	**7.7**	**70**
	1,1-Dichloroethane	<1.00	**NVE**	**77**	**3,500**
	1,1-Dichloroethene	<1.00	**NVE**	**NVE**	**880**
	1,1-Dichloropropene	<1.00	**NVE**	**NVE**	**NVE**
	1,2,3-Trichlorobenzene	<1.00 C3	**NVE**	**NVE**	**14**
	1,2,3-Trichloropropane	<2.50	**NVE**	**0.015**	**70**
	1,2,3-Trimethylbenzene	<1.00	**NVE**	**NVE**	**180**
	1,2,4-Trichlorobenzene	<2.00 C3	**NVE**	**15**	**180**
	1,2,4-Trimethylbenzene	<2.00	**NVE**	**NVE**	**180**
	1,2-Dibromo-3-chloropropane	<5.00 C3	**NVE**	**0.55**	**3.5**
	1,2-Dibromoethane	<1.00	**0.01**	**0.22**	**160**
	1,2-Dichlorobenzene	<1.00	**NVE**	**NVE**	**1,600**
	1,2-Dichloroethane	<1.00	**5**	**4.8**	**110**
	1,2-Dichloropropane	<1.00	**NVE**	**12**	**700**
	1,3,5-Trimethylbenzene	<1.00	**NVE**	**NVE**	**180**
	1,3-Dichlorobenzene	<1.00	**NVE**	**NVE**	**NVE**
	1,3-Dichloropropane	<1.00	**NVE**	**NVE**	**350**
	1,4-Dichlorobenzene	<1.00	**NVE**	**81**	**1,200**
	2,2-Dichloropropane	<1.00	**NVE**	**NVE**	**NVE**
	2-Butanone	<20.0	**NVE**	**NVE**	**11,000**
	2-Chlorotoluene	<1.00	**NVE**	**NVE**	**350**
	4-Chlorotoluene	<1.00	**NVE**	**NVE**	**350**
	4-Isopropyltoluene	<1.00	**NVE**	**NVE**	**70**
	4-Methyl-2-pentanone	<20.0	**NVE**	**NVE**	**1,400**
	Acetone	<50.0	**NVE**	**NVE**	**16,000**
	Acrolein	<50.0 C3	**NVE**	**NVE**	**8.8**
	Acrylonitrile	<10.0	**NVE**	**0.81**	**18**
	Benzene	<1.00	**5**	**8**	**70**
	Bromobenzene	<1.00	**NVE**	**NVE**	**140**
	Bromodichloromethane	<1.00	**NVE**	**7.1**	**350**
	Bromoform	<1.00	**NVE**	**55**	**350**
	Bromomethane	<5.00	**NVE**	**NVE**	**25**
	Carbon tetrachloride	<1.00	**NVE**	**6.3**	**70**
	Chlorobenzene	<1.00	**NVE**	**NVE**	**350**
	Chloroethane	<5.00	**NVE**	**NVE**	**NVE**
	Chloroform	<5.00	**NVE**	**14**	**180**
	Chloromethane	<5.00	**NVE**	**NVE**	**NVE**
	cis-1,2-Dichloroethene	<1.00	**NVE**	**NVE**	**35**
	cis-1,3-Dichloropropene	<1.00	**NVE**	**NVE**	**NVE**
	Chlorodibromomethane	<1.00	**NVE**	**5.2**	**350**
	Dibromomethane	<1.00	**NVE**	**NVE**	**180**
	Dichlorodifluoromethane (Freon 12)	<5.00	**NVE**	**NVE**	**3,500**
	Di-isopropyl ether	<1.00	**NVE**	**NVE**	**NVE**
	Ethylbenzene	<1.00	**700**	**NVE**	**1,800**
	Hexachloro-1,3-butadiene	<2.00 C3	**NVE**	**5.6**	**18**
	Isopropylbenzene (Cumene)	**1.25**	**NVE**	**NVE**	**1,800**
	Methyl tert-butyl ether (MTBE)	<1.00	**20**	**240**	**NVE**
	Methylene chloride	<5.00	**5**	**220**	**110**
	Naphthalene	<5.00	**160**	**NVE**	**350**

Table 2
Groundwater Analytical Results
Phase II Soil and Groundwater Investigation
Phillips 66 Ferndale Refinery
Ferndale, Washington

Analytical Results			Cleanup Levels		
	Sample ID	MW-OWS-4	MTCA Method A Groundwater Cleanup Levels[a]	MTCA Method C Groundwater Cleanup Levels (Cancer)[b]	MTCA Method C Groundwater Cleanup Levels (Noncancer)[b]
	Sample Date	08/19/2025			
Volatile Organic Compounds (VOCs)[i]	n-Butylbenzene	**1.2**	**NVE**	**NVE**	**880**
	n-Propylbenzene	**3.44**	**NVE**	**NVE**	**1,800**
	sec-Butylbenzene	**1.62**	**NVE**	**NVE**	**1,800**
	Styrene	<1.00	**NVE**	**NVE**	**3,500**
	tert-Butylbenzene	<1.00	**NVE**	**NVE**	**1,800**
	Tetrachloroethene	<1.00	**5**	**210**	**110**
	Toluene	<1.00	**1,000**	**NVE**	**1,400**
	trans-1,2-Dichloroethene	<1.00	**NVE**	**NVE**	**350**
	trans-1,3-Dichloropropene	<1.00	**NVE**	**NVE**	**NVE**
	Trichloroethene	<1.00	**5**	**9.5**	**8.8**
	Trichlorofluoromethane (Freon 11)	<5.00	**NVE**	**NVE**	**5,300**
	Trichlorotrifluoroethane (Freon 113)	<1.00	**NVE**	**NVE**	**530,000**
	Vinyl chloride	<1.00	**0.2**	**0.29**	**53**
	Xylenes, total	<3.00	**1,000**	**NVE**	**3,500**
Semivolatile Organic Compounds (SVOCs)[j]	1-Methylnaphthalene	**30.2**	**NVE**	**8.6**	**1,200**
	2-Chloronaphthalene	<1.00	**NVE**	**NVE**	**1,400**
	2-Methylnaphthalene	**3.9**	**NVE**	**NVE**	**70**
	Acenaphthene	**4.58**	**NVE**	**NVE**	**1,100**
	Acenaphthylene	<0.200	**NVE**	**NVE**	**NVE**
	Anthracene	**0.190 J**	**NVE**	**NVE**	**5,300**
	Benzo(g,h,i)perylene	<0.200	**NVE**	**NVE**	**NVE**
	Fluoranthene	<0.200	**NVE**	**NVE**	**1,400**
	Fluorene	**6.27**	**NVE**	**NVE**	**700**
	Naphthalene	<1.00	**160**	**NVE**	**350**
	Phenanthrene	**8.3**	**NVE**	**NVE**	**NVE**
	Pyrene	**0.223**	**NVE**	**NVE**	**530**
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)[j]	Benzo(a)pyrene	<0.200	**See Cleanup Level for TEF-Adjusted Total cPAHs**	**See Cleanup Level for TEF-Adjusted Total cPAHs**	**See Cleanup Level for TEF-Adjusted Total cPAHs**
	Benzo(a)anthracene	<0.200			
	Benzo(b)fluoranthene	<0.200			
	Benzo(k)fluoranthene	<0.200			
	Chrysene	<0.200			
	Dibenz(a,h)anthracene	<0.200			
	Indeno(1,2,3-cd)pyrene	<0.200			
TEF-Adjusted Total cPAHs[k]		ND	**0.1**	**0.88**	**11**

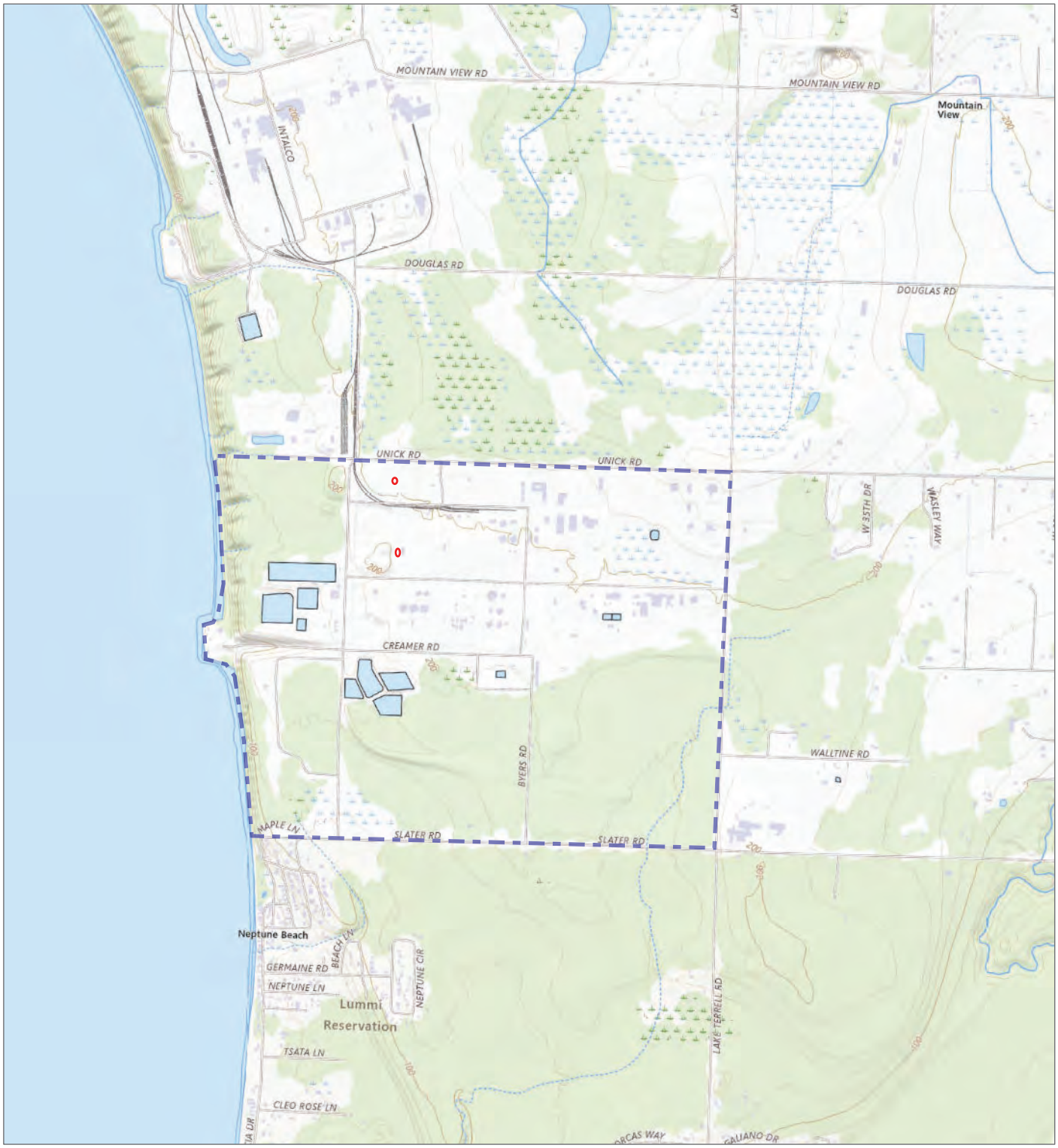
Notes:
All results presented in micrograms per liter (µg/L).

Bold	Bold result exceeds the laboratory reporting limit.
	Shaded result exceeds the applicable MTCA Method A or Method C cleanup level.
<	Result is less than the laboratory reporting limit.
a	Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1, Washington Administrative Code (WAC) 173-340-900, February 2025.
b	MTCA Method C Groundwater Cleanup Levels from Cleanup Levels and Risk Calculations (CLARC).
c	Analyzed by NWTPH-Gx.
d	Analyzed by NWTPH-Dx.
e	Analyzed by EPA Method 6010D unless otherwise indicated.
f	Chromium,Trivalent calculated by Pace Laboratories, Inc. = (Total Cr - Hexavalent Cr).
g	Analyzed by Method 3500Cr C-2011.
h	Analyzed by EPA Method 7470A.
i	Analyzed by EPA Method 8260D.
j	Analyzed by EPA Method 8270E SIM.
k	Toxicity Equivalency Factors (TEFs) calculated under WAC 173-340-708(e) in accordance with Table 708-2 (in WAC 173-340-90
l	Total Chromium (Cr) = Cr(III) + Cr(VI) concentration.
ND	None of the analyzed compounds were detected at a concentration exceeding the laboratory reporting limit.
NVE	No value established.

Qualifiers:

C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable, the reported value is an estimate.

Figures



PROPERTY BOUNDARY

PHASE II INVESTIGATION AREAS

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'



PROJECT: **PHILLIPS 66 FERNDALE REFINERY**
3901 UNICK ROAD
FERNDALE, WASHINGTON

TITLE: **GENERAL VICINITY MAP**
PHASE II SOIL AND GROUNDWATER INVESTIGATION

EDITED BY:	E. LARSEN	PROJ. NO.:	664185.0000.0000
CHECKED BY:	J. WINDSOR		
APPROVED BY:	J. BERNTHAL		**FIGURE 1**
DATE:	SEPTEMBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PHASEII SOIL AND GW INV

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE WASHINGTON SOUTH FIPS 4602 FT US; MAP ROTATION: 0
-- EDITED/SAVED BY: ELARSEN ON 9/24/2025, 3:15 PM; FILE PATH: T:\Clients\Active Projects\Phillips 66\664185.0\Reports\Phase II Tech Memo\3-FIGURES; LAYOUT NAME: FIGURE 1 GVM

AOC-2
B-2-23
MW-OWS-4
2nd STREET
4th STREET
6th STREET
'M' STREET
'L' STREET
'K' STREET
'J' STREET
'H' STREET
6000x1
1340x 117
800x 142
800x 143
800x 151
800x 144
800x 145
960x 1
550x 100
800x 141
550x 104
550x 103
1340x 115
550x 101
800x 148
800x 150
800x 146
800x 147
BH-2-6
BH-2-7
MH-11K-RE
900x1
3000x1
900x 3
900x 2

AREA OF REFINERY SHOWN



NOTES:

OWS	OILY WATER SEWER
MW-OWS-4	GROUNDWATER MONITORING WELL
B-2-23	SOIL SAMPLE (2023) EXCEEDED MTCA METHOD A CLEANUP LEVEL
BH-2-6	SOIL BORING LOCATION (2025)
MH-11K-RE	OWS INVESTIGATION PH II MANHOLE LOCATION (OTHER OWS MANHOLES SHOWN ON FIGURE 3)
	OWS MAJOR TRUNK LINES
	AREA OF CONCERN 2 (AOC-2)
	FENCE
800x 151	STORAGE TANK VOLUME (BBL) TANK NUMBER

N

0 250 500
FEET

PROJECT:
PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

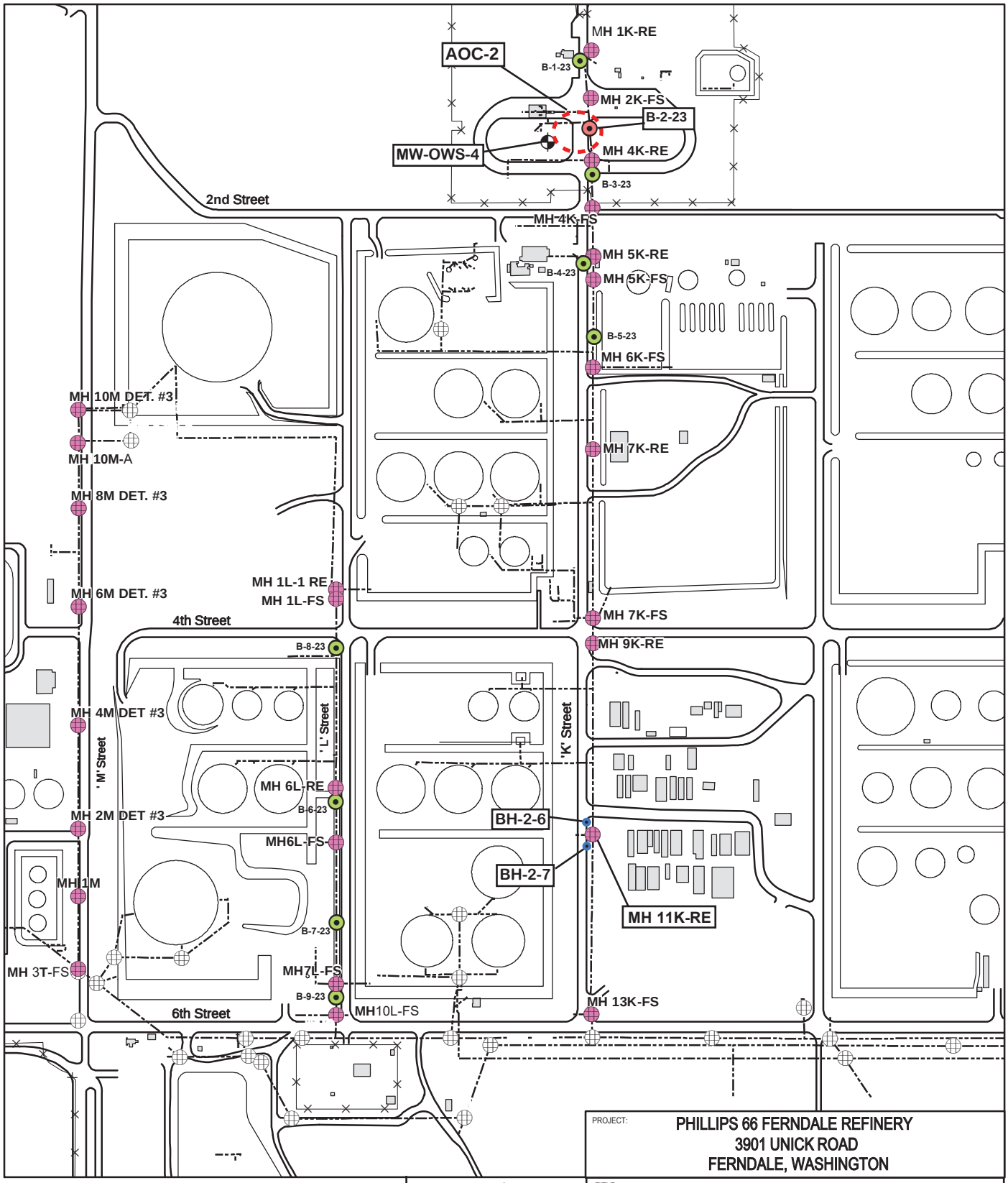
TITLE:
EXTENDED VICINITY MAP
PHASE II SOIL AND GROUNDWATER INVESTIGATION

DRAWN BY:	E.LARSEN	PROJ. NO.:	664185.0000.0000
CHECKED BY:	J. WINDSOR		
APPROVED BY:	J. BERNTHAL		**FIGURE 2**
DATE:	SEPTEMBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: Projects\Philips 66\664185.0\Reports\Phase II Investigation\3-FIGURES

System: NAD 1983 StatePlane Washington North FIPS 4601



NOTES:

MW-OWS-4	⊕	GROUNDWATER MONITORING WELL
B-2-23	◉	SOIL SAMPLE (2003) EXCEEDED MTCA CUL
B-7-23	◉	SOIL SAMPLE (2003) BELOW MTCA CUL
BH-2-6	◉	RECENTLY INSTALLED SOIL BORING
MH-11K-RE	⊕	PH II OWS MANHOLE LOCATION

N

0 125 250

FEET



PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

TITLE: AOC-2 AND MH 11K-RE SOIL AND GROUNDWATER MONITORING WELL LOCATIONS

EDITED BY:	E. LARSEN	PROJ. NO.:	664185.0000.0000
CHECKED BY:	J. WINDSOR		
APPROVED BY:	J. BERNTHAL		FIGURE 3
DATE:	SEPTEMBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: Projects\Philips 66\664185.0\Reports\Phase II Investigation\3-FIGURES

Appendix A
Boring Logs and Field Notes

BORING ID: BH-2-6

SITE ADDRESS: **3901 Unick Road, Ferndale WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **664185**
DRILLING EQUIPMENT: **GeoProbe 7822 DT**	DATE: **8/19/2025**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: **NM** / DECOMMISSIONING MATERIAL: **Bentonite Chips**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs** / BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other. *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No Sample Recovery (vac truck)	0				
5	SM	SILTY SAND; grayish brown, wet, very soft, low plasticity, mostly fine sand, some silt, trace gravel		0.6			
7			100	0.5			
9		Decrease to minor silt					
10				5.3			
11		Increase to some silt					
12	ML	SILT; grayish brown, damp, stiff, nonplastic, mostly silt, trace sand	100	1.3			
14					BH-2-6: 14		
15		END OF BOREHOLE		0			END OF BOREHOLE
16							

NOTES:

BORING ID: BH-2-7

SITE ADDRESS: **3901 Unick Road, Ferndale WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **664185**
DRILLING EQUIPMENT: **GeoProbe 7822 DT**	DATE: **8/19/2025**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: **NM** / DECOMMISSIONING MATERIAL: **Bentonite Chips**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs** / BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No Sample Recovery (vac truck)	0				
5	SM	SILTY SAND; grayish brown, wet, very soft, low plasticity, mostly fine sand, some silt, trace gravel	100	0			
7	SM	Decrease to minor silt, increase to few gravel		5.7			
9	ML	SILT; grayish brown and light olive brown, damp, very stiff, nonplastic, mostly silt, few sand, trace gravel		2.7			
13	ML		100	0.5			
14	CL	LEAN CLAY; reddish gray, moist, medium stiffness, high plasticity, mostly clay		0	BH-2-7: 14		
15		END OF BOREHOLE		0			END OF BOREHOLE

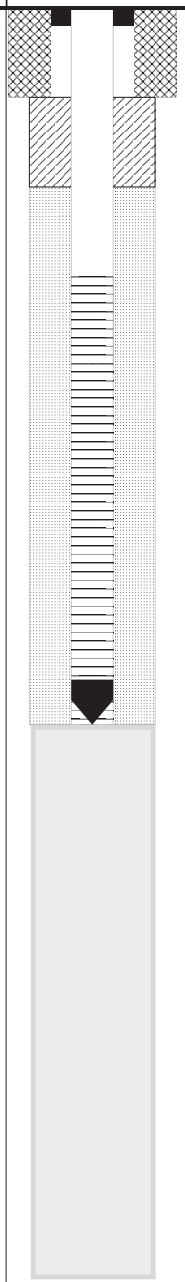
*: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%

NOTES:

BORING ID: MW-OWS-4

SITE ADDRESS: **3901 Unick Road, Ferndale WA**		CLIENT: **Phillips 66**	CASING MATERIAL AND SIZE: **2' Sch 40 PVC**
DRILLING CONTRACTOR: **Cascade**		PROJECT #: **664185**	SCREEN SIZE: **0.01"**
DRILLING EQUIPMENT: **GeoProbe 7822 DT**		DATE: **8/19/2025**	SCREEN INTERVAL: **3'-8'**
DRILLING METHOD: **Direct Push Technology**	REGULATORY TAG #: **NM**	GROUND SURFACE ELEV. FT AMSL: **NM**	FILTER PACK: **Prepacked silica sand**
LOGGED BY: **M. Taylor**	BOREHOLE SIZE: **2.25"**	TOTAL DEPTH: **14' bgs**	FILTER PACK INTERVAL: **2'-8'**

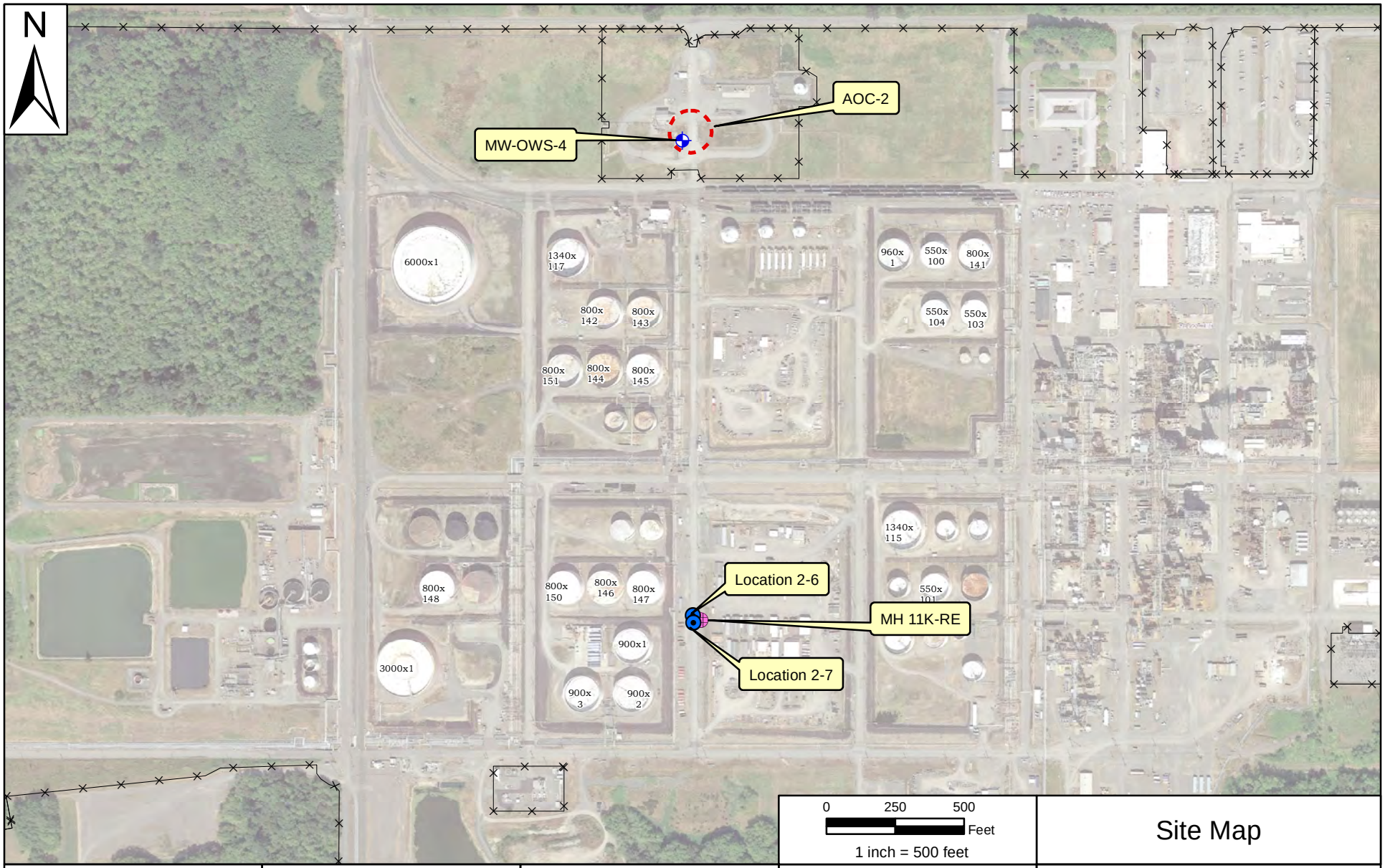
Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other. *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%)	Interval & % Recovery	PID (ppm)	Sample
0		No Sample Recovery (vac truck)	0		
4		Observed Water Level			
5	ML	SILT; grayish brown, damp, very stiff, non plastic, mostly silt, minor sand, few gravel		0.4	
7			100	10	
9		Becomes moist to wet, soft, low plasticity			
10				4.7	
12	SM	SILTY SAND WITH GRAVEL; grayish brown, dry to damp, medium dense, mostly fine to medium sand, some silt, trace gravel	100	6.7	
13	MH	ELASTIC SILT; grayish brown, damp to moist, medium stiffness, low plasticity, mostly silt, trace sand			
14		END OF BOREHOLE		13.8	MW-OWS-4: 14
16					



NOTES: Core at 13'-15' wet on the outside with a silty sand but the inside was as dry. Water likely came in from above. DTW = 4.39'

Phillips 66 - 664185
AOC-2 Soil Sampling

664185
P66 Ferndale
8-19-25
L. Briand



Site Map

- Proposed Monitoring Well
- Sample Needed
- OWS Investigation Phase II Manhole
- AOC-2
- Fence

All data are approximate and should be used for relative location reference only.
2020 Aerial Photograph

Prepared for: PHILLIPS 66

Prepared by: ALL4

3901 Unick Rd.
Ferndale, WA 98248

P66 OWS Phase II

5/3/2024

Figure 1

conds: Ore-cast, 64f

0700 TRC (L. Brion+) on-site, cascade on-site.

0710 Equip PPE, review scope. check-in w/ front gate.

0720 Meet up w/ core (P66), get work permit + review H&S topics for site.

0740 Mob to southern boring locations, review clearance w/ cascade & WRS.

0750 WRS to begin vac clearing to 5ft.

0820 continue vac clearing



0900 WRS finished at BH-2-7 & BH-2-6, mob to MW-OWS-4 to clear.

0910 Cascade to stage probe at BH-2-6.

0930 M. Taylor on-site, begin drilling at BH-2-6,

1015 Sample BH-2-6:14, mob to BH-2-7.

1035 Sample BH-2-7:14, mob to MW-OWS-4.

1040 Prep at MW-OWS-4, prepare drilling equipment



1125 Begin drilling at MW-OWS-4.

1200 Sample MW-OWS-4:14

1205 Cascade to begin setting well at location.

1230 confer w/ PM & cole regarding drill mix refusal & recharge.

1245 Lunch break to let hole fill.

1315 Cascade to install well. Cascade to Sand from 10-8ft bgs. Screen from 8-3 ft bgs.

1345 Continue installation of well.

1400 Finish well installation, allow water to fill.

1420 Gauge well: DTW: 4.39 ft
TD: 7.88 ft

Well ID: BG12212

Gallons needed for 10-wetted volumes. ~5.8 gal.

1430 Begin development of mw-ows-4

1500 Continue well development, evaluate discharge. ~1.5 gal. Multiple dry purges.

1530 Confer w/ PM, Provide update. PM advises to sample via low-flow & gather 1 set of readings. Final development volume: 2.0 gal.

1545 Sample mw-OWS-4 groundwater.

1600 Continue filling of Sample containers.

1635 Finalize sampling, prepare Duplicate containers for lab. Gather Dup.

1640 M. Taylor to calibrate YSI.

1650 Record 1 round of parameters.

1700 Prepare equipment demob, fill out COC & decon site.

1730 Prep Drum Storage!





1740 Prepare coolers for shipment.





1800 Check out w/ Security & Cole (P66), TRC off-site

LD
6-19-25

Appendix B
Laboratory Analytical Reports

ANALYTICAL REPORT

September 16, 2025

TRC - Woodinville, WA

Sample Delivery Group:	L1890727
Samples Received:	08/21/2025
Project Number:	664185
Description:	Phillips 66
Site:	FERNDALE, WA
Report To:	Eric Larsen 13810 SE Eastgate Way Suite 440 Bellevue, WA 98005

Entire Report Reviewed By:

Andi R Jones
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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SAMPLE SUMMARY

MW-OWS-4 L1890727-01

Collected by	Collected date/time	Received date/time
	08/19/25 15:45	08/21/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2584659	1	08/29/25 00:45	08/29/25 00:45	EKB	Mt. Juliet, TN
Wet Chemistry by Method 3500Cr C-2011	WG2584823	1	08/29/25 00:45	08/29/25 00:45	EKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2584829	1	08/26/25 15:39	08/29/25 17:59	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2584659	1	08/26/25 09:34	08/26/25 13:52	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2585377	1	08/22/25 15:15	08/22/25 15:15	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2585810	1	08/23/25 16:52	08/23/25 16:52	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2586449	1	08/27/25 07:46	08/28/25 03:43	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2586441	4	08/25/25 14:06	08/26/25 12:21	HLA	Mt. Juliet, TN

DUP-1 L1890727-02

Collected by	Collected date/time	Received date/time
	08/19/25 00:00	08/21/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2585810	1	08/23/25 17:11	08/23/25 17:11	WHS	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Andi R Jones
Project Manager

Calculated Results

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chromium,Trivalent	11.4		0.100	0.500	1	08/29/2025 00:45	WG2584659

Wet Chemistry by Method 3500Cr C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium	U		0.100	0.500	1	08/29/2025 00:45	WG2584823

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.0700	0.200	1	08/29/2025 17:59	WG2584829

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	U		7.83	10.0	1	08/26/2025 13:52	WG2584659
Cadmium	0.900	J	0.538	2.00	1	08/26/2025 13:52	WG2584659
Chromium	11.4		1.51	10.0	1	08/26/2025 13:52	WG2584659
Lead	10.2		2.43	6.00	1	08/26/2025 13:52	WG2584659
Nickel	14.2		1.96	10.0	1	08/26/2025 13:52	WG2584659
Zinc	54.3		4.67	50.0	1	08/26/2025 13:52	WG2584659

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	223		78.6	100	1	08/22/2025 15:15	WG2585377
(S) a,a,a-Trifluorotoluene(FID)	*107*			*78.0-120*		*08/22/2025 15:15*	WG2585377

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		46.9	50.0	1	08/23/2025 16:52	WG2585810
Acrolein	U	C3	25.0	50.0	1	08/23/2025 16:52	WG2585810
Acrylonitrile	U		8.09	10.0	1	08/23/2025 16:52	WG2585810
Benzene	U		0.320	1.00	1	08/23/2025 16:52	WG2585810
Bromobenzene	U		0.277	1.00	1	08/23/2025 16:52	WG2585810
Bromodichloromethane	U		0.371	1.00	1	08/23/2025 16:52	WG2585810
Bromoform	U		0.548	1.00	1	08/23/2025 16:52	WG2585810
Bromomethane	U		4.85	5.00	1	08/23/2025 16:52	WG2585810
n-Butylbenzene	1.20		0.516	1.00	1	08/23/2025 16:52	WG2585810
sec-Butylbenzene	1.62		0.355	1.00	1	08/23/2025 16:52	WG2585810
tert-Butylbenzene	U		0.314	1.00	1	08/23/2025 16:52	WG2585810
Carbon tetrachloride	U		0.360	1.00	1	08/23/2025 16:52	WG2585810
Chlorobenzene	U		0.266	1.00	1	08/23/2025 16:52	WG2585810
Chlorodibromomethane	U		0.398	1.00	1	08/23/2025 16:52	WG2585810
Chloroethane	U		2.79	5.00	1	08/23/2025 16:52	WG2585810
Chloroform	U		1.28	5.00	1	08/23/2025 16:52	WG2585810
Chloromethane	U		1.70	5.00	1	08/23/2025 16:52	WG2585810
2-Chlorotoluene	U		0.273	1.00	1	08/23/2025 16:52	WG2585810
4-Chlorotoluene	U		0.256	1.00	1	08/23/2025 16:52	WG2585810
1,2-Dibromo-3-Chloropropane	U	C3	1.25	5.00	1	08/23/2025 16:52	WG2585810
1,2-Dibromoethane	U		0.341	1.00	1	08/23/2025 16:52	WG2585810

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Dibromomethane	U		0.422	1.00	1	08/23/2025 16:52	WG2585810
1,2-Dichlorobenzene	U		0.304	1.00	1	08/23/2025 16:52	WG2585810
1,3-Dichlorobenzene	U		0.282	1.00	1	08/23/2025 16:52	WG2585810
1,4-Dichlorobenzene	U		0.277	1.00	1	08/23/2025 16:52	WG2585810
Dichlorodifluoromethane	U		2.41	5.00	1	08/23/2025 16:52	WG2585810
1,1-Dichloroethane	U		0.389	1.00	1	08/23/2025 16:52	WG2585810
1,2-Dichloroethane	U		0.395	1.00	1	08/23/2025 16:52	WG2585810
1,1-Dichloroethene	U		0.422	1.00	1	08/23/2025 16:52	WG2585810
cis-1,2-Dichloroethene	U		0.323	1.00	1	08/23/2025 16:52	WG2585810
trans-1,2-Dichloroethene	U		0.348	1.00	1	08/23/2025 16:52	WG2585810
1,2-Dichloropropane	U		0.427	1.00	1	08/23/2025 16:52	WG2585810
1,1-Dichloropropene	U		0.359	1.00	1	08/23/2025 16:52	WG2585810
1,3-Dichloropropane	U		0.283	1.00	1	08/23/2025 16:52	WG2585810
cis-1,3-Dichloropropene	U		0.348	1.00	1	08/23/2025 16:52	WG2585810
trans-1,3-Dichloropropene	U		0.313	1.00	1	08/23/2025 16:52	WG2585810
2,2-Dichloropropane	U		0.463	1.00	1	08/23/2025 16:52	WG2585810
Di-isopropyl ether	U		0.105	1.00	1	08/23/2025 16:52	WG2585810
Ethylbenzene	U		0.234	1.00	1	08/23/2025 16:52	WG2585810
Hexachloro-1,3-butadiene	U	C3	0.650	2.00	1	08/23/2025 16:52	WG2585810
Isopropylbenzene	1.25		0.105	1.00	1	08/23/2025 16:52	WG2585810
p-Isopropyltoluene	U		0.345	1.00	1	08/23/2025 16:52	WG2585810
2-Butanone (MEK)	U		9.00	20.0	1	08/23/2025 16:52	WG2585810
Methylene Chloride	U		1.48	5.00	1	08/23/2025 16:52	WG2585810
4-Methyl-2-pentanone (MIBK)	U		7.52	20.0	1	08/23/2025 16:52	WG2585810
Methyl tert-butyl ether	U		0.357	1.00	1	08/23/2025 16:52	WG2585810
Naphthalene	U		2.64	5.00	1	08/23/2025 16:52	WG2585810
n-Propylbenzene	3.44		0.239	1.00	1	08/23/2025 16:52	WG2585810
Styrene	U		0.342	1.00	1	08/23/2025 16:52	WG2585810
1,1,1,2-Tetrachloroethane	U		0.381	1.00	1	08/23/2025 16:52	WG2585810
1,1,2,2-Tetrachloroethane	U		0.354	1.00	1	08/23/2025 16:52	WG2585810
1,1,2-Trichlorotrifluoroethane	U		0.643	1.00	1	08/23/2025 16:52	WG2585810
Tetrachloroethene	U		0.358	1.00	1	08/23/2025 16:52	WG2585810
Toluene	U		0.274	1.00	1	08/23/2025 16:52	WG2585810
1,2,3-Trichlorobenzene	U	C3	0.935	1.00	1	08/23/2025 16:52	WG2585810
1,2,4-Trichlorobenzene	U	C3	0.691	2.00	1	08/23/2025 16:52	WG2585810
1,1,1-Trichloroethane	U		0.336	1.00	1	08/23/2025 16:52	WG2585810
1,1,2-Trichloroethane	U		0.375	1.00	1	08/23/2025 16:52	WG2585810
Trichloroethene	U		0.383	1.00	1	08/23/2025 16:52	WG2585810
Trichlorofluoromethane	U		3.04	5.00	1	08/23/2025 16:52	WG2585810
1,2,3-Trichloropropane	U		0.602	2.50	1	08/23/2025 16:52	WG2585810
1,2,4-Trimethylbenzene	U		0.274	2.00	1	08/23/2025 16:52	WG2585810
1,2,3-Trimethylbenzene	U		0.339	1.00	1	08/23/2025 16:52	WG2585810
1,3,5-Trimethylbenzene	U		0.266	1.00	1	08/23/2025 16:52	WG2585810
Vinyl chloride	U		0.458	1.00	1	08/23/2025 16:52	WG2585810
Xylenes, Total	U		0.319	3.00	1	08/23/2025 16:52	WG2585810
(S) Toluene-d8	*95.3*			*80.0-120*		*08/23/2025 16:52*	WG2585810
(S) 4-Bromofluorobenzene	*95.2*			*77.0-126*		*08/23/2025 16:52*	WG2585810
(S) 1,2-Dichloroethane-d4	*97.1*			*70.0-130*		*08/23/2025 16:52*	WG2585810

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	546		60.5	200	1	08/28/2025 03:43	WG2586449
Residual Range Organics (RRO)	U		77.2	250	1	08/28/2025 03:43	WG2586449
(S) o-Terphenyl	*5.89*	J2		*52.0-156*		*08/28/2025 03:43*	WG2586449

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	

Sample Narrative:

L1890727-01 WG2586449: Sample produced emulsion during Extraction process, low surr/spike recoveries due to matrix.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	0.190	J	0.0840	0.200	4	08/26/2025 12:21	WG2586441
Acenaphthene	4.58		0.0808	0.200	4	08/26/2025 12:21	WG2586441
Acenaphthylene	U		0.0884	0.200	4	08/26/2025 12:21	WG2586441
Benzo(a)anthracene	U		0.0968	0.200	4	08/26/2025 12:21	WG2586441
Benzo(a)pyrene	U		0.109	0.200	4	08/26/2025 12:21	WG2586441
Benzo(b)fluoranthene	U		0.101	0.200	4	08/26/2025 12:21	WG2586441
Benzo(g,h,i)perylene	U		0.134	0.200	4	08/26/2025 12:21	WG2586441
Benzo(k)fluoranthene	U		0.102	0.200	4	08/26/2025 12:21	WG2586441
Chrysene	U		0.103	0.200	4	08/26/2025 12:21	WG2586441
Dibenz(a,h)anthracene	U		0.100	0.200	4	08/26/2025 12:21	WG2586441
Fluoranthene	U		0.150	0.200	4	08/26/2025 12:21	WG2586441
Fluorene	6.27		0.0848	0.200	4	08/26/2025 12:21	WG2586441
Indeno(1,2,3-cd)pyrene	U		0.108	0.200	4	08/26/2025 12:21	WG2586441
Naphthalene	U		0.472	1.00	4	08/26/2025 12:21	WG2586441
Phenanthrene	8.30		0.112	0.200	4	08/26/2025 12:21	WG2586441
Pyrene	0.223		0.166	0.200	4	08/26/2025 12:21	WG2586441
1-Methylnaphthalene	30.2		0.448	1.00	4	08/26/2025 12:21	WG2586441
2-Methylnaphthalene	3.90		0.468	1.00	4	08/26/2025 12:21	WG2586441
2-Chloronaphthalene	U		0.444	1.00	4	08/26/2025 12:21	WG2586441
(S) Nitrobenzene-d5	*85.3*			*31.0-160*		*08/26/2025 12:21*	WG2586441
(S) 2-Fluorobiphenyl	*50.1*			*48.0-148*		*08/26/2025 12:21*	WG2586441
(S) p-Terphenyl-d14	*38.2*			*37.0-146*		*08/26/2025 12:21*	WG2586441

Sample Narrative:

L1890727-01 WG2586441: Dilution due to matrix impact during extraction procedure.

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		46.9	50.0	1	08/23/2025 17:11	WG2585810
Acrolein	U	C3	25.0	50.0	1	08/23/2025 17:11	WG2585810
Acrylonitrile	U		8.09	10.0	1	08/23/2025 17:11	WG2585810
Benzene	U		0.320	1.00	1	08/23/2025 17:11	WG2585810
Bromobenzene	U		0.277	1.00	1	08/23/2025 17:11	WG2585810
Bromodichloromethane	U		0.371	1.00	1	08/23/2025 17:11	WG2585810
Bromoform	U		0.548	1.00	1	08/23/2025 17:11	WG2585810
Bromomethane	U		4.85	5.00	1	08/23/2025 17:11	WG2585810
n-Butylbenzene	1.04		0.516	1.00	1	08/23/2025 17:11	WG2585810
sec-Butylbenzene	1.41		0.355	1.00	1	08/23/2025 17:11	WG2585810
tert-Butylbenzene	U		0.314	1.00	1	08/23/2025 17:11	WG2585810
Carbon tetrachloride	U		0.360	1.00	1	08/23/2025 17:11	WG2585810
Chlorobenzene	U		0.266	1.00	1	08/23/2025 17:11	WG2585810
Chlorodibromomethane	U		0.398	1.00	1	08/23/2025 17:11	WG2585810
Chloroethane	U		2.79	5.00	1	08/23/2025 17:11	WG2585810
Chloroform	U		1.28	5.00	1	08/23/2025 17:11	WG2585810
Chloromethane	U		1.70	5.00	1	08/23/2025 17:11	WG2585810
2-Chlorotoluene	U		0.273	1.00	1	08/23/2025 17:11	WG2585810
4-Chlorotoluene	U		0.256	1.00	1	08/23/2025 17:11	WG2585810
1,2-Dibromo-3-Chloropropane	U	C3	1.25	5.00	1	08/23/2025 17:11	WG2585810
1,2-Dibromoethane	U		0.341	1.00	1	08/23/2025 17:11	WG2585810
Dibromomethane	U		0.422	1.00	1	08/23/2025 17:11	WG2585810
1,2-Dichlorobenzene	U		0.304	1.00	1	08/23/2025 17:11	WG2585810
1,3-Dichlorobenzene	U		0.282	1.00	1	08/23/2025 17:11	WG2585810
1,4-Dichlorobenzene	U		0.277	1.00	1	08/23/2025 17:11	WG2585810
Dichlorodifluoromethane	U		2.41	5.00	1	08/23/2025 17:11	WG2585810
1,1-Dichloroethane	U		0.389	1.00	1	08/23/2025 17:11	WG2585810
1,2-Dichloroethane	U		0.395	1.00	1	08/23/2025 17:11	WG2585810
1,1-Dichloroethene	U		0.422	1.00	1	08/23/2025 17:11	WG2585810
cis-1,2-Dichloroethene	U		0.323	1.00	1	08/23/2025 17:11	WG2585810
trans-1,2-Dichloroethene	U		0.348	1.00	1	08/23/2025 17:11	WG2585810
1,2-Dichloropropane	U		0.427	1.00	1	08/23/2025 17:11	WG2585810
1,1-Dichloropropene	U		0.359	1.00	1	08/23/2025 17:11	WG2585810
1,3-Dichloropropane	U		0.283	1.00	1	08/23/2025 17:11	WG2585810
cis-1,3-Dichloropropene	U		0.348	1.00	1	08/23/2025 17:11	WG2585810
trans-1,3-Dichloropropene	U		0.313	1.00	1	08/23/2025 17:11	WG2585810
2,2-Dichloropropane	U		0.463	1.00	1	08/23/2025 17:11	WG2585810
Di-isopropyl ether	U		0.105	1.00	1	08/23/2025 17:11	WG2585810
Ethylbenzene	U		0.234	1.00	1	08/23/2025 17:11	WG2585810
Hexachloro-1,3-butadiene	U	C3	0.650	2.00	1	08/23/2025 17:11	WG2585810
Isopropylbenzene	1.19		0.105	1.00	1	08/23/2025 17:11	WG2585810
p-Isopropyltoluene	U		0.345	1.00	1	08/23/2025 17:11	WG2585810
2-Butanone (MEK)	U		9.00	20.0	1	08/23/2025 17:11	WG2585810
Methylene Chloride	U		1.48	5.00	1	08/23/2025 17:11	WG2585810
4-Methyl-2-pentanone (MIBK)	U		7.52	20.0	1	08/23/2025 17:11	WG2585810
Methyl tert-butyl ether	U		0.357	1.00	1	08/23/2025 17:11	WG2585810
Naphthalene	U		2.64	5.00	1	08/23/2025 17:11	WG2585810
n-Propylbenzene	3.08		0.239	1.00	1	08/23/2025 17:11	WG2585810
Styrene	U		0.342	1.00	1	08/23/2025 17:11	WG2585810
1,1,1,2-Tetrachloroethane	U		0.381	1.00	1	08/23/2025 17:11	WG2585810
1,1,2,2-Tetrachloroethane	U		0.354	1.00	1	08/23/2025 17:11	WG2585810
1,1,2-Trichlorotrifluoroethane	U		0.643	1.00	1	08/23/2025 17:11	WG2585810
Tetrachloroethene	U		0.358	1.00	1	08/23/2025 17:11	WG2585810
Toluene	U		0.274	1.00	1	08/23/2025 17:11	WG2585810
1,2,3-Trichlorobenzene	U	C3	0.935	1.00	1	08/23/2025 17:11	WG2585810
1,2,4-Trichlorobenzene	U	C3	0.691	2.00	1	08/23/2025 17:11	WG2585810

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,1-Trichloroethane	U		0.336	1.00	1	08/23/2025 17:11	WG2585810
1,1,2-Trichloroethane	U		0.375	1.00	1	08/23/2025 17:11	WG2585810
Trichloroethene	U		0.383	1.00	1	08/23/2025 17:11	WG2585810
Trichlorofluoromethane	U		3.04	5.00	1	08/23/2025 17:11	WG2585810
1,2,3-Trichloropropane	U		0.602	2.50	1	08/23/2025 17:11	WG2585810
1,2,4-Trimethylbenzene	U		0.274	2.00	1	08/23/2025 17:11	WG2585810
1,2,3-Trimethylbenzene	U		0.339	1.00	1	08/23/2025 17:11	WG2585810
1,3,5-Trimethylbenzene	U		0.266	1.00	1	08/23/2025 17:11	WG2585810
Vinyl chloride	U		0.458	1.00	1	08/23/2025 17:11	WG2585810
Xylenes, Total	U		0.319	3.00	1	08/23/2025 17:11	WG2585810
(S) Toluene-d8	*99.1*			*80.0-120*		*08/23/2025 17:11*	WG2585810
(S) 4-Bromofluorobenzene	*98.3*			*77.0-126*		*08/23/2025 17:11*	WG2585810
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*08/23/2025 17:11*	WG2585810

QUALITY CONTROL SUMMARY

L1890727-01

Method Blank (MB)

(MB) R4273735-1 08/28/25 19:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Hexavalent Chromium	U		0.100	0.500

L1889475-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1889475-05 08/28/25 19:35 • (DUP) R4273735-3 08/28/25 19:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Hexavalent Chromium	U	U	1	0.000		20

L1890737-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1890737-01 08/29/25 00:58 • (DUP) R4273735-6 08/29/25 01:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Hexavalent Chromium	0.162	0.163	1	0.800	J	20

Laboratory Control Sample (LCS)

(LCS) R4273735-2 08/28/25 19:22

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Hexavalent Chromium	2.00	1.95	97.3	90.0-110	

L1889981-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1889981-02 08/28/25 20:27 • (MS) R4273735-4 08/28/25 20:40 • (MSD) R4273735-5 08/28/25 20:53

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Hexavalent Chromium	50.0	U	45.1	45.4	90.3	90.9	1	90.0-110			0.690	20

L1890762-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1890762-01 08/29/25 01:24 • (MS) R4273735-7 08/29/25 01:37

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Hexavalent Chromium	50.0	U	41.4	82.9	1	90.0-110	J6

Method Blank (MB)

(MB) R4266441-1 08/29/25 17:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0700	0.200

Laboratory Control Sample (LCS)

(LCS) R4266441-2 08/29/25 17:13

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Mercury	3.00	2.63	87.7	80.0-120	

L1890420-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1890420-01 08/29/25 17:16 • (MS) R4266441-4 08/29/25 17:22 • (MSD) R4266441-5 08/29/25 17:25

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	U	2.59	2.61	86.3	87.0	1	75.0-125			0.823	20

Method Blank (MB)

(MB) R4264208-1 08/26/25 13:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		7.83	10.0
Cadmium	U		0.538	2.00
Chromium	U		1.51	10.0
Lead	U		2.43	6.00
Nickel	U		1.96	10.0
Zinc	U		4.67	50.0

Laboratory Control Sample (LCS)

(LCS) R4264208-2 08/26/25 13:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	1000	952	95.2	80.0-120	
Cadmium	1000	940	94.0	80.0-120	
Chromium	1000	968	96.8	80.0-120	
Lead	1000	976	97.6	80.0-120	
Nickel	1000	972	97.2	80.0-120	
Zinc	1000	993	99.3	80.0-120	

L1890559-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1890559-01 08/26/25 13:18 • (MS) R4264208-4 08/26/25 13:22 • (MSD) R4264208-5 08/26/25 13:24

Analyte	Spike Amount ug/l	Original Result	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	1000		999	998	98.4	98.3	1	75.0-125			0.0842	20
Cadmium	1000		961	959	96.0	95.8	1	75.0-125			0.192	20
Chromium	1000		990	979	98.6	97.4	1	75.0-125			1.16	20
Lead	1000		972	961	96.6	95.4	1	75.0-125			1.16	20
Nickel	1000		972	963	96.6	95.7	1	75.0-125			0.891	20
Zinc	1000		978	970	97.2	96.5	1	75.0-125			0.775	20

Method Blank (MB)

(MB) R4264168-3 08/22/25 10:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		78.6	100
(S) a,a,a-Trifluorotoluene(FID)	*107*			*78.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4264168-1 08/22/25 09:40 • (LCSD) R4264168-2 08/22/25 10:01

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5000	5660	5670	113	113	70.0-124			0.177	20
(S) a,a,a-Trifluorotoluene(FID)				*114*	*115*	*78.0-120*				

Method Blank (MB)

(MB) R4263062-3 08/23/25 10:23

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		46.9	50.0
Acrolein	U		25.0	50.0
Acrylonitrile	U		8.09	10.0
Benzene	U		0.320	1.00
Bromobenzene	U		0.277	1.00
Bromodichloromethane	U		0.371	1.00
Bromoform	U		0.548	1.00
Bromomethane	U		4.85	5.00
n-Butylbenzene	U		0.516	1.00
sec-Butylbenzene	U		0.355	1.00
tert-Butylbenzene	U		0.314	1.00
Carbon tetrachloride	U		0.360	1.00
Chlorobenzene	U		0.266	1.00
Chlorodibromomethane	U		0.398	1.00
Chloroethane	U		2.79	5.00
Chloroform	U		1.28	5.00
Chloromethane	U		1.70	5.00
2-Chlorotoluene	U		0.273	1.00
4-Chlorotoluene	U		0.256	1.00
1,2-Dibromo-3-Chloropropane	U		1.25	5.00
1,2-Dibromoethane	U		0.341	1.00
Dibromomethane	U		0.422	1.00
1,2-Dichlorobenzene	U		0.304	1.00
1,3-Dichlorobenzene	U		0.282	1.00
1,4-Dichlorobenzene	U		0.277	1.00
Dichlorodifluoromethane	U		2.41	5.00
1,1-Dichloroethane	U		0.389	1.00
1,2-Dichloroethane	U		0.395	1.00
1,1-Dichloroethene	U		0.422	1.00
cis-1,2-Dichloroethene	U		0.323	1.00
trans-1,2-Dichloroethene	U		0.348	1.00
1,2-Dichloropropane	U		0.427	1.00
1,1-Dichloropropene	U		0.359	1.00
1,3-Dichloropropane	U		0.283	1.00
cis-1,3-Dichloropropene	U		0.348	1.00
trans-1,3-Dichloropropene	U		0.313	1.00
2,2-Dichloropropane	U		0.463	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.234	1.00
Hexachloro-1,3-butadiene	U		0.650	2.00

Method Blank (MB)

(MB) R4263062-3 08/23/25 10:23

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.345	1.00
2-Butanone (MEK)	U		9.00	20.0
Methylene Chloride	U		1.48	5.00
4-Methyl-2-pentanone (MIBK)	U		7.52	20.0
Methyl tert-butyl ether	U		0.357	1.00
Naphthalene	U		2.64	5.00
n-Propylbenzene	U		0.239	1.00
Styrene	U		0.342	1.00
1,1,1,2-Tetrachloroethane	U		0.381	1.00
1,1,2,2-Tetrachloroethane	U		0.354	1.00
1,1,2-Trichlorotrifluoroethane	U		0.643	1.00
Tetrachloroethene	U		0.358	1.00
Toluene	U		0.274	1.00
1,2,3-Trichlorobenzene	U		0.935	1.00
1,2,4-Trichlorobenzene	U		0.691	2.00
1,1,1-Trichloroethane	U		0.336	1.00
1,1,2-Trichloroethane	U		0.375	1.00
Trichloroethene	U		0.383	1.00
Trichlorofluoromethane	U		3.04	5.00
1,2,3-Trichloropropane	U		0.602	2.50
1,2,4-Trimethylbenzene	U		0.274	2.00
1,2,3-Trimethylbenzene	U		0.339	1.00
1,3,5-Trimethylbenzene	U		0.266	1.00
Vinyl chloride	U		0.458	1.00
Xylenes, Total	U		0.319	3.00
(S) Toluene-d8	*100*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4263062-1 08/23/25 09:24 • (LCSD) R4263062-2 08/23/25 09:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	161	151	129	121	19.0-160			6.41	27
Acrolein	125	80.5	77.7	64.4	62.2	10.0-160			3.54	26
Acrylonitrile	125	109	108	87.2	86.4	55.0-149			0.922	20
Benzene	25.0	22.7	22.6	90.8	90.4	70.0-123			0.442	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4263062-1 08/23/25 09:24 • (LCSD) R4263062-2 08/23/25 09:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromobenzene	25.0	22.1	22.4	88.4	89.6	73.0-121			1.35	20
Bromodichloromethane	25.0	21.7	22.1	86.8	88.4	75.0-120			1.83	20
Bromoform	25.0	20.5	19.5	82.0	78.0	68.0-132			5.00	20
Bromomethane	25.0	23.2	24.5	92.8	98.0	10.0-160			5.45	25
n-Butylbenzene	25.0	21.8	20.4	87.2	81.6	73.0-125			6.64	20
sec-Butylbenzene	25.0	22.9	21.8	91.6	87.2	75.0-125			4.92	20
tert-Butylbenzene	25.0	22.4	21.7	89.6	86.8	76.0-124			3.17	20
Carbon tetrachloride	25.0	22.3	22.1	89.2	88.4	68.0-126			0.901	20
Chlorobenzene	25.0	22.5	21.6	90.0	86.4	80.0-121			4.08	20
Chlorodibromomethane	25.0	21.1	20.6	84.4	82.4	77.0-125			2.40	20
Chloroethane	25.0	24.4	24.7	97.6	98.8	47.0-150			1.22	20
Chloroform	25.0	21.3	21.9	85.2	87.6	73.0-120			2.78	20
Chloromethane	25.0	24.9	24.7	99.6	98.8	41.0-142			0.806	20
2-Chlorotoluene	25.0	22.9	22.9	91.6	91.6	76.0-123			0.000	20
4-Chlorotoluene	25.0	21.8	22.0	87.2	88.0	75.0-122			0.913	20
1,2-Dibromo-3-Chloropropane	25.0	18.7	17.9	74.8	71.6	58.0-134			4.37	20
1,2-Dibromoethane	25.0	22.0	21.4	88.0	85.6	80.0-122			2.76	20
Dibromomethane	25.0	21.8	22.4	87.2	89.6	80.0-120			2.71	20
1,2-Dichlorobenzene	25.0	21.1	20.8	84.4	83.2	79.0-121			1.43	20
1,3-Dichlorobenzene	25.0	20.6	20.5	82.4	82.0	79.0-120			0.487	20
1,4-Dichlorobenzene	25.0	21.6	21.0	86.4	84.0	79.0-120			2.82	20
Dichlorodifluoromethane	25.0	22.9	24.6	91.6	98.4	51.0-149			7.16	20
1,1-Dichloroethane	25.0	22.1	22.7	88.4	90.8	70.0-126			2.68	20
1,2-Dichloroethane	25.0	22.2	22.0	88.8	88.0	70.0-128			0.905	20
1,1-Dichloroethene	25.0	20.7	21.2	82.8	84.8	71.0-124			2.39	20
cis-1,2-Dichloroethene	25.0	20.8	21.2	83.2	84.8	73.0-120			1.90	20
trans-1,2-Dichloroethene	25.0	22.4	22.8	89.6	91.2	73.0-120			1.77	20
1,2-Dichloropropane	25.0	22.1	22.6	88.4	90.4	77.0-125			2.24	20
1,1-Dichloropropene	25.0	22.3	22.4	89.2	89.6	74.0-126			0.447	20
1,3-Dichloropropane	25.0	22.5	22.1	90.0	88.4	80.0-120			1.79	20
cis-1,3-Dichloropropene	25.0	22.1	21.9	88.4	87.6	80.0-123			0.909	20
trans-1,3-Dichloropropene	25.0	22.2	21.4	88.8	85.6	78.0-124			3.67	20
2,2-Dichloropropane	25.0	21.5	23.1	86.0	92.4	58.0-130			7.17	20
Di-isopropyl ether	25.0	22.7	23.6	90.8	94.4	58.0-138			3.89	20
Ethylbenzene	25.0	22.0	21.2	88.0	84.8	79.0-123			3.70	20
Hexachloro-1,3-butadiene	25.0	18.9	16.4	75.6	65.6	54.0-138			14.2	20
Isopropylbenzene	25.0	21.7	20.6	86.8	82.4	76.0-127			5.20	20
p-Isopropyltoluene	25.0	22.5	21.1	90.0	84.4	76.0-125			6.42	20
2-Butanone (MEK)	125	134	129	107	103	44.0-160			3.80	20
Methylene Chloride	25.0	21.7	21.8	86.8	87.2	67.0-120			0.460	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4263062-1 08/23/25 09:24 • (LCSD) R4263062-2 08/23/25 09:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	125	125	121	100	96.8	68.0-142			3.25	20
Methyl tert-butyl ether	25.0	22.0	22.5	88.0	90.0	68.0-125			2.25	20
Naphthalene	25.0	20.0	18.2	80.0	72.8	54.0-135			9.42	20
n-Propylbenzene	25.0	22.8	22.5	91.2	90.0	77.0-124			1.32	20
Styrene	25.0	22.5	21.5	90.0	86.0	73.0-130			4.55	20
1,1,1,2-Tetrachloroethane	25.0	20.6	20.3	82.4	81.2	75.0-125			1.47	20
1,1,2,2-Tetrachloroethane	25.0	21.9	22.3	87.6	89.2	65.0-130			1.81	20
1,1,2-Trichlorotrifluoroethane	25.0	20.4	21.3	81.6	85.2	69.0-132			4.32	20
Tetrachloroethene	25.0	20.8	20.0	83.2	80.0	72.0-132			3.92	20
Toluene	25.0	23.0	22.4	92.0	89.6	79.0-120			2.64	20
1,2,3-Trichlorobenzene	25.0	19.5	16.9	78.0	67.6	50.0-138			14.3	20
1,2,4-Trichlorobenzene	25.0	19.8	17.4	79.2	69.6	57.0-137			12.9	20
1,1,1-Trichloroethane	25.0	22.1	22.6	88.4	90.4	73.0-124			2.24	20
1,1,2-Trichloroethane	25.0	22.3	21.7	89.2	86.8	80.0-120			2.73	20
Trichloroethene	25.0	22.4	22.3	89.6	89.2	78.0-124			0.447	20
Trichlorofluoromethane	25.0	22.7	23.7	90.8	94.8	59.0-147			4.31	20
1,2,3-Trichloropropane	25.0	21.7	21.8	86.8	87.2	73.0-130			0.460	20
1,2,4-Trimethylbenzene	25.0	22.2	21.8	88.8	87.2	76.0-121			1.82	20
1,2,3-Trimethylbenzene	25.0	22.3	21.5	89.2	86.0	77.0-120			3.65	20
1,3,5-Trimethylbenzene	25.0	22.6	22.5	90.4	90.0	76.0-122			0.443	20
Vinyl chloride	25.0	22.5	22.8	90.0	91.2	67.0-131			1.32	20
Xylenes, Total	75.0	66.6	63.6	88.8	84.8	79.0-123			4.61	20
(S) Toluene-d8				*99.1*	*98.1*	*80.0-120*				
(S) 4-Bromofluorobenzene				*94.5*	*90.1*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*105*	*108*	*70.0-130*				

Method Blank (MB)

(MB) R4265185-1 08/27/25 19:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		60.5	200
Residual Range Organics (RRO)	U		77.2	250
(S) o-Terphenyl	*106*			*52.0-156*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4265185-2 08/27/25 20:00 • (LCSD) R4265185-3 08/27/25 20:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Diesel Range Organics (DRO)	1500	1750	1650	117	110	50.0-150			5.88	20
(S) o-Terphenyl				*137*	*131*	*52.0-156*				

Method Blank (MB)

(MB) R4264509-2 08/26/25 10:53

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0210	0.0500
Acenaphthene	U		0.0202	0.0500
Acenaphthylene	U		0.0221	0.0500
Benzo(a)anthracene	U		0.0242	0.0500
Benzo(a)pyrene	U		0.0272	0.0500
Benzo(b)fluoranthene	U		0.0253	0.0500
Benzo(g,h,i)perylene	U		0.0335	0.0500
Benzo(k)fluoranthene	U		0.0254	0.0500
Chrysene	U		0.0257	0.0500
Dibenz(a,h)anthracene	U		0.0251	0.0500
Fluoranthene	U		0.0375	0.0500
Fluorene	U		0.0212	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0270	0.0500
Naphthalene	U		0.118	0.250
Phenanthrene	U		0.0279	0.0500
Pyrene	U		0.0416	0.0500
1-Methylnaphthalene	U		0.112	0.250
2-Methylnaphthalene	U		0.117	0.250
2-Chloronaphthalene	U		0.111	0.250
(S) Nitrobenzene-d5	*97.5*			*31.0-160*
(S) 2-Fluorobiphenyl	*92.5*			*48.0-148*
(S) p-Terphenyl-d14	*89.0*			*37.0-146*

Laboratory Control Sample (LCS)

(LCS) R4264509-1 08/26/25 10:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	2.00	2.17	108	67.0-150	
Acenaphthene	2.00	1.94	97.0	65.0-138	
Acenaphthylene	2.00	2.06	103	66.0-140	
Benzo(a)anthracene	2.00	1.98	99.0	61.0-140	
Benzo(a)pyrene	2.00	1.91	95.5	60.0-143	
Benzo(b)fluoranthene	2.00	1.80	90.0	58.0-141	
Benzo(g,h,i)perylene	2.00	1.82	91.0	52.0-153	
Benzo(k)fluoranthene	2.00	1.92	96.0	58.0-148	
Chrysene	2.00	2.08	104	64.0-144	
Dibenz(a,h)anthracene	2.00	1.87	93.5	52.0-155	
Fluoranthene	2.00	2.48	124	69.0-153	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS)

(LCS) R4264509-1 08/26/25 10:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	2.00	2.18	109	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.68	84.0	54.0-153	
Naphthalene	2.00	2.04	102	61.0-137	
Phenanthrene	2.00	2.05	103	62.0-137	
Pyrene	2.00	1.90	95.0	60.0-142	
1-Methylnaphthalene	2.00	2.41	120	66.0-142	
2-Methylnaphthalene	2.00	2.19	109	62.0-136	
2-Chloronaphthalene	2.00	1.93	96.5	64.0-140	
(S) Nitrobenzene-d5			*103*	*31.0-160*	
(S) 2-Fluorobiphenyl			*88.0*	*48.0-148*	
(S) p-Terphenyl-d14			*88.5*	*37.0-146*	

L1890995-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1890995-02 08/26/25 11:11 • (MS) R4264509-3 08/26/25 11:28 • (MSD) R4264509-4 08/26/25 11:46

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	1.90	0.0306	2.24	2.36	116	123	1	56.0-156			5.22	20
Acenaphthene	1.90	0.0734	2.05	2.09	104	106	1	44.0-153			1.93	20
Acenaphthylene	1.90	U	2.16	2.22	114	117	1	53.0-150			2.74	20
Benzo(a)anthracene	1.90	U	2.19	2.26	115	119	1	47.0-151			3.15	20
Benzo(a)pyrene	1.90	U	2.05	2.17	108	114	1	45.0-146			5.69	20
Benzo(b)fluoranthene	1.90	U	1.94	2.08	102	109	1	43.0-142			6.97	20
Benzo(g,h,i)perylene	1.90	U	1.86	1.94	97.9	102	1	40.0-147			4.21	20
Benzo(k)fluoranthene	1.90	U	1.98	2.11	104	111	1	43.0-148			6.36	21
Chrysene	1.90	U	2.17	2.24	114	118	1	50.0-148			3.17	20
Dibenz(a,h)anthracene	1.90	U	1.92	1.96	101	103	1	37.0-151			2.06	20
Fluoranthene	1.90	U	2.52	2.64	133	139	1	56.0-157			4.65	20
Fluorene	1.90	0.147	2.45	2.54	121	126	1	48.0-148			3.61	20
Indeno(1,2,3-cd)pyrene	1.90	U	1.77	1.87	93.2	98.4	1	41.0-148			5.49	20
Naphthalene	1.90	0.682	2.84	2.94	114	119	1	10.0-160			3.46	20
Phenanthrene	1.90	0.246	2.41	2.50	114	119	1	47.0-147			3.67	20
Pyrene	1.90	U	1.98	2.05	104	108	1	51.0-148			3.47	20
1-Methylnaphthalene	1.90	5.56	8.74	8.95	167	178	1	21.0-160	J5	J5	2.37	20
2-Methylnaphthalene	1.90	3.73	6.46	6.68	144	155	1	31.0-160			3.35	20
2-Chloronaphthalene	1.90	U	2.06	2.15	108	113	1	52.0-148			4.28	20
(S) Nitrobenzene-d5					*117*	*121*		*31.0-160*				
(S) 2-Fluorobiphenyl					*101*	*105*		*48.0-148*				
(S) p-Terphenyl-d14					*92.1*	*98.9*		*37.0-146*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
TRC – Woodinville, WA

13810 SE Eastgate Way
Suite 440
Bellevue. WA 98005

Billing Information:
Accounts Payable
21 Griffin Road
North Windsor, CT 06095

Pres Chk

Report to: ~~Madison Taylor 425-512-7073~~ Eric Larsen 425.566.0403

Email To: ~~mtaylor~~@trccompanies.com;elarsen@trccomp

Project Description: **Phillips 66**

City/State Collected: Ferndale, WA

Please Circle: (PT) MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # **664185**

Lab Project # **TRCWWA-P66**

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day ___ STD TAT

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	L2 *Metals 250mlHDPE-HNO3	CR3 250mlHDPE-NoPres	CR6ICFFP 50mlTube/plungerPres	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVI 40mlAmb-NoPres-WT	V8260 40mlAmb-HCl			Remarks	Sample # (lab only)
MW-OWS-4	G	GW	7	8/19/25	1545	13	X	X	X	X	X	X	X			didn't use filter for hex chrome	-01
DUP-1	G	GW	7	↓	—	3							X				-02
		GW															

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L891077

B219

Acctnum: **TRCWWA**
Template: **T279234**
Prelogin: **P1171516**
PM: **4089 - Andi R Jones**
PB:

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:*Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg
Short Hold

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #
PH – 10BDH2631
TRC – 5090A93

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: X __Y __N
Preservation Correct/Checked: X Y __N
RAD Screen <0.5 mR/hr: X Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 5 5 0.6 5.4 16
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Christopher D. Hollins	Date: 8/21/25 Time: 0900

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

ANALYTICAL REPORT

September 04, 2025

TRC - Woodinville, WA

Sample Delivery Group:	L1891047
Samples Received:	08/21/2025
Project Number:	664185
Description:	Phillips 66

Report To: Eric Larson
13810 SE Eastgate Way
Suite 440
Bellevue, WA 98005

Entire Report Reviewed By:

Andi R Jones
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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BH-2-6:14 L1891047-01

Collected by	Collected date/time	Received date/time
	08/19/25 10:15	08/21/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2590055	1	08/28/25 17:10	09/01/25 13:31	ARV	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2589586	1	08/28/25 08:15	08/28/25 08:25	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2589481	1	08/31/25 17:00	09/01/25 13:31	ARV	Mt. Juliet, TN
Mercury by Method 7471B	WG2589818	1	08/28/25 10:28	08/29/25 14:13	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2590055	1	08/28/25 17:10	08/29/25 04:49	JTM	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2590755	1.19	08/19/25 10:15	08/29/25 18:41	NCD	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2591547	1.19	08/19/25 10:15	09/01/25 23:28	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2586780	1.19	08/19/25 10:15	08/25/25 02:02	JAH	Mt. Juliet, TN
TPH by Method EPH	WG2589527	2.94	08/27/25 15:51	09/01/25 10:05	MAA	Mt. Juliet, TN
TPH by Method EPH	WG2589527	2.94	08/27/25 15:51	09/01/25 14:58	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2590800	1	09/02/25 07:32	09/02/25 18:48	CMF	Mt. Juliet, TN

BH-2-7:14 L1891047-02

Collected by	Collected date/time	Received date/time
	08/19/25 10:35	08/21/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2590055	1	08/28/25 17:10	09/01/25 13:32	ARV	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2589586	1	08/28/25 08:15	08/28/25 08:25	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2589481	1	08/31/25 17:00	09/01/25 13:32	ARV	Mt. Juliet, TN
Mercury by Method 7471B	WG2589818	1	08/28/25 10:28	08/29/25 14:45	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2590055	1	08/28/25 17:10	08/29/25 05:03	JTM	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2590755	1	08/19/25 10:35	08/29/25 19:18	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2586780	1	08/19/25 10:35	08/25/25 02:21	JAH	Mt. Juliet, TN
TPH by Method EPH	WG2589527	2.97	08/27/25 15:51	09/01/25 10:28	MAA	Mt. Juliet, TN
TPH by Method EPH	WG2589527	2.97	08/27/25 15:51	09/01/25 15:21	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2590800	1	09/02/25 07:32	09/02/25 19:05	CMF	Mt. Juliet, TN

MW-OWS-4:14 L1891047-03

Collected by	Collected date/time	Received date/time
	08/19/25 12:00	08/21/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2590055	1	08/28/25 17:10	09/01/25 13:33	ARV	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2589586	1	08/28/25 08:15	08/28/25 08:25	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2589481	1	08/31/25 17:00	09/01/25 13:33	ARV	Mt. Juliet, TN
Mercury by Method 7471B	WG2589818	1	08/28/25 10:28	08/29/25 14:48	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2590055	1	08/28/25 17:10	08/29/25 05:09	JTM	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2590755	1	08/19/25 12:00	08/29/25 19:55	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2586780	1	08/19/25 12:00	08/25/25 02:40	JAH	Mt. Juliet, TN
TPH by Method EPH	WG2589527	2.96	08/27/25 15:51	09/01/25 10:50	MAA	Mt. Juliet, TN
TPH by Method EPH	WG2589527	2.96	08/27/25 15:51	09/01/25 15:43	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2590800	1	09/02/25 07:32	09/02/25 19:23	CMF	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Andi R Jones
Project Manager

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	41.7		0.256	1.20	1	09/01/2025 13:31	WG2590055

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	83.6		1	08/28/2025 08:25	WG2589586

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.898	2.39	1	09/01/2025 13:31	WG2589481

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0638		0.0246	0.0478	1	08/29/2025 14:13	WG2589818

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.77		1.00	2.39	1	08/29/2025 04:49	WG2590055
Cadmium	0.222	J	0.0781	0.598	1	08/29/2025 04:49	WG2590055
Chromium	41.7		0.256	1.20	1	08/29/2025 04:49	WG2590055
Lead	8.22		0.390	0.598	1	08/29/2025 04:49	WG2590055
Nickel	38.1		0.239	2.39	1	08/29/2025 04:49	WG2590055
Zinc	58.6		1.16	5.98	1	08/29/2025 04:49	WG2590055

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	U		2.69	8.09	1.19	08/29/2025 18:41	WG2590755
Adjusted C5-C6 Aliphatics	U		2.69	8.09	1.19	08/29/2025 18:41	WG2590755
Unadjusted C6-C8 Aliphatics	U		0.736	8.09	1.19	08/29/2025 18:41	WG2590755
Adjusted C6-C8 Aliphatics	U		0.736	8.09	1.19	08/29/2025 18:41	WG2590755
Unadjusted C8-C10 Aliphatics	U		2.69	8.09	1.19	08/29/2025 18:41	WG2590755
Adjusted C8-C10 Aliphatics	U		2.69	8.09	1.19	08/29/2025 18:41	WG2590755
C8-C10 Aromatics	U		0.898	8.09	1.19	09/01/2025 23:28	WG2591547
(S) 2,5-Dibromotoluene(FID)	*117*			*60.0-140*		*08/29/2025 18:41*	WG2590755
(S) 2,5-Dibromotoluene(FID)	*81.0*			*60.0-140*		*09/01/2025 23:28*	WG2591547
(S) 2,5-Dibromotoluene(PID)	*115*			*60.0-140*		*08/29/2025 18:41*	WG2590755
(S) 2,5-Dibromotoluene(PID)	*87.1*			*60.0-140*		*09/01/2025 23:28*	WG2591547

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	U		0.113	0.162	1.19	08/25/2025 02:02	WG2586780
Acrylonitrile	U		0.0130	0.0203	1.19	08/25/2025 02:02	WG2586780
Benzene	0.0136		0.00115	0.00162	1.19	08/25/2025 02:02	WG2586780
Bromobenzene	U		0.00631	0.0203	1.19	08/25/2025 02:02	WG2586780
Bromodichloromethane	U		0.00189	0.00404	1.19	08/25/2025 02:02	WG2586780
Bromoform	U		0.0160	0.0404	1.19	08/25/2025 02:02	WG2586780
Bromomethane	U	C3	0.0163	0.0203	1.19	08/25/2025 02:02	WG2586780
n-Butylbenzene	U		0.0101	0.0203	1.19	08/25/2025 02:02	WG2586780

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.00620	0.0203	1.19	08/25/2025 02:02	WG2586780
tert-Butylbenzene	U		0.00306	0.00809	1.19	08/25/2025 02:02	WG2586780
Carbon tetrachloride	U		0.00487	0.00809	1.19	08/25/2025 02:02	WG2586780
Chlorobenzene	U		0.00139	0.00404	1.19	08/25/2025 02:02	WG2586780
Chlorodibromomethane	U		0.00261	0.00404	1.19	08/25/2025 02:02	WG2586780
Chloroethane	U	C3	0.00921	0.0162	1.19	08/25/2025 02:02	WG2586780
Chloroform	U		0.00262	0.00404	1.19	08/25/2025 02:02	WG2586780
Chloromethane	U	C3	0.0137	0.0203	1.19	08/25/2025 02:02	WG2586780
2-Chlorotoluene	U		0.00209	0.00404	1.19	08/25/2025 02:02	WG2586780
4-Chlorotoluene	U		0.00249	0.00809	1.19	08/25/2025 02:02	WG2586780
1,2-Dibromo-3-Chloropropane	U		0.0173	0.0404	1.19	08/25/2025 02:02	WG2586780
1,2-Dibromoethane	U		0.00204	0.00404	1.19	08/25/2025 02:02	WG2586780
Dibromomethane	U		0.00288	0.00809	1.19	08/25/2025 02:02	WG2586780
1,2-Dichlorobenzene	U		0.00253	0.00809	1.19	08/25/2025 02:02	WG2586780
1,3-Dichlorobenzene	U		0.00267	0.00809	1.19	08/25/2025 02:02	WG2586780
1,4-Dichlorobenzene	U		0.00283	0.00809	1.19	08/25/2025 02:02	WG2586780
Dichlorodifluoromethane	U	C3	0.00704	0.00809	1.19	08/25/2025 02:02	WG2586780
1,1-Dichloroethane	U		0.00163	0.00404	1.19	08/25/2025 02:02	WG2586780
1,2-Dichloroethane	0.00655		0.00237	0.00404	1.19	08/25/2025 02:02	WG2586780
1,1-Dichloroethene	U	C3	0.00248	0.00404	1.19	08/25/2025 02:02	WG2586780
cis-1,2-Dichloroethene	U		0.00209	0.00404	1.19	08/25/2025 02:02	WG2586780
trans-1,2-Dichloroethene	U		0.00169	0.00809	1.19	08/25/2025 02:02	WG2586780
1,2-Dichloropropane	U		0.00310	0.00809	1.19	08/25/2025 02:02	WG2586780
1,1-Dichloropropene	U		0.00223	0.00809	1.19	08/25/2025 02:02	WG2586780
1,3-Dichloropropane	U		0.00262	0.00809	1.19	08/25/2025 02:02	WG2586780
cis-1,3-Dichloropropene	U		0.00170	0.00404	1.19	08/25/2025 02:02	WG2586780
trans-1,3-Dichloropropene	U		0.00170	0.00809	1.19	08/25/2025 02:02	WG2586780
2,2-Dichloropropane	U		0.00326	0.00404	1.19	08/25/2025 02:02	WG2586780
Di-isopropyl ether	U		0.00124	0.00162	1.19	08/25/2025 02:02	WG2586780
Ethylbenzene	U		0.00159	0.00404	1.19	08/25/2025 02:02	WG2586780
Hexachloro-1,3-butadiene	U		0.0169	0.0404	1.19	08/25/2025 02:02	WG2586780
Isopropylbenzene	U		0.00163	0.00404	1.19	08/25/2025 02:02	WG2586780
p-Isopropyltoluene	U		0.00344	0.00809	1.19	08/25/2025 02:02	WG2586780
2-Butanone (MEK)	U		0.144	0.162	1.19	08/25/2025 02:02	WG2586780
Methylene Chloride	U		0.0178	0.0404	1.19	08/25/2025 02:02	WG2586780
4-Methyl-2-pentanone (MIBK)	U		0.0160	0.0404	1.19	08/25/2025 02:02	WG2586780
Methyl tert-butyl ether	U	C3	0.00125	0.00162	1.19	08/25/2025 02:02	WG2586780
Naphthalene	U		0.0123	0.0203	1.19	08/25/2025 02:02	WG2586780
n-Propylbenzene	U		0.00273	0.00809	1.19	08/25/2025 02:02	WG2586780
Styrene	U		0.00721	0.0203	1.19	08/25/2025 02:02	WG2586780
1,1,1,2-Tetrachloroethane	U		0.00211	0.00404	1.19	08/25/2025 02:02	WG2586780
1,1,2,2-Tetrachloroethane	U		0.00188	0.00404	1.19	08/25/2025 02:02	WG2586780
1,1,2-Trichlorotrifluoroethane	U	C3	0.00454	0.00809	1.19	08/25/2025 02:02	WG2586780
Tetrachloroethene	U		0.00246	0.00404	1.19	08/25/2025 02:02	WG2586780
Toluene	U		0.00468	0.00809	1.19	08/25/2025 02:02	WG2586780
1,2,3-Trichlorobenzene	U		0.0113	0.0203	1.19	08/25/2025 02:02	WG2586780
1,2,4-Trichlorobenzene	U		0.00877	0.0203	1.19	08/25/2025 02:02	WG2586780
1,1,1-Trichloroethane	U		0.00235	0.00404	1.19	08/25/2025 02:02	WG2586780
1,1,2-Trichloroethane	U		0.00216	0.00404	1.19	08/25/2025 02:02	WG2586780
Trichloroethene	U		0.00144	0.00162	1.19	08/25/2025 02:02	WG2586780
Trichlorofluoromethane	U	C3	0.00423	0.00647	1.19	08/25/2025 02:02	WG2586780
1,2,3-Trichloropropane	U		0.00990	0.0203	1.19	08/25/2025 02:02	WG2586780
1,2,4-Trimethylbenzene	U		0.00385	0.00809	1.19	08/25/2025 02:02	WG2586780
1,2,3-Trimethylbenzene	U		0.00295	0.00809	1.19	08/25/2025 02:02	WG2586780
1,3,5-Trimethylbenzene	U		0.00369	0.00809	1.19	08/25/2025 02:02	WG2586780
Vinyl chloride	U	C3	0.00325	0.00404	1.19	08/25/2025 02:02	WG2586780

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Xylenes, Total	U		0.00453	0.0105	1.19	08/25/2025 02:02	WG2586780
(S) Toluene-d8	*98.0*			*75.0-131*		*08/25/2025 02:02*	WG2586780
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*08/25/2025 02:02*	WG2586780
(S) 1,2-Dichloroethane-d4	*97.2*			*70.0-130*		*08/25/2025 02:02*	WG2586780

TPH by Method EPH

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	U	J4	13.6	17.6	2.94	09/01/2025 10:05	WG2589527
C12-C16 Aliphatics	U	J4	13.6	17.6	2.94	09/01/2025 10:05	WG2589527
C16-C21 Aliphatics	U		13.6	17.6	2.94	09/01/2025 10:05	WG2589527
C21-C34 Aliphatics	U		15.9	17.6	2.94	09/01/2025 10:05	WG2589527
C10-C12 Aromatics	U		11.0	17.6	2.94	09/01/2025 14:58	WG2589527
C12-C16 Aromatics	U		11.0	17.6	2.94	09/01/2025 14:58	WG2589527
C16-C21 Aromatics	U		11.0	17.6	2.94	09/01/2025 14:58	WG2589527
C21-C34 Aromatics	U		11.0	17.6	2.94	09/01/2025 14:58	WG2589527
(S) o-Terphenyl	*84.0*			*50.0-150*		*09/01/2025 14:58*	WG2589527
(S) 1-Chloro-octadecane	*64.7*			*50.0-150*		*09/01/2025 10:05*	WG2589527
(S) 2-Fluorobiphenyl	*110*			*50.0-150*		*09/01/2025 14:58*	WG2589527
(S) 2-Bromonaphthalene	*107*			*50.0-150*		*09/01/2025 14:58*	WG2589527

Sample Narrative:

L1891047-01 WG2589527: Dilution due to matrix impact during extraction procedure.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00195	0.00718	1	09/02/2025 18:48	WG2590800
Acenaphthene	U		0.00194	0.00718	1	09/02/2025 18:48	WG2590800
Acenaphthylene	U		0.00190	0.00718	1	09/02/2025 18:48	WG2590800
Benzo(a)anthracene	U		0.00239	0.00718	1	09/02/2025 18:48	WG2590800
Benzo(a)pyrene	U		0.00195	0.00718	1	09/02/2025 18:48	WG2590800
Benzo(b)fluoranthene	U		0.00329	0.00718	1	09/02/2025 18:48	WG2590800
Benzo(g,h,i)perylene	U		0.00231	0.00718	1	09/02/2025 18:48	WG2590800
Benzo(k)fluoranthene	U		0.00255	0.00718	1	09/02/2025 18:48	WG2590800
Chrysene	U	J4	0.00246	0.00718	1	09/02/2025 18:48	WG2590800
Dibenz(a,h)anthracene	U		0.00240	0.00718	1	09/02/2025 18:48	WG2590800
Fluoranthene	U	J4	0.00286	0.00718	1	09/02/2025 18:48	WG2590800
Fluorene	U		0.00215	0.00718	1	09/02/2025 18:48	WG2590800
Indeno(1,2,3-cd)pyrene	U		0.00280	0.00718	1	09/02/2025 18:48	WG2590800
Naphthalene	U		0.00692	0.0239	1	09/02/2025 18:48	WG2590800
Phenanthrene	U		0.00365	0.00718	1	09/02/2025 18:48	WG2590800
Pyrene	U		0.00245	0.00718	1	09/02/2025 18:48	WG2590800
1-Methylnaphthalene	U	J4	0.00262	0.0239	1	09/02/2025 18:48	WG2590800
2-Methylnaphthalene	U		0.00683	0.0239	1	09/02/2025 18:48	WG2590800
2-Chloronaphthalene	U		0.00154	0.0239	1	09/02/2025 18:48	WG2590800
(S) p-Terphenyl-d14	*76.0*			*23.0-120*		*09/02/2025 18:48*	WG2590800
(S) Nitrobenzene-d5	*90.2*			*14.0-149*		*09/02/2025 18:48*	WG2590800
(S) 2-Fluorobiphenyl	*86.6*			*34.0-125*		*09/02/2025 18:48*	WG2590800

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	42.6		0.265	1.24	1	09/01/2025 13:32	WG2590055

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.6		1	08/28/2025 08:25	WG2589586

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.931	2.48	1	09/01/2025 13:32	WG2589481

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0354	J	0.0255	0.0496	1	08/29/2025 14:45	WG2589818

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.46		1.04	2.48	1	08/29/2025 05:03	WG2590055
Cadmium	0.211	J	0.0810	0.620	1	08/29/2025 05:03	WG2590055
Chromium	42.6		0.265	1.24	1	08/29/2025 05:03	WG2590055
Lead	9.15		0.404	0.620	1	08/29/2025 05:03	WG2590055
Nickel	43.7		0.248	2.48	1	08/29/2025 05:03	WG2590055
Zinc	71.7		1.21	6.20	1	08/29/2025 05:03	WG2590055

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	U		2.57	7.71	1	08/29/2025 19:18	WG2590755
Adjusted C5-C6 Aliphatics	U		2.57	7.71	1	08/29/2025 19:18	WG2590755
Unadjusted C6-C8 Aliphatics	0.723	J	0.702	7.71	1	08/29/2025 19:18	WG2590755
Adjusted C6-C8 Aliphatics	U		0.702	7.71	1	08/29/2025 19:18	WG2590755
Unadjusted C8-C10 Aliphatics	U		2.57	7.71	1	08/29/2025 19:18	WG2590755
Adjusted C8-C10 Aliphatics	U		2.57	7.71	1	08/29/2025 19:18	WG2590755
C8-C10 Aromatics	U		0.856	7.71	1	08/29/2025 19:18	WG2590755
(S) 2,5-Dibromotoluene(FID)	*112*			*60.0-140*		*08/29/2025 19:18*	WG2590755
(S) 2,5-Dibromotoluene(PID)	*110*			*60.0-140*		*08/29/2025 19:18*	WG2590755

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	U		0.107	0.154	1	08/25/2025 02:21	WG2586780
Acrylonitrile	U		0.0124	0.0193	1	08/25/2025 02:21	WG2586780
Benzene	0.0446		0.00110	0.00154	1	08/25/2025 02:21	WG2586780
Bromobenzene	U		0.00601	0.0193	1	08/25/2025 02:21	WG2586780
Bromodichloromethane	U		0.00180	0.00385	1	08/25/2025 02:21	WG2586780
Bromoform	U		0.0153	0.0385	1	08/25/2025 02:21	WG2586780
Bromomethane	U	C3	0.0156	0.0193	1	08/25/2025 02:21	WG2586780
n-Butylbenzene	U		0.00964	0.0193	1	08/25/2025 02:21	WG2586780
sec-Butylbenzene	0.00641	J	0.00591	0.0193	1	08/25/2025 02:21	WG2586780
tert-Butylbenzene	U		0.00291	0.00771	1	08/25/2025 02:21	WG2586780

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.00464	0.00771	1	08/25/2025 02:21	WG2586780
Chlorobenzene	U		0.00132	0.00385	1	08/25/2025 02:21	WG2586780
Chlorodibromomethane	U		0.00248	0.00385	1	08/25/2025 02:21	WG2586780
Chloroethane	U	C3	0.00877	0.0154	1	08/25/2025 02:21	WG2586780
Chloroform	U		0.00250	0.00385	1	08/25/2025 02:21	WG2586780
Chloromethane	U	C3	0.0131	0.0193	1	08/25/2025 02:21	WG2586780
2-Chlorotoluene	U		0.00199	0.00385	1	08/25/2025 02:21	WG2586780
4-Chlorotoluene	U		0.00237	0.00771	1	08/25/2025 02:21	WG2586780
1,2-Dibromo-3-Chloropropane	U		0.0165	0.0385	1	08/25/2025 02:21	WG2586780
1,2-Dibromoethane	U		0.00194	0.00385	1	08/25/2025 02:21	WG2586780
Dibromomethane	U		0.00274	0.00771	1	08/25/2025 02:21	WG2586780
1,2-Dichlorobenzene	U		0.00241	0.00771	1	08/25/2025 02:21	WG2586780
1,3-Dichlorobenzene	U		0.00254	0.00771	1	08/25/2025 02:21	WG2586780
1,4-Dichlorobenzene	U		0.00270	0.00771	1	08/25/2025 02:21	WG2586780
Dichlorodifluoromethane	U	C3	0.00671	0.00771	1	08/25/2025 02:21	WG2586780
1,1-Dichloroethane	U		0.00156	0.00385	1	08/25/2025 02:21	WG2586780
1,2-Dichloroethane	U		0.00225	0.00385	1	08/25/2025 02:21	WG2586780
1,1-Dichloroethene	U	C3	0.00236	0.00385	1	08/25/2025 02:21	WG2586780
cis-1,2-Dichloroethene	U		0.00199	0.00385	1	08/25/2025 02:21	WG2586780
trans-1,2-Dichloroethene	U		0.00160	0.00771	1	08/25/2025 02:21	WG2586780
1,2-Dichloropropane	U		0.00296	0.00771	1	08/25/2025 02:21	WG2586780
1,1-Dichloropropene	U		0.00213	0.00771	1	08/25/2025 02:21	WG2586780
1,3-Dichloropropane	U		0.00250	0.00771	1	08/25/2025 02:21	WG2586780
cis-1,3-Dichloropropene	U		0.00162	0.00385	1	08/25/2025 02:21	WG2586780
trans-1,3-Dichloropropene	U		0.00162	0.00771	1	08/25/2025 02:21	WG2586780
2,2-Dichloropropane	U		0.00311	0.00385	1	08/25/2025 02:21	WG2586780
Di-isopropyl ether	U		0.00119	0.00154	1	08/25/2025 02:21	WG2586780
Ethylbenzene	0.0160		0.00152	0.00385	1	08/25/2025 02:21	WG2586780
Hexachloro-1,3-butadiene	U		0.0160	0.0385	1	08/25/2025 02:21	WG2586780
Isopropylbenzene	0.0202		0.00156	0.00385	1	08/25/2025 02:21	WG2586780
p-Isopropyltoluene	U		0.00328	0.00771	1	08/25/2025 02:21	WG2586780
2-Butanone (MEK)	U		0.137	0.154	1	08/25/2025 02:21	WG2586780
Methylene Chloride	U		0.0170	0.0385	1	08/25/2025 02:21	WG2586780
4-Methyl-2-pentanone (MIBK)	U		0.0153	0.0385	1	08/25/2025 02:21	WG2586780
Methyl tert-butyl ether	U	C3	0.00119	0.00154	1	08/25/2025 02:21	WG2586780
Naphthalene	0.0259		0.0118	0.0193	1	08/25/2025 02:21	WG2586780
n-Propylbenzene	0.0325		0.00261	0.00771	1	08/25/2025 02:21	WG2586780
Styrene	U		0.00686	0.0193	1	08/25/2025 02:21	WG2586780
1,1,1,2-Tetrachloroethane	U		0.00200	0.00385	1	08/25/2025 02:21	WG2586780
1,1,2,2-Tetrachloroethane	U		0.00179	0.00385	1	08/25/2025 02:21	WG2586780
1,1,2-Trichlorotrifluoroethane	U	C3	0.00433	0.00771	1	08/25/2025 02:21	WG2586780
Tetrachloroethene	U		0.00234	0.00385	1	08/25/2025 02:21	WG2586780
Toluene	0.0367		0.00446	0.00771	1	08/25/2025 02:21	WG2586780
1,2,3-Trichlorobenzene	U		0.0108	0.0193	1	08/25/2025 02:21	WG2586780
1,2,4-Trichlorobenzene	U		0.00836	0.0193	1	08/25/2025 02:21	WG2586780
1,1,1-Trichloroethane	U		0.00224	0.00385	1	08/25/2025 02:21	WG2586780
1,1,2-Trichloroethane	U		0.00207	0.00385	1	08/25/2025 02:21	WG2586780
Trichloroethene	U		0.00137	0.00154	1	08/25/2025 02:21	WG2586780
Trichlorofluoromethane	U	C3	0.00402	0.00617	1	08/25/2025 02:21	WG2586780
1,2,3-Trichloropropane	U		0.00944	0.0193	1	08/25/2025 02:21	WG2586780
1,2,4-Trimethylbenzene	0.0894		0.00367	0.00771	1	08/25/2025 02:21	WG2586780
1,2,3-Trimethylbenzene	0.0149		0.00281	0.00771	1	08/25/2025 02:21	WG2586780
1,3,5-Trimethylbenzene	0.0376		0.00352	0.00771	1	08/25/2025 02:21	WG2586780
Vinyl chloride	U	C3	0.00310	0.00385	1	08/25/2025 02:21	WG2586780
Xylenes, Total	0.0970		0.00432	0.0100	1	08/25/2025 02:21	WG2586780
(S) Toluene-d8	*97.1*			*75.0-131*		*08/25/2025 02:21*	WG2586780

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*08/25/2025 02:21*	WG2586780
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*		*08/25/2025 02:21*	WG2586780

TPH by Method EPH

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	U	J4	14.3	18.5	2.97	09/01/2025 10:28	WG2589527
C12-C16 Aliphatics	U	J4	14.3	18.5	2.97	09/01/2025 10:28	WG2589527
C16-C21 Aliphatics	U		14.3	18.5	2.97	09/01/2025 10:28	WG2589527
C21-C34 Aliphatics	U		16.6	18.5	2.97	09/01/2025 10:28	WG2589527
C10-C12 Aromatics	U		11.5	18.5	2.97	09/01/2025 15:21	WG2589527
C12-C16 Aromatics	U		11.5	18.5	2.97	09/01/2025 15:21	WG2589527
C16-C21 Aromatics	U		11.5	18.5	2.97	09/01/2025 15:21	WG2589527
C21-C34 Aromatics	U		11.5	18.5	2.97	09/01/2025 15:21	WG2589527
(S) o-Terphenyl	*77.8*			*50.0-150*		*09/01/2025 15:21*	WG2589527
(S) 1-Chloro-octadecane	*64.6*			*50.0-150*		*09/01/2025 10:28*	WG2589527
(S) 2-Fluorobiphenyl	*104*			*50.0-150*		*09/01/2025 15:21*	WG2589527
(S) 2-Bromonaphthalene	*100*			*50.0-150*		*09/01/2025 15:21*	WG2589527

Sample Narrative:

L1891047-02 WG2589527: Dilution due to matrix impact during extraction procedure.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00202	0.00744	1	09/02/2025 19:05	WG2590800
Acenaphthene	U		0.00201	0.00744	1	09/02/2025 19:05	WG2590800
Acenaphthylene	U		0.00197	0.00744	1	09/02/2025 19:05	WG2590800
Benzo(a)anthracene	U		0.00248	0.00744	1	09/02/2025 19:05	WG2590800
Benzo(a)pyrene	U		0.00202	0.00744	1	09/02/2025 19:05	WG2590800
Benzo(b)fluoranthene	U		0.00341	0.00744	1	09/02/2025 19:05	WG2590800
Benzo(g,h,i)perylene	U		0.00239	0.00744	1	09/02/2025 19:05	WG2590800
Benzo(k)fluoranthene	U		0.00264	0.00744	1	09/02/2025 19:05	WG2590800
Chrysene	U	J4	0.00255	0.00744	1	09/02/2025 19:05	WG2590800
Dibenz(a,h)anthracene	U		0.00249	0.00744	1	09/02/2025 19:05	WG2590800
Fluoranthene	U	J4	0.00296	0.00744	1	09/02/2025 19:05	WG2590800
Fluorene	U		0.00223	0.00744	1	09/02/2025 19:05	WG2590800
Indeno(1,2,3-cd)pyrene	U		0.00290	0.00744	1	09/02/2025 19:05	WG2590800
Naphthalene	U		0.00718	0.0248	1	09/02/2025 19:05	WG2590800
Phenanthrene	U		0.00378	0.00744	1	09/02/2025 19:05	WG2590800
Pyrene	U		0.00254	0.00744	1	09/02/2025 19:05	WG2590800
1-Methylnaphthalene	U	J4	0.00272	0.0248	1	09/02/2025 19:05	WG2590800
2-Methylnaphthalene	U		0.00708	0.0248	1	09/02/2025 19:05	WG2590800
2-Chloronaphthalene	U		0.00160	0.0248	1	09/02/2025 19:05	WG2590800
(S) p-Terphenyl-d14	*57.6*			*23.0-120*		*09/02/2025 19:05*	WG2590800
(S) Nitrobenzene-d5	*72.0*			*14.0-149*		*09/02/2025 19:05*	WG2590800
(S) 2-Fluorobiphenyl	*66.1*			*34.0-125*		*09/02/2025 19:05*	WG2590800

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	49.9		0.274	1.28	1	09/01/2025 13:33	WG2590055

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	78.1		1	08/28/2025 08:25	WG2589586

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.962	2.56	1	09/01/2025 13:33	WG2589481

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0282	J	0.0264	0.0512	1	08/29/2025 14:48	WG2589818

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.67		1.07	2.56	1	08/29/2025 05:09	WG2590055
Cadmium	0.184	J	0.0836	0.640	1	08/29/2025 05:09	WG2590055
Chromium	49.9		0.274	1.28	1	08/29/2025 05:09	WG2590055
Lead	8.06		0.417	0.640	1	08/29/2025 05:09	WG2590055
Nickel	40.6		0.256	2.56	1	08/29/2025 05:09	WG2590055
Zinc	55.9		1.25	6.40	1	08/29/2025 05:09	WG2590055

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	U		2.69	8.04	1	08/29/2025 19:55	WG2590755
Adjusted C5-C6 Aliphatics	U		2.69	8.04	1	08/29/2025 19:55	WG2590755
Unadjusted C6-C8 Aliphatics	3.47	J	0.732	8.04	1	08/29/2025 19:55	WG2590755
Adjusted C6-C8 Aliphatics	3.47	J	0.732	8.04	1	08/29/2025 19:55	WG2590755
Unadjusted C8-C10 Aliphatics	7.01	J	2.69	8.04	1	08/29/2025 19:55	WG2590755
Adjusted C8-C10 Aliphatics	7.01	J	2.69	8.04	1	08/29/2025 19:55	WG2590755
C8-C10 Aromatics	5.07	J	0.893	8.04	1	08/29/2025 19:55	WG2590755
(S) 2,5-Dibromotoluene(FID)	*96.4*			*60.0-140*		*08/29/2025 19:55*	WG2590755
(S) 2,5-Dibromotoluene(PID)	*98.7*			*60.0-140*		*08/29/2025 19:55*	WG2590755

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	U		0.112	0.161	1	08/25/2025 02:40	WG2586780
Acrylonitrile	U		0.0129	0.0201	1	08/25/2025 02:40	WG2586780
Benzene	U		0.00114	0.00161	1	08/25/2025 02:40	WG2586780
Bromobenzene	U		0.00627	0.0201	1	08/25/2025 02:40	WG2586780
Bromodichloromethane	U		0.00188	0.00402	1	08/25/2025 02:40	WG2586780
Bromoform	U		0.0160	0.0402	1	08/25/2025 02:40	WG2586780
Bromomethane	U	C3	0.0162	0.0201	1	08/25/2025 02:40	WG2586780
n-Butylbenzene	0.180		0.0101	0.0201	1	08/25/2025 02:40	WG2586780
sec-Butylbenzene	0.138		0.00616	0.0201	1	08/25/2025 02:40	WG2586780
tert-Butylbenzene	0.0102		0.00304	0.00804	1	08/25/2025 02:40	WG2586780

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.00484	0.00804	1	08/25/2025 02:40	WG2586780
Chlorobenzene	U		0.00138	0.00402	1	08/25/2025 02:40	WG2586780
Chlorodibromomethane	U		0.00259	0.00402	1	08/25/2025 02:40	WG2586780
Chloroethane	U	C3	0.00915	0.0161	1	08/25/2025 02:40	WG2586780
Chloroform	U		0.00261	0.00402	1	08/25/2025 02:40	WG2586780
Chloromethane	U	C3	0.0137	0.0201	1	08/25/2025 02:40	WG2586780
2-Chlorotoluene	U		0.00207	0.00402	1	08/25/2025 02:40	WG2586780
4-Chlorotoluene	U		0.00248	0.00804	1	08/25/2025 02:40	WG2586780
1,2-Dibromo-3-Chloropropane	U		0.0172	0.0402	1	08/25/2025 02:40	WG2586780
1,2-Dibromoethane	U		0.00203	0.00402	1	08/25/2025 02:40	WG2586780
Dibromomethane	U		0.00286	0.00804	1	08/25/2025 02:40	WG2586780
1,2-Dichlorobenzene	U		0.00251	0.00804	1	08/25/2025 02:40	WG2586780
1,3-Dichlorobenzene	U		0.00265	0.00804	1	08/25/2025 02:40	WG2586780
1,4-Dichlorobenzene	U		0.00281	0.00804	1	08/25/2025 02:40	WG2586780
Dichlorodifluoromethane	U	C3	0.00700	0.00804	1	08/25/2025 02:40	WG2586780
1,1-Dichloroethane	U		0.00162	0.00402	1	08/25/2025 02:40	WG2586780
1,2-Dichloroethane	U		0.00235	0.00402	1	08/25/2025 02:40	WG2586780
1,1-Dichloroethene	U	C3	0.00246	0.00402	1	08/25/2025 02:40	WG2586780
cis-1,2-Dichloroethene	U		0.00207	0.00402	1	08/25/2025 02:40	WG2586780
trans-1,2-Dichloroethene	U		0.00167	0.00804	1	08/25/2025 02:40	WG2586780
1,2-Dichloropropane	U		0.00309	0.00804	1	08/25/2025 02:40	WG2586780
1,1-Dichloropropene	U		0.00222	0.00804	1	08/25/2025 02:40	WG2586780
1,3-Dichloropropane	U		0.00261	0.00804	1	08/25/2025 02:40	WG2586780
cis-1,3-Dichloropropene	U		0.00169	0.00402	1	08/25/2025 02:40	WG2586780
trans-1,3-Dichloropropene	U		0.00169	0.00804	1	08/25/2025 02:40	WG2586780
2,2-Dichloropropane	U		0.00325	0.00402	1	08/25/2025 02:40	WG2586780
Di-isopropyl ether	U		0.00124	0.00161	1	08/25/2025 02:40	WG2586780
Ethylbenzene	U		0.00159	0.00402	1	08/25/2025 02:40	WG2586780
Hexachloro-1,3-butadiene	U		0.0167	0.0402	1	08/25/2025 02:40	WG2586780
Isopropylbenzene	0.0365		0.00162	0.00402	1	08/25/2025 02:40	WG2586780
p-Isopropyltoluene	U		0.00343	0.00804	1	08/25/2025 02:40	WG2586780
2-Butanone (MEK)	U		0.143	0.161	1	08/25/2025 02:40	WG2586780
Methylene Chloride	U		0.0177	0.0402	1	08/25/2025 02:40	WG2586780
4-Methyl-2-pentanone (MIBK)	U		0.0160	0.0402	1	08/25/2025 02:40	WG2586780
Methyl tert-butyl ether	U	C3	0.00124	0.00161	1	08/25/2025 02:40	WG2586780
Naphthalene	U		0.0123	0.0201	1	08/25/2025 02:40	WG2586780
n-Propylbenzene	0.126		0.00272	0.00804	1	08/25/2025 02:40	WG2586780
Styrene	U		0.00716	0.0201	1	08/25/2025 02:40	WG2586780
1,1,1,2-Tetrachloroethane	U		0.00209	0.00402	1	08/25/2025 02:40	WG2586780
1,1,2,2-Tetrachloroethane	U		0.00187	0.00402	1	08/25/2025 02:40	WG2586780
1,1,2-Trichlorotrifluoroethane	U	C3	0.00452	0.00804	1	08/25/2025 02:40	WG2586780
Tetrachloroethene	U		0.00244	0.00402	1	08/25/2025 02:40	WG2586780
Toluene	U		0.00465	0.00804	1	08/25/2025 02:40	WG2586780
1,2,3-Trichlorobenzene	U		0.0112	0.0201	1	08/25/2025 02:40	WG2586780
1,2,4-Trichlorobenzene	U		0.00872	0.0201	1	08/25/2025 02:40	WG2586780
1,1,1-Trichloroethane	U		0.00233	0.00402	1	08/25/2025 02:40	WG2586780
1,1,2-Trichloroethane	U		0.00215	0.00402	1	08/25/2025 02:40	WG2586780
Trichloroethene	U		0.00143	0.00161	1	08/25/2025 02:40	WG2586780
Trichlorofluoromethane	U	C3	0.00420	0.00643	1	08/25/2025 02:40	WG2586780
1,2,3-Trichloropropane	U		0.00984	0.0201	1	08/25/2025 02:40	WG2586780
1,2,4-Trimethylbenzene	U		0.00383	0.00804	1	08/25/2025 02:40	WG2586780
1,2,3-Trimethylbenzene	U		0.00293	0.00804	1	08/25/2025 02:40	WG2586780
1,3,5-Trimethylbenzene	U		0.00367	0.00804	1	08/25/2025 02:40	WG2586780
Vinyl chloride	U	C3	0.00323	0.00402	1	08/25/2025 02:40	WG2586780
Xylenes, Total	U		0.00450	0.0105	1	08/25/2025 02:40	WG2586780
(S) Toluene-d8	*96.6*			*75.0-131*		*08/25/2025 02:40*	WG2586780

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*08/25/2025 02:40*	WG2586780
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*		*08/25/2025 02:40*	WG2586780

TPH by Method EPH

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	U	J4	14.7	19.0	2.96	09/01/2025 10:50	WG2589527
C12-C16 Aliphatics	19.5	J4	14.7	19.0	2.96	09/01/2025 10:50	WG2589527
C16-C21 Aliphatics	17.3	J	14.7	19.0	2.96	09/01/2025 10:50	WG2589527
C21-C34 Aliphatics	U		17.0	19.0	2.96	09/01/2025 10:50	WG2589527
C10-C12 Aromatics	U		11.8	19.0	2.96	09/01/2025 15:43	WG2589527
C12-C16 Aromatics	17.4	J	11.8	19.0	2.96	09/01/2025 15:43	WG2589527
C16-C21 Aromatics	28.3		11.8	19.0	2.96	09/01/2025 15:43	WG2589527
C21-C34 Aromatics	U		11.8	19.0	2.96	09/01/2025 15:43	WG2589527
(S) o-Terphenyl	*89.9*			*50.0-150*		*09/01/2025 15:43*	WG2589527
(S) 1-Chloro-octadecane	*73.4*			*50.0-150*		*09/01/2025 10:50*	WG2589527
(S) 2-Fluorobiphenyl	*108*			*50.0-150*		*09/01/2025 15:43*	WG2589527
(S) 2-Bromonaphthalene	*105*			*50.0-150*		*09/01/2025 15:43*	WG2589527

Sample Narrative:

L1891047-03 WG2589527: Dilution due to matrix impact during extraction procedure.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00209	0.00768	1	09/02/2025 19:23	WG2590800
Acenaphthene	0.0752		0.00207	0.00768	1	09/02/2025 19:23	WG2590800
Acenaphthylene	U		0.00204	0.00768	1	09/02/2025 19:23	WG2590800
Benzo(a)anthracene	U		0.00256	0.00768	1	09/02/2025 19:23	WG2590800
Benzo(a)pyrene	U		0.00209	0.00768	1	09/02/2025 19:23	WG2590800
Benzo(b)fluoranthene	U		0.00352	0.00768	1	09/02/2025 19:23	WG2590800
Benzo(g,h,i)perylene	U		0.00247	0.00768	1	09/02/2025 19:23	WG2590800
Benzo(k)fluoranthene	U		0.00273	0.00768	1	09/02/2025 19:23	WG2590800
Chrysene	U	J4	0.00264	0.00768	1	09/02/2025 19:23	WG2590800
Dibenz(a,h)anthracene	U		0.00257	0.00768	1	09/02/2025 19:23	WG2590800
Fluoranthene	U	J4	0.00306	0.00768	1	09/02/2025 19:23	WG2590800
Fluorene	0.0981		0.00230	0.00768	1	09/02/2025 19:23	WG2590800
Indeno(1,2,3-cd)pyrene	U		0.00300	0.00768	1	09/02/2025 19:23	WG2590800
Naphthalene	U		0.00741	0.0256	1	09/02/2025 19:23	WG2590800
Phenanthrene	0.251		0.00391	0.00768	1	09/02/2025 19:23	WG2590800
Pyrene	0.00638	J	0.00263	0.00768	1	09/02/2025 19:23	WG2590800
1-Methylnaphthalene	0.323	J4	0.00280	0.0256	1	09/02/2025 19:23	WG2590800
2-Methylnaphthalene	0.104		0.00731	0.0256	1	09/02/2025 19:23	WG2590800
2-Chloronaphthalene	U		0.00165	0.0256	1	09/02/2025 19:23	WG2590800
(S) p-Terphenyl-d14	*65.5*			*23.0-120*		*09/02/2025 19:23*	WG2590800
(S) Nitrobenzene-d5	*94.0*			*14.0-149*		*09/02/2025 19:23*	WG2590800
(S) 2-Fluorobiphenyl	*69.2*			*34.0-125*		*09/02/2025 19:23*	WG2590800

Method Blank (MB)

(MB) R4265699-1 08/28/25 08:25

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1891044-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1891044-01 08/28/25 08:25 • (DUP) R4265699-3 08/28/25 08:25

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.6	81.9	1	0.381		10

Laboratory Control Sample (LCS)

(LCS) R4265699-2 08/28/25 08:25

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	90.0-110	

Method Blank (MB)

(MB) R4267089-1 09/01/25 13:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.751	2.00

L1891047-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1891047-02 09/01/25 13:32 • (DUP) R4267089-7 09/01/25 13:32

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

L1891047-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1891047-03 09/01/25 13:33 • (DUP) R4267089-8 09/01/25 13:33

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4267089-2 09/01/25 13:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	23.9	99.5	73.0-125	

L1891047-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1891047-01 09/01/25 13:31 • (MS) R4267089-5 09/01/25 13:32 • (MSD) R4267089-6 09/01/25 13:32

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	23.9	U	23.7	23.5	99.0	98.2	1	85.0-115			0.781	20

L1891047-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1891047-01 09/01/25 13:31 • (MS) R4267089-4 09/01/25 13:31

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	767	U	839	109	50	85.0-115	

Method Blank (MB)

(MB) R4266444-1 08/29/25 14:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0206	0.0400

Laboratory Control Sample (LCS)

(LCS) R4266444-2 08/29/25 14:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.493	98.5	80.0-120	

L1891047-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1891047-01 08/29/25 14:13 • (MS) R4266444-4 08/29/25 14:24 • (MSD) R4266444-5 08/29/25 14:26

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.598	0.0638	0.576	0.549	85.7	81.2	1	75.0-125			4.73	20

Method Blank (MB)

(MB) R4265975-1 08/29/25 04:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.837	2.00
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Zinc	U		0.974	5.00

Laboratory Control Sample (LCS)

(LCS) R4265975-2 08/29/25 04:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	103	103	80.0-120	
Cadmium	100	106	106	80.0-120	
Chromium	100	108	108	80.0-120	
Lead	100	104	104	80.0-120	
Nickel	100	103	103	80.0-120	
Zinc	100	106	106	80.0-120	

L1891047-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1891047-01 08/29/25 04:49 • (MS) R4265975-5 08/29/25 04:55 • (MSD) R4265975-6 08/29/25 04:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	120	5.77	115	117	91.4	93.3	1	75.0-125			2.02	20
Cadmium	120	0.222	113	114	94.0	95.5	1	75.0-125			1.59	20
Chromium	120	41.7	154	155	94.2	94.4	1	75.0-125			0.174	20
Lead	120	8.22	120	121	93.7	94.4	1	75.0-125			0.659	20
Nickel	120	38.1	154	154	96.8	97.0	1	75.0-125			0.109	20
Zinc	120	58.6	171	172	93.7	94.5	1	75.0-125			0.549	20

Method Blank (MB)

(MB) R4266615-3 08/29/25 16:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Unadjusted C5-C6 Aliphatics	U		1.67	5.00
Adjusted C5-C6 Aliphatics	U		1.67	5.00
Unadjusted C6-C8 Aliphatics	U		0.455	5.00
Adjusted C6-C8 Aliphatics	U		0.455	5.00
Unadjusted C8-C10 Aliphatics	U		1.67	5.00
Adjusted C8-C10 Aliphatics	U		1.67	5.00
C8-C10 Aromatics	U		0.555	5.00
(S) 2,5-Dibromotoluene(FID)	*119*			*60.0-140*
(S) 2,5-Dibromotoluene(PID)	*118*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4266615-1 08/29/25 14:21 • (LCSD) R4266615-2 08/29/25 14:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Unadjusted C5-C6 Aliphatics	30.0	28.0	29.7	93.3	99.0	70.0-130			5.89	25
Adjusted C5-C6 Aliphatics	30.0	28.0	29.7	93.3	99.0	70.0-130			5.89	25
Unadjusted C6-C8 Aliphatics	20.0	18.4	19.3	92.0	96.5	70.0-130			4.77	25
Adjusted C6-C8 Aliphatics	20.0	18.4	19.3	92.0	96.5	70.0-130			4.77	25
Unadjusted C8-C10 Aliphatics	60.0	56.4	59.0	94.0	98.3	70.0-130			4.51	25
Adjusted C8-C10 Aliphatics	60.0	56.4	59.0	94.0	98.3	70.0-130			4.51	25
C8-C10 Aromatics	50.0	48.0	49.7	96.0	99.4	70.0-130			3.48	25
(S) 2,5-Dibromotoluene(FID)				*116*	*118*	*60.0-140*				
(S) 2,5-Dibromotoluene(PID)				*117*	*120*	*60.0-140*				

Method Blank (MB)

(MB) R4267295-3 09/01/25 21:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C8-C10 Aromatics	U		0.555	5.00
(S) 2,5-Dibromotoluene(FID)	*83.9*			*60.0-140*
(S) 2,5-Dibromotoluene(PID)	*90.2*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4267295-1 09/01/25 15:37 • (LCSD) R4267295-2 09/01/25 16:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C8-C10 Aromatics	50.0	44.2	44.1	88.4	88.2	70.0-130			0.227	25
(S) 2,5-Dibromotoluene(FID)				*93.4*	*92.0*	*60.0-140*				
(S) 2,5-Dibromotoluene(PID)				*101*	*98.7*	*60.0-140*				

Method Blank (MB)

(MB) R4264938-2 08/25/25 00:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0697	0.100
Acrylonitrile	U		0.00803	0.0125
Benzene	U		0.000711	0.00100
Bromobenzene	U		0.00390	0.0125
Bromodichloromethane	U		0.00117	0.00250
Bromoform	U		0.00992	0.0250
Bromomethane	U		0.0101	0.0125
n-Butylbenzene	U		0.00625	0.0125
sec-Butylbenzene	U		0.00383	0.0125
tert-Butylbenzene	U		0.00189	0.00500
Carbon tetrachloride	U		0.00301	0.00500
Chlorobenzene	U		0.000858	0.00250
Chlorodibromomethane	U		0.00161	0.00250
Chloroethane	U		0.00569	0.0100
Chloroform	U		0.00162	0.00250
Chloromethane	U		0.00850	0.0125
2-Chlorotoluene	U		0.00129	0.00250
4-Chlorotoluene	U		0.00154	0.00500
1,2-Dibromo-3-Chloropropane	U		0.0107	0.0250
1,2-Dibromoethane	U		0.00126	0.00250
Dibromomethane	U		0.00178	0.00500
1,2-Dichlorobenzene	U		0.00156	0.00500
1,3-Dichlorobenzene	U		0.00165	0.00500
1,4-Dichlorobenzene	U		0.00175	0.00500
Dichlorodifluoromethane	U		0.00435	0.00500
1,1-Dichloroethane	U		0.00101	0.00250
1,2-Dichloroethane	U		0.00146	0.00250
1,1-Dichloroethene	U		0.00153	0.00250
cis-1,2-Dichloroethene	U		0.00129	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00192	0.00500
1,1-Dichloropropene	U		0.00138	0.00500
1,3-Dichloropropane	U		0.00162	0.00500
cis-1,3-Dichloropropene	U		0.00105	0.00250
trans-1,3-Dichloropropene	U		0.00105	0.00500
2,2-Dichloropropane	U		0.00202	0.00250
Di-isopropyl ether	U		0.000769	0.00100
Ethylbenzene	U		0.000987	0.00250
Hexachloro-1,3-butadiene	U		0.0104	0.0250
Isopropylbenzene	U		0.00101	0.00250

Method Blank (MB)

(MB) R4264938-2 08/25/25 00:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00213	0.00500
2-Butanone (MEK)	U		0.0887	0.100
Methylene Chloride	U		0.0110	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00992	0.0250
Methyl tert-butyl ether	U		0.000773	0.00100
Naphthalene	U		0.00763	0.0125
n-Propylbenzene	U		0.00169	0.00500
Styrene	U		0.00445	0.0125
1,1,1,2-Tetrachloroethane	U		0.00130	0.00250
1,1,2,2-Tetrachloroethane	U		0.00116	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.00281	0.00500
Tetrachloroethene	U		0.00152	0.00250
Toluene	U		0.00289	0.00500
1,2,3-Trichlorobenzene	U		0.00699	0.0125
1,2,4-Trichlorobenzene	U		0.00542	0.0125
1,1,1-Trichloroethane	U		0.00145	0.00250
1,1,2-Trichloroethane	U		0.00134	0.00250
Trichloroethene	U		0.000891	0.00100
Trichlorofluoromethane	U		0.00261	0.00400
1,2,3-Trichloropropane	U		0.00612	0.0125
1,2,4-Trimethylbenzene	U		0.00238	0.00500
1,2,3-Trimethylbenzene	U		0.00182	0.00500
1,3,5-Trimethylbenzene	U		0.00228	0.00500
Vinyl chloride	U		0.00201	0.00250
Xylenes, Total	U		0.00280	0.00650
(S) Toluene-d8	*97.6*			*75.0-131*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*98.3*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4264938-1 08/24/25 22:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	3.13	2.90	92.7	10.0-160	
Acrylonitrile	3.13	2.80	89.5	45.0-153	
Benzene	0.625	0.546	87.4	70.0-123	
Bromobenzene	0.625	0.581	93.0	73.0-121	
Bromodichloromethane	0.625	0.607	97.1	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R4264938-1 08/24/25 22:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.625	0.607	97.1	64.0-132	
Bromomethane	0.625	0.483	77.3	56.0-147	
n-Butylbenzene	0.625	0.613	98.1	68.0-135	
sec-Butylbenzene	0.625	0.615	98.4	74.0-130	
tert-Butylbenzene	0.625	0.637	102	75.0-127	
Carbon tetrachloride	0.625	0.566	90.6	66.0-128	
Chlorobenzene	0.625	0.542	86.7	76.0-128	
Chlorodibromomethane	0.625	0.621	99.4	74.0-127	
Chloroethane	0.625	0.436	69.8	61.0-134	
Chloroform	0.625	0.529	84.6	72.0-123	
Chloromethane	0.625	0.379	60.6	51.0-138	
2-Chlorotoluene	0.625	0.562	89.9	75.0-124	
4-Chlorotoluene	0.625	0.609	97.4	75.0-124	
1,2-Dibromo-3-Chloropropane	0.625	0.569	91.0	59.0-130	
1,2-Dibromoethane	0.625	0.619	99.0	74.0-128	
Dibromomethane	0.625	0.607	97.1	75.0-122	
1,2-Dichlorobenzene	0.625	0.555	88.8	76.0-124	
1,3-Dichlorobenzene	0.625	0.581	93.0	76.0-125	
1,4-Dichlorobenzene	0.625	0.550	88.0	77.0-121	
Dichlorodifluoromethane	0.625	0.355	56.8	43.0-156	
1,1-Dichloroethane	0.625	0.544	87.0	70.0-127	
1,2-Dichloroethane	0.625	0.550	88.0	65.0-131	
1,1-Dichloroethene	0.625	0.469	75.0	65.0-131	
cis-1,2-Dichloroethene	0.625	0.551	88.2	73.0-125	
trans-1,2-Dichloroethene	0.625	0.505	80.8	71.0-125	
1,2-Dichloropropane	0.625	0.606	97.0	74.0-125	
1,1-Dichloropropene	0.625	0.626	100	73.0-125	
1,3-Dichloropropane	0.625	0.606	97.0	80.0-125	
cis-1,3-Dichloropropene	0.625	0.656	105	76.0-127	
trans-1,3-Dichloropropene	0.625	0.603	96.5	73.0-127	
2,2-Dichloropropane	0.625	0.497	79.5	59.0-135	
Di-isopropyl ether	0.625	0.534	85.4	60.0-136	
Ethylbenzene	0.625	0.560	89.6	74.0-126	
Hexachloro-1,3-butadiene	0.625	0.515	82.4	57.0-150	
Isopropylbenzene	0.625	0.546	87.4	72.0-127	
p-Isopropyltoluene	0.625	0.610	97.6	72.0-133	
2-Butanone (MEK)	3.13	3.00	95.8	30.0-160	
Methylene Chloride	0.625	0.511	81.8	68.0-123	
4-Methyl-2-pentanone (MIBK)	3.13	2.53	80.8	56.0-143	
Methyl tert-butyl ether	0.625	0.487	77.9	66.0-132	

Laboratory Control Sample (LCS)

(LCS) R4264938-1 08/24/25 22:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.625	0.628	100	59.0-130	
n-Propylbenzene	0.625	0.577	92.3	74.0-126	
Styrene	0.625	0.651	104	72.0-127	
1,1,1,2-Tetrachloroethane	0.625	0.510	81.6	74.0-129	
1,1,2,2-Tetrachloroethane	0.625	0.534	85.4	68.0-128	
1,1,2-Trichlorotrifluoroethane	0.625	0.469	75.0	61.0-139	
Tetrachloroethene	0.625	0.529	84.6	70.0-136	
Toluene	0.625	0.520	83.2	75.0-121	
1,2,3-Trichlorobenzene	0.625	0.602	96.3	59.0-139	
1,2,4-Trichlorobenzene	0.625	0.595	95.2	62.0-137	
1,1,1-Trichloroethane	0.625	0.530	84.8	69.0-126	
1,1,2-Trichloroethane	0.625	0.590	94.4	78.0-123	
Trichloroethene	0.625	0.614	98.2	76.0-126	
Trichlorofluoromethane	0.625	0.447	71.5	61.0-142	
1,2,3-Trichloropropane	0.625	0.568	90.9	67.0-129	
1,2,4-Trimethylbenzene	0.625	0.610	97.6	70.0-126	
1,2,3-Trimethylbenzene	0.625	0.538	86.1	74.0-124	
1,3,5-Trimethylbenzene	0.625	0.600	96.0	73.0-127	
Vinyl chloride	0.625	0.420	67.2	63.0-134	
Xylenes, Total	1.88	1.74	92.6	72.0-127	
(S) Toluene-d8			*95.4*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*103*	*70.0-130*	

Method Blank (MB)

(MB) R4266982-1 08/31/25 19:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C12 Aliphatics	U		3.87	5.00
C12-C16 Aliphatics	U		3.87	5.00
C16-C21 Aliphatics	U		3.87	5.00
C21-C34 Aliphatics	U		4.51	5.00
(S) 1-Chloro-octadecane	*66.5*			*50.0-150*

Method Blank (MB)

(MB) R4266982-4 08/31/25 20:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C12 Aromatics	U		3.12	5.00
C12-C16 Aromatics	U		3.12	5.00
C16-C21 Aromatics	U		3.12	5.00
C21-C34 Aromatics	U		3.12	5.00
(S) o-Terphenyl	*85.9*			*50.0-150*
(S) 2-Fluorobiphenyl	*101*			*50.0-150*
(S) 2-Bromonaphthalene	*98.3*			*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4266982-2 08/31/25 19:35 • (LCSD) R4266982-3 08/31/25 19:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	6.65	3.83	4.25	57.6	63.9	70.0-130	J J4	J J4	10.4	20
C12-C16 Aliphatics	13.3	8.81	9.61	66.2	72.3	70.0-130	J4		8.69	20
C16-C21 Aliphatics	20.0	15.5	16.6	77.5	83.0	70.0-130			6.85	20
C21-C34 Aliphatics	33.3	25.1	26.7	75.4	80.2	70.0-130			6.18	20
(S) 1-Chloro-octadecane				*67.1*	*67.7*	*50.0-150*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4266982-5 08/31/25 20:42 • (LCSD) R4266982-6 08/31/25 21:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	6.65	5.07	5.25	76.2	78.9	70.0-130			3.49	20
C12-C16 Aromatics	20.0	16.6	17.0	83.0	85.0	70.0-130			2.38	20
C16-C21 Aromatics	33.3	30.7	30.5	92.2	91.6	70.0-130			0.654	20
C21-C34 Aromatics	53.2	40.8	39.1	76.7	73.5	70.0-130			4.26	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4266982-5 08/31/25 20:42 • (LCSD) R4266982-6 08/31/25 21:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) o-Terphenyl				*92.1*	*88.5*	*50.0-150*				
(S) 2-Fluorobiphenyl				*108*	*105*	*50.0-150*				
(S) 2-Bromonaphthalene				*105*	*103*	*50.0-150*				

L1890375-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1890375-19 08/31/25 21:27 • (MS) R4266982-7 08/31/25 21:49 • (MSD) R4266982-8 08/31/25 22:11

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	7.06	U	4.76	4.71	67.4	66.8	1	70.0-130	J J6	J J6	0.897	20
C12-C16 Aliphatics	14.1	U	10.8	10.6	76.7	75.2	1	70.0-130			1.98	20
C16-C21 Aliphatics	21.2	U	18.7	18.3	88.0	86.0	1	70.0-130			2.30	20
C21-C34 Aliphatics	35.4	U	30.2	29.6	85.3	83.8	1	70.0-130			1.78	20
(S) 1-Chloro-octadecane					*70.1*	*65.6*		*50.0-150*				

L1890375-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1890375-19 09/01/25 03:01 • (MS) R4266982-9 09/01/25 03:24 • (MSD) R4266982-10 09/01/25 03:46

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	7.06	U	5.83	5.45	82.6	77.1	1	70.0-130			6.78	20
C12-C16 Aromatics	21.2	U	18.8	17.4	88.5	82.0	1	70.0-130			7.62	20
C16-C21 Aromatics	35.4	U	33.8	31.9	95.5	90.1	1	70.0-130			5.83	20
C21-C34 Aromatics	56.5	U	43.3	42.5	76.7	75.2	1	70.0-130			1.98	20
(S) o-Terphenyl					*92.1*	*85.5*		*50.0-150*				
(S) 2-Fluorobiphenyl					*111*	*107*		*50.0-150*				
(S) 2-Bromonaphthalene					*110*	*106*		*50.0-150*				

Method Blank (MB)

(MB) R4267908-2 09/02/25 14:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00163	0.00600
Acenaphthene	U		0.00162	0.00600
Acenaphthylene	U		0.00159	0.00600
Benzo(a)anthracene	U		0.00200	0.00600
Benzo(a)pyrene	U		0.00163	0.00600
Benzo(b)fluoranthene	U		0.00275	0.00600
Benzo(g,h,i)perylene	U		0.00193	0.00600
Benzo(k)fluoranthene	U		0.00213	0.00600
Chrysene	U		0.00206	0.00600
Dibenz(a,h)anthracene	U		0.00201	0.00600
Fluoranthene	U		0.00239	0.00600
Fluorene	U		0.00180	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00234	0.00600
Naphthalene	U		0.00579	0.0200
Phenanthrene	U		0.00305	0.00600
Pyrene	U		0.00205	0.00600
1-Methylnaphthalene	U		0.00219	0.0200
2-Methylnaphthalene	U		0.00571	0.0200
2-Chloronaphthalene	U		0.00129	0.0200
(S) p-Terphenyl-d14	*91.5*			*23.0-120*
(S) Nitrobenzene-d5	*93.8*			*14.0-149*
(S) 2-Fluorobiphenyl	*92.2*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4267908-1 09/02/25 13:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0950	119	50.0-126	
Acenaphthene	0.0800	0.0804	101	50.0-120	
Acenaphthylene	0.0800	0.0896	112	50.0-120	
Benzo(a)anthracene	0.0800	0.0935	117	45.0-120	
Benzo(a)pyrene	0.0800	0.0857	107	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0890	111	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0910	114	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0951	119	49.0-125	
Chrysene	0.0800	0.0991	124	49.0-122	J4
Dibenz(a,h)anthracene	0.0800	0.0946	118	47.0-125	
Fluoranthene	0.0800	0.111	139	49.0-129	J4

Laboratory Control Sample (LCS)

(LCS) R4267908-1 09/02/25 13:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0934	117	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0876	110	46.0-125	
Naphthalene	0.0800	0.0827	103	50.0-120	
Phenanthrene	0.0800	0.0915	114	47.0-120	
Pyrene	0.0800	0.0880	110	43.0-123	
1-Methylnaphthalene	0.0800	0.0975	122	51.0-121	J4
2-Methylnaphthalene	0.0800	0.0908	114	50.0-120	
2-Chloronaphthalene	0.0800	0.0773	96.6	50.0-120	
(S) p-Terphenyl-d14			*101*	*23.0-120*	
(S) Nitrobenzene-d5			*95.7*	*14.0-149*	
(S) 2-Fluorobiphenyl			*93.4*	*34.0-125*	

L1891046-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1891046-03 09/02/25 14:24 • (MS) R4267908-3 09/02/25 14:42 • (MSD) R4267908-4 09/02/25 14:59

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0861	U	0.0933	0.0904	108	105	1	10.0-145			3.11	30
Acenaphthene	0.0861	U	0.0774	0.0748	89.9	86.9	1	14.0-127			3.46	27
Acenaphthylene	0.0861	U	0.0812	0.0827	94.3	96.0	1	21.0-124			1.88	25
Benzo(a)anthracene	0.0861	U	0.0974	0.0956	113	111	1	10.0-139			1.94	30
Benzo(a)pyrene	0.0861	U	0.0918	0.0918	107	107	1	10.0-141			0.000	31
Benzo(b)fluoranthene	0.0861	U	0.0839	0.0801	97.4	93.0	1	10.0-140			4.69	36
Benzo(g,h,i)perylene	0.0861	U	0.0919	0.0888	107	103	1	10.0-140			3.53	33
Benzo(k)fluoranthene	0.0861	U	0.0878	0.0839	102	97.4	1	10.0-137			4.48	31
Chrysene	0.0861	0.00967	0.108	0.105	115	111	1	10.0-145			2.77	30
Dibenz(a,h)anthracene	0.0861	U	0.0922	0.0987	107	115	1	10.0-132			6.90	31
Fluoranthene	0.0861	U	0.113	0.104	131	121	1	10.0-153			8.29	33
Fluorene	0.0861	U	0.0836	0.0835	97.1	96.9	1	11.0-130			0.131	29
Indeno(1,2,3-cd)pyrene	0.0861	U	0.0886	0.0903	103	105	1	10.0-137			1.84	32
Naphthalene	0.0861	U	0.0802	0.0789	93.1	91.6	1	10.0-135			1.66	27
Phenanthrene	0.0861	U	0.101	0.0968	118	112	1	10.0-144			4.66	31
Pyrene	0.0861	U	0.0994	0.0869	115	101	1	10.0-148			13.4	35
1-Methylnaphthalene	0.0861	U	0.0924	0.0891	107	103	1	10.0-142			3.63	28
2-Methylnaphthalene	0.0861	U	0.0855	0.0839	99.2	97.4	1	10.0-137			1.82	28
2-Chloronaphthalene	0.0861	U	0.0747	0.0761	86.7	88.4	1	29.0-120			1.89	24
(S) p-Terphenyl-d14					*87.8*	*80.7*		*23.0-120*				
(S) Nitrobenzene-d5					*93.6*	*90.7*		*14.0-149*				
(S) 2-Fluorobiphenyl					*86.8*	*83.8*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
TRC - Woodinville, WA
13810 SE Eastgate Way
Suite 440
Bellevue. WA 98005

Billing Information:
Accounts Payable
21 Griffin Road
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Pres Chk

Report to: ~~Madison Taylor 425-512-7073~~ Eric Larsen 425.566.0403

Email To: cmoon@trccompanies.com ~~mptaylor@trccompanies.com~~;elarsen@trccomp

Project Description: Phillips 66

City/State Collected: Ferndale, WA Bellingham MT

Please Circle: (PT) MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # 664185

Lab Project # TRCWWA-P66

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X STD TAT

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Metals 8ozClr-NoPres	CR6, CR3 8ozClr-NoPres	EPHWA 4ozAmb-NoPres	SV8270PAHSIM 8ozClr-NoPres	V8260 40mlAmb/MeOH 10ml/Syr	VPHWA 40mlAmb/MeOH 10ml/Syr	Remarks	Sample # (lab only)
BH-2-6:14	G	SS	14	8/19/25	1015	3	X	X	X	X	X	X	short hold	-01
BH-2-7:14	G	SS	14	8/19/25	1035	3	X	X	X	X	X	X	↓	-02
MW-OWS-4:14	G	SS	14	8/19/25	1200	3	X	X	X	X	X	X		-03

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 189047

F017

Acctnum: TRCWWA
Template: T279231
Prelogin: P1171515
PM: 4089 - Andi R Jones
PB:
Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 416681546 7228

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y __N
Bottles arrive intact: Y __N
Correct bottles used: Y __N
Sufficient volume sent: Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR	
	8/19/25	1705			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: TLA 90.2-0.1=0.1 9	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/21/25 Time: 9:00	Hold: Condition: NCF (OK)

APPENDIX E-
PHASE III OWS SAMPLING AND ANALYSIS PLAN

Phase III Sampling and Analysis Plan

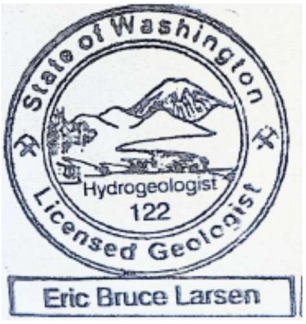
Phillips 66 Ferndale Refinery
3901 Unick Road
Ferndale, WA 98248

October 3, 2025

Prepared For:
Phillips 66
401 South 23rd Street
Billings, Montana 59101

Prepared By:
TRC Environmental Corporation
13810 SE Eastgate Way, Suite 440
Bellevue, Washington 98005

Project Number: 670297.0000.0000



Jill Windsor

Prepared by:
Jill Windsor
Project Geologist

Reviewed and Approved by:
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Senior Geologist

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ABBREVIATIONS AND ACRONYMS

Abbreviation/ Acronym	Definition
AO	Agreed Order
Atlas	Atlas Inspection
bgs	Below ground surface
COC	Contaminant of concern
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
IRP	Investigation and Response Plan
OWS	Oily water sewer
PID	Photoionization detector
QA/QC	Quality assurance and quality control
WWTP	Wastewater treatment plant

1.0 INTRODUCTION

Phillips 66 entered into an Agreed Order No DE 16297 (AO) with the Washington State Department of Ecology (Ecology) for the Ferndale Refinery located at 3901 Unick Road, Washington (subject property). The objective of the AO is to investigate the integrity of the oily water sewer (OWS) system on the subject property. The OWS was constructed in 1953 and consists of underground piping, drain hubs, manholes, hatches, and other access points. The OWS conveys process wastewater to the facility's wastewater treatment plant (WWTP).

An *Investigation and Response Plan* (IRP) was prepared in accordance with the requirements in the AO. The IRP provides a framework to investigate the integrity of the OWS and respond to any potential releases of contamination to soil and/or groundwater. The IRP outlined four phases of major OWS trunk line inspections to be completed by December 31, 2029.

Per the IRP, if a potential release is discovered during the sewer inspections, the first step is to initiate site characterization at the potential release location(s). A potential release includes a sewer defect, which indicates that the sewer has failed and there is the potential for contaminants from the OWS to impact soil or groundwater.

During the Phase III OWS inspection, approximately 2,330 linear feet of sewer line segments and eight manholes were inspected by Atlas Inspection (Atlas), a subsidiary of Industrial Inspection & Analysis, Inc. Data were processed and segment identifiers and locations were confirmed in the field daily with refinery personnel. Locations of Phase III inspections are presented in Figures 2A through 2D. Cleaning and inspection activities for the sewers revealed that some locations required further analysis.

Sewer segment and manhole inspection videos for the listed segments and manholes provided to TRC by Atlas and the refinery between July 24, 2024, and August 23, 2024. TRC's team of certified National Association of Sewer Service Companies (NASSCO) staff reviewed videos and provided an initial identification of defects in the sewer segments and manholes. TRC's NASSCO staff used the Pipeline Assessment Certification Program (PACP) and Manhole Assessment Certification Program (MACP) structural rating (SR) system to structurally rate sewer defects (e.g., cracking, deformities, etc.). TRC assigned defects a site-specific separate environmental rating (ER) considering the potential for release. Each ER category is based on defect characteristics and the prioritization for follow-up actions and documentation. Defects are rated ER-1 through ER-5.

This Sampling and Analysis Plan (SAP) describes sample collection, handling, and analysis procedures per Table 6.4 of the Ecology's Guidance for Remediation of Petroleum Sites (Guidance). For the purpose of this SAP, only locations rated as ER-4 (significant structural defect with potential for release) during the Phase III OWS inspection will be further investigated.

2.0 SAMPLING AND ANALYSIS PLAN

This SAP describes sample collection, handling, and analysis procedures in accordance with Table 6.4 of the Guidance.

2.1 Objective

The objective of the soil sampling event is to collect soil samples from the locations identified as ER-4 during the Phase III OWS inspection at the following repair areas:

- **Repair Area 1 (Figure 2A)**
  - 3-1 (12-4:8H-1)
- **Repair Area 2 (Figure 2A)**
  - 3-2A (12-4:FCC Distribution Box)
- **Repair Area 3 (Figure 2B)**
  - 3-2B (10-4:FCC Distribution Box)
- **Repair Area 5 (Figure 2B)**
  - 3-4 D (9-4:1E-FS) and 3-4 U (1E-FS:9-4)
- **Repair Area 6 (Figure 2B)**
  - 3-5 D (1E-FS:1E-1) and 3-5 U (1E-1:1E-FS)
- **Repair Area 7 (Figure 2B)**
  - 3-6 D (1E-1:1B-E) and 3-6 U (1B-E:1E-1)
- **Repair Area 8 (Figure 2B)**
  - 3-7 D (1B-E:7-5) and 3-7 U (7-5:1B-E)
  - 3-8 D (7-5:3-5-FS) and 3-8 U (3-5-FS:7-5)
- **Repair Area 9 (Figure 2B)**
  - 3-9 (3-5-FS:4-5)

A licensed driller will advance 11 boreholes for initial site characterization at Repair Areas 1 through 3 and 5 through 9.

The ER-4 locations are shown on Figures 2A and 2B.

2.2 Project Schedule

Soil sampling activities will occur in the summer of 2025.

2.3 Soil Boring and Soil Sampling Procedures

The following sections describe soil boring and soil sampling procedures to be applied in the field.

2.3.1 Proposed Soil Boring Locations

The 11 proposed soil boring locations shown on Figures 2A and 2B will be located as close as practicable to the ER-4 repair areas/potential release locations identified during the OWS inspection project (TRC 2025). Since there are above-ground obstructions such as refinery piping runs at or near some of the proposed boring locations, these locations will be field-verified and adjusted as needed for safety and accessibility while remaining as close as possible to the original proposed location. As described in more detail in the following sections, all boring locations will be physically cleared to a minimum of 5-feet below ground surface (bgs) prior to advancing any tooling and will be advanced using direct-push drilling methods beyond 5-feet bgs where feasible. However, if access limitations preclude the use of a drill rig, an attempt will be made to collect soil samples using hand auger equipment and vacuum excavation equipment, if necessary. OWS depths have been determined by reviewing the facility drawings.

2.3.2 Preliminary Activities

TRC will notify Washington One Call Service a minimum of 3 business days before scheduled field activities at the subject property. In addition, Phillips 66 will provide refinery-specific procedures for subsurface obstruction clearance, excavation, and safety requirements at each sampling location prior to advancing borings. Phillips 66 will also provide a utility map where work will be conducted at least 72 hours prior to the start of work. Prior to drilling, borehole locations will be vacuum cleared to a depth of at least 5 feet.

2.3.3 Soil Borings and Soil Sampling Procedures

Soil borings will be drilled and sampled using direct-push drilling technology (DPT) and sampling methods under the supervision of a Washington-State-licensed well driller and an experienced TRC engineer or licensed geologist. The soil borings will be advanced to a terminal depth of approximately 15 feet bgs.

The TRC engineer or geologist will continuously log soils to the terminal depth following the Unified Soil Classification System and the description will be recorded on a boring log. The drill rig equipment will be decontaminated prior to initiating each soil boring.

During drilling at each location, soil samples will be screened for the presence of volatile compounds using a photoionization detector (PID) and field methods such as sheen testing and visual and olfactory inspection. The soil sample will be placed in a plastic re-sealable bag, and the tip of a photo-ionization PID will be inserted into the plastic bag to measure organic vapor concentrations in the headspace. The PID measurement will be recorded on the boring log. The organic vapor headspace screening will be conducted using a MiniRAE Model 3000 PID equipped with a 10.6 eV lamp (or similar). At a minimum, the PID will be calibrated daily in accordance with the manufacturer's specifications using an isobutylene standard. The calibration gas and concentration will be recorded in the field log.

Sheen tests will be conducted using a portion of the soil core and distilled water. Sheen tests will be recorded as: NS – no sheen, VSS – very slight sheen, SS – slight sheen, MS – moderate sheen, and HS – heavy sheen.

At least two samples from the borings (i.e., 28 total) will be selected for laboratory analysis. The soil sample with the highest PID reading from each boring will be collected for analysis. A duplicate will be collected from two of the soil borings. Additional soil samples may be archived for potential additional analysis based on field screening results. Field personnel will collect samples according to U.S. Environmental Protection Agency (EPA) Method 5035A to limit the potential loss of volatile compounds.

2.3.4 Backfilling of Soil Borings

The borings will be backfilled from total depth to approximately 1 foot bgs with hydrated bentonite chips. The borehole will be completed from 1 foot bgs to surface grade with material that matches existing surface conditions.

2.3.5 Soil Analysis

Soil samples will be analyzed for known or suspected contaminants of concern (COCs) in the wastewater conveyed by the specific section of oily water sewer piping per the IRP. Samples will be analyzed for the COCs by the following analytical methods:

- Extractable petroleum hydrocarbons (EPH) by Northwest Total Petroleum Hydrocarbons (NWTPH) as EPH method
- Volatile petroleum hydrocarbons (VPH) by VPH method
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) and halogenated volatile organic compounds (hVOC) by EPA Method 8260
- Naphthalenes and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270 SIM
- Arsenic, cadmium, chromium VI, chromium III, lead, nickel, mercury, and zinc by EPA Method 7471

TRC will submit samples for analysis to Pace Analytical Laboratory (Pace) in Minneapolis, Minnesota. Pace is an Ecology-accredited laboratory.

2.4 Investigation-Derived Waste Handling Procedures

Soil cuttings generated from the drilling or sampling will be stored on the subject property at the petroleum contaminated soil (PCS) staging yard. The soil will be removed from the subject property and transported under manifest to a client- and regulatory-approved facility for recycling or disposal. Decontamination fluids from drilling activities will be treated in the facility's WWTP. If on-site treatment of fluids is not an option, all fluids will be stored in labeled, regulatory-approved storage containers. Fluids will be subsequently transported under manifest to a client- and regulatory-approved facility for disposal.

Any waste materials other than soil cuttings/fluids generated by sampling activities must be disposed appropriately. Any materials that have been in contact with contaminated media will need to be disposed of in the roll-off box labeled "contaminated PPE and debris, waste code F037."

2.5 Quality Assurance/Quality Control (QA/QC)

Soil boring locations will be measured and verified in the field at the time of sampling in accordance with Figures 2C and 2D. All soil characterization, sampling, and screening will be conducted by competent and trained personnel. Samples will be collected using decontaminated stainless-steel sampling implements and placed into laboratory-provided sample containers. Decontamination will be conducted using Alconox detergent followed by a distilled water rinse. The PID will be calibrated on a daily basis in accordance with manufacturer's specifications using a hexane or isobutylene standard.

Two duplicate soil samples will be collected and analyzed during this investigation. Each sample will have an adhesive plastic or waterproof label affixed to the container. Sample labels will include the project name, unique sample identification, and the sample date and time. Samples will be stored in a cooler on ice and transported to the lab following proper shipping and chain-of-custody protocols. The project geologist or project engineer will verify that all analytical data meets the laboratory provided QA/QC such as surrogate recoveries for each sample, method blank results, duplicate analyses, and matrix spike or method blank analyses.

2.6 Health and Safety

Prior to commencing any field activities, TRC will prepare a site-specific Health and Safety Plan (HASP) for investigation activities as required by the Code of Federal Regulations (CFR) Title 29 1910.120 and by the Washington State Department of Labor and Industries. The HASP is a document that establishes site objectives, anticipates job hazards, provides implementation of a hazard communication and injuries/illness prevention program, and establishes policies and procedures to be followed in both routine and emergency situations.

All personnel will adhere to both the Phillips 66 Ferndale Refinery safe work practices and TRC safety policies. Workers will be trained in general and site-specific hazard identification and mitigation, and all activities will be conducted in accordance with established health and safety protocols.

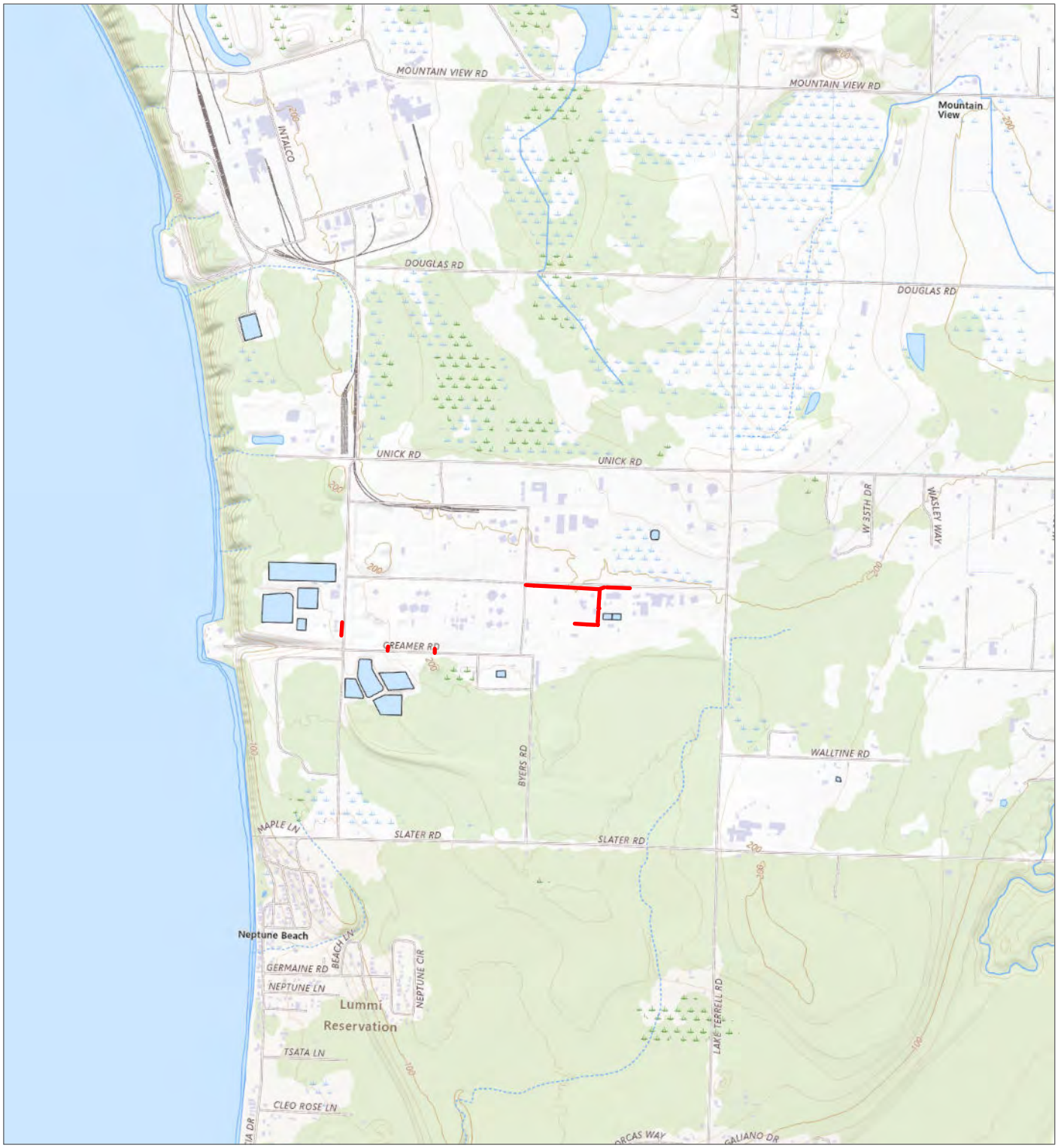
2.7 Site Investigation Report

Following the completion of the site investigation, a report will be prepared documenting the investigation results. The report will include a narrative of the actions performed with summary data tables, figures presenting the salient findings of the work, and original laboratory analytical reports.

3.0 REFERENCES

TRC Companies. (2025). *Phillips 66 Ferndale Refinery, Phase III Oily Water Sewer Inspections and Repair Recommendations, March 11, 2025*.

Figures



PHASE III SEWER INSPECTION ROUTE

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N

0 1,000 2,000
FEET
1:24,000 1" = 2,000'



PROJECT: **PHILLIPS 66 FERNDALE REFINERY**
3901 UNICK ROAD
FERNDALE, WASHINGTON

TITLE: **GENERAL VICINITY MAP**
PHASE III SAMPLING AND ANALYSIS PLAN

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	J. WINDSOR		
APPROVED BY:	M. ESPARRA		**FIGURE 1**
DATE:	JUNE 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PHASEIII_SAP

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE WASHINGTON SOUTH FIPS 4602 FT US; MAP ROTATION: 0
-- SAVED BY: RCOLLINS ON 6/9/2025, 10:13:40 AM; FILE PATH: T:\1-PROJECTS\PHILLIPS66_COI\670297_FERNDALE\2-APRX\P66_PHASEIII_SAP.APRX; -- LAYOUT NAME: FIGURE 1 GVM



POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

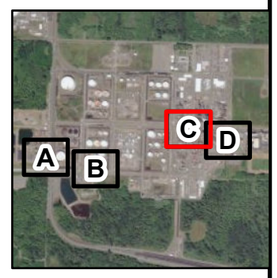
CONTINUOUS DEFECTS

- ENVIRONMENTAL RATING = 3

OILY AND PHENOLIC SEWER MANHOLES

- PHASE III
- PHASE IVA
- PHASE IVB
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- PHENOLIC SEWER MAJOR TRUNK LINE
- OILY WATER SEWER MAJOR TRUNK LINE
- PROPOSED SOIL BORING / SAMPLE LOCATION

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC



1:845
1" = 70'
0 35 70 FEET

PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

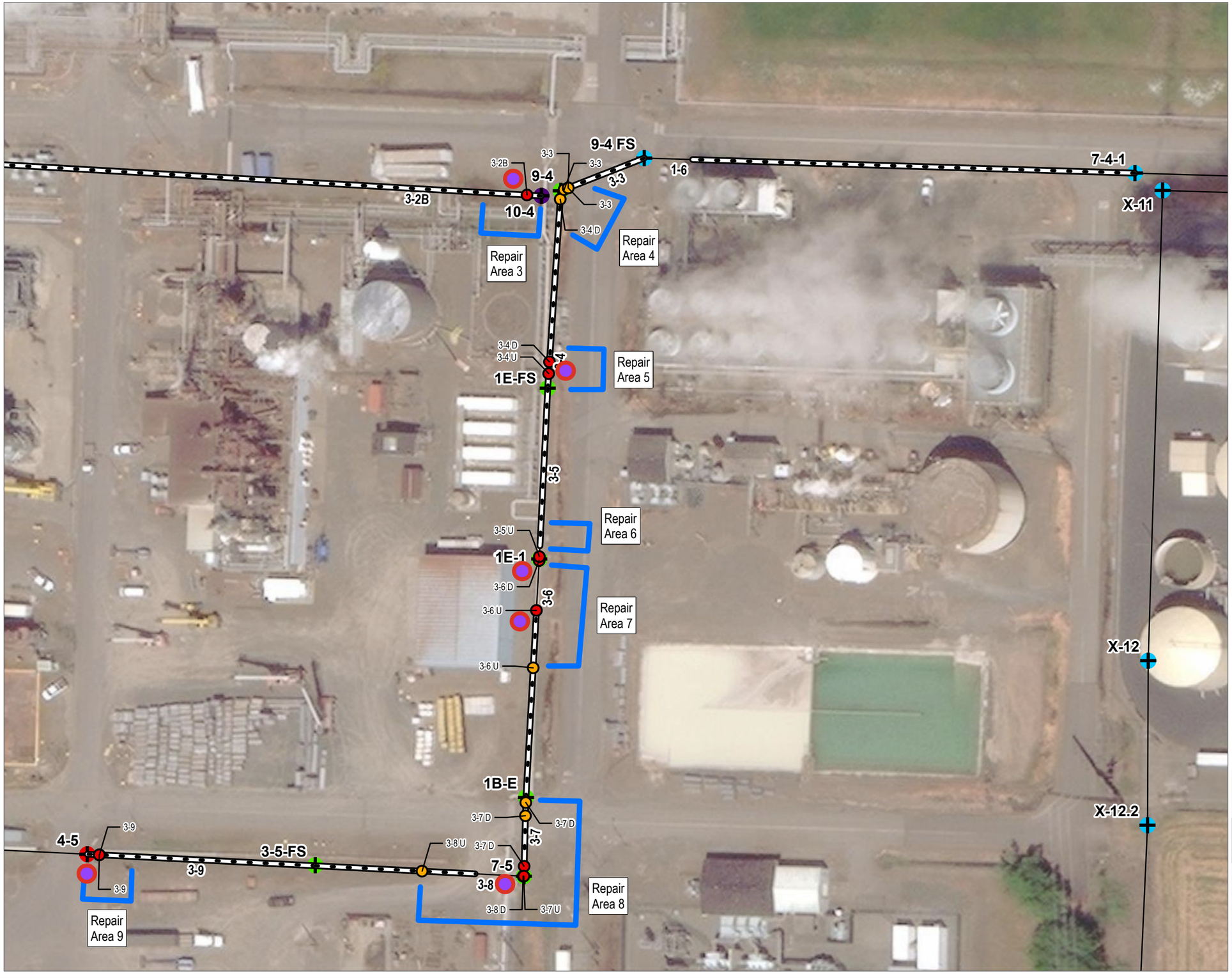
TITLE: PHASE III SEWER INSPECTION REPAIR AREAS AND ENVIRONMENTAL RATED DEFECTS 3 & 4 PHASE III SAMPLING AND ANALYSIS PLAN

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	J. WINDSOR		FIGURE 2A
APPROVED BY:	E. LARSEN		
DATE:	OCTOBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PhaseIII_SAP.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
Saved By: RCOLLINS on 6/9/2025, 11:00:44 AM; File Path: T:\1-PROJECTS\Phillips66_Co\670297_Ferndale\2-A\PRX\P66_PhaseIII_SAP.aprx; Layout Name: Figure 2A_2B - P3 Defects



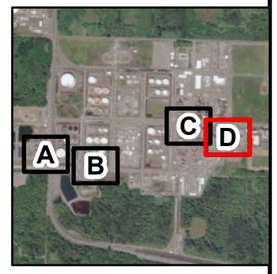
POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

OILY AND PHENOLIC SEWER MANHOLES

- PHASE I
- PHASE III
- PHASE IVA
- PHASE IVD
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- OILY WATER SEWER MAJOR TRUNK LINE
- PROPOSED SOIL BORING / SAMPLE LOCATION

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC



N

1:845
1" = 70'
0 35 70 FEET

PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

TITLE: PHASE III SEWER INSPECTION REPAIR AREAS AND ENVIRONMENTAL RATED DEFECTS 3 & 4 PHASE III SAMPLING AND ANALYSIS PLAN

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	J. WINDSOR		FIGURE 2B
APPROVED BY:	E. LARSEN		
DATE:	OCTOBER 2025		

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FILE: P66_PhaseIII_SAP.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
Saved By: RCOLLINS on 6/9/2025, 11:00:44 AM; File Path: T:\1-PROJECTS\Phillips66_Co\670297_Ferndale\2-A\PRX\P66_PhaseIII_SAP.aprx; Layout Name: Figure 2A_2B - P3 Defects

APPENDIX F-
PHASE III OWS SOIL AND GROUNDWATER INVESTIGATION

Phase III Soil and Groundwater Investigation Report

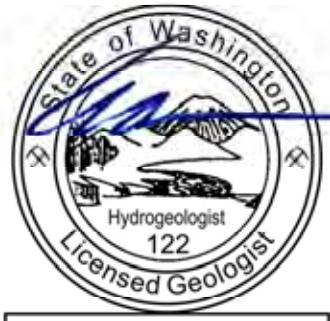
Phillips 66 Ferndale Refinery
3901 Unick Road
Ferndale, WA 98248

January 20, 2026

Prepared For:
Phillips 66
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ABBREVIATIONS AND ACRONYMS

Abbreviation/ Acronym	Definition
AO	Agreed Order Number DE 16297
Atlas	Atlas Inspection
bgs	Below ground surface
COC	Contaminant of concern
CUL	Cleanup level
DPT	Direct-push technology
DRO	Diesel-range organics
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
EPH	Extractable petroleum hydrocarbons
ER	Environmental rating
GRO	Gasoline-range organics
IRP	Investigation and Response Plan
µg/L	Micrograms per liter
mg/kg	Milligrams per kilogram
MTCA	Model Toxics Control Act
NASSCO	National Association of Sewer Service Companies
OWS	Oily water sewer
PID	Photoionization detector
ppm	Parts per million
QA/QC	Quality assurance and quality control
RPD	Relative percent difference
RRO	Residual-range organics
SAP	Sampling and Analysis Plan

Abbreviation/ Acronym	Definition
SVOCs	Semivolatile organic compounds
TRC	TRC Environmental Corporation
VOCs	Volatile organic compounds
VPH	Volatile petroleum hydrocarbons
WAC	Washington Administrative Code

1.0 INTRODUCTION

TRC Environmental Corporation (TRC) has prepared this *Phase III Soil Investigation and Groundwater Monitoring Report* on behalf of Phillips 66 Company (Phillips 66) for work conducted at the Phillips 66 Ferndale Refinery located at 3901 Unick Road in Ferndale, Washington (Refinery). **Figure 1** shows the location and general vicinity of the Refinery.

The work presented herein was performed on behalf of Phillips 66 to document the assessment of soil and groundwater in the locations described in the following sections. This report is intended to meet the requirements of the Model Toxics Control Act (70.105D Revised Code of Washington [RCW]) and its implementing regulation (Washington Administrative Code [WAC] 174-340, collectively known as "MTCA"). The Washington State Department of Ecology (Ecology) previously assigned the Facility Site ID Number (No.) 17Cleanup Site No. 4886 to the Refinery.

1.1 Background and Regulatory Setting

In August 2020, Phillips 66 and Ecology signed Agreed Order Number DE 16297 (AO) for the Refinery. The objective of the AO is to investigate the integrity of the oily water sewer (OWS) system located on the Refinery. The OWS was constructed in 1953 and consists of underground piping, drain hubs, manholes, hatches, and other access points. The OWS conveys process wastewater and drainage from Refinery operations to the facility's wastewater treatment plant.

An *Investigation and Response Plan* (IRP) was prepared by Phillips 66 in 2022 in accordance with the requirements of the AO. The IRP describes measures to investigate the integrity of the OWS and respond to any potential releases of contamination to soil and/or groundwater. The IRP outlined four phases of major OWS trunk line inspections to be completed by December 31, 2029 (Phillips 66 2022).

Per the IRP, if an indication of a potential release is discovered during the sewer inspections, site characterization will be performed at the potential release location(s). A potential release location includes a sewer defect, the inspection of which indicates the sewer has failed and creates the potential for contaminants from the OWS to impact soil or groundwater. Each potential release location was assigned an environmental rating (ER) from 1 to 5 based on the defect characteristics and the prioritization for follow-up actions and documentation. Defects with an ER of 3 or 4 are grouped together in numbered "Repair Areas."

During the Phase III OWS inspection, approximately 2,330 linear feet of sewer line segments and eight manholes (**Figure 2**) were inspected by Atlas Inspection (Atlas). OWS inspection data was processed and line segment identifiers and locations were confirmed in the field daily with Refinery personnel. Locations of the Phase III OWS inspections are presented in **Figures 3A** and **3B**. The OWS cleaning and inspection activities identified some locations requiring further analysis (TRC 2025a).

The Phase III OWS segment and manhole inspection videos for the listed segments and manholes were provided to TRC by Atlas and the Refinery between July 24, 2024, and August 23, 2024. TRC's team of certified National Association of Sewer Service Companies (NASSCO) staff reviewed videos and provided an initial identification of defects in the sewer segments and

manholes. TRC's NASSCO staff used the Pipeline Assessment Certification Program (PACP) and Manhole Assessment Certification Program (MACP) structural rating (SR) system to structurally rate sewer defects (e.g., cracking, deformities, etc.). TRC assigned each defect a site-specific separate ER considering the potential for release. Each ER category is based on defect characteristics and the prioritization for follow-up actions and documentation. OWS defect ratings range from ER-1 through ER-5.

TRC prepared a *Phase III Sampling and Analysis Plan* (SAP) detailing proposed soil sample collection, handling, and analysis procedures based on Ecology's "Guidance for Remediation of Petroleum Sites" (Guidance). The Phase III OWS inspection defects that were identified as ER-4 (significant structural defect with potential for release) or higher were chosen for further investigation (TRC 2025b).

1.2 Scope of Work

1.2.1 Soil Sampling

The SAP scope of work detailed soil sampling adjacent to nine repair areas identified as ER-4 potential release locations. These repair areas are located along OWS Line Segments 3-1, 3-2A, 3-2B, 3-4, 3-6, 3-8, and 3-9 (**Figures 3A** and **3B**). Eleven soil boring locations were chosen as close as practicable to the ER-4 locations. The shallow soil sampling depths were chosen to target soils immediately below the surveyed depth of the OWS line at each location (**Table 1**).

Table 1
OWS Phase III Soil Boring Sample Designation and Depth

Soil Boring	OWS Line Depth (feet bgs)	Sampling Depths (feet bgs)	Drilling Method	OWS Line Segment	Closest Manhole	PH III OWS Repair Area
B-1-25	6.83	7.0[a], 12.0[a]	DP	3-1	MH 8H-1	1
B-2-25	6.83	7.2[a], 12.2[a]	DP	3-1	MH 8H-1	1
B-3-25	6.8	7.5[a], 11.5[a]	HA	3-2A	MH 12-4	2
B-4-25	6.8	7.0[a], 12.0[a]	DP	3-2A	MH 12-4	2
B-5-25	6.8	6.3[a], 11.3[a]	DP	3-2A	MH 12-4	2
B-6-25	6.8	7.8, 12.8	DP	3-2B	MH 10-4	3
B-7-25	6.8	7.8, 12.8	DP	3-4	MH 1E-FS	5
B-8-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7
B-9-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7

Table 1
OWS Phase III Soil Boring Sample Designation and Depth

Soil Boring	OWS Line Depth (feet bgs)	Sampling Depths (feet bgs)	Drilling Method	OWS Line Segment	Closest Manhole	PH III OWS Repair Area
B-10-25	6.0	7.0, 12.0	DP	3-8	MH 7-5	8
B-11-25	12	13.0, 15.0	DP	3-9	MH 4-5	9

Notes:
a Sample depth proposed in SAP was adjusted based on boring surface elevation variance measured during field work from OWS manhole surveyed elevation.
bgs Below ground surface.
DP Direct-push technology drill rig.
HA Hand auger.

A second deeper soil sample was also collected from each boring approximately 5 feet below the shallow soil sample depth. Deeper soil samples were submitted for laboratory analysis to provide vertical delineation of impacts to soil if a shallow sample exhibited evidence of contaminant of concern (COC) impacts during field screening. Deeper soil samples from borings not exhibiting field screening evidence of COCs were also submitted to the laboratory and placed on hold in case vertical delineation of COCs might be needed based on laboratory analytical results. Soil sample collection, handling, and analytical procedures were performed in accordance with Table 6.4 of the Ecology's "Guidance for Remediation of Petroleum Contaminated Sites" (Ecology 2016).

1.2.2 Groundwater Sampling

In coordination with the Phase III OWS soil sampling activities, TRC collected a quarterly groundwater sample from monitoring well MW-OWS-4. This monitoring well was installed in August 2025 as part of the Phase II OWS Site Investigation activities (TRC 2025c). Well MW-OWS-4 is located just north of the intersection of "K" Street and 2nd Street (**Figure 2**).

2.0 ASSESMENT SAMPLING PROCEDURES

On November 5 and 6, 2025, TRC mobilized to the Refinery to advance 11 soil borings (B-1-25 through B-11-25) using direct-push technology (DPT) drilling and sampling methods. On October 29, 2025, prior to field mobilization TRC notified Washington One-Call (DigSafeWA) with a locate request to identify any publicly-owned subsurface utilities in the vicinity of the Phase III OWS work area at the Refinery. DigSafeWA.com verified that no public utilities exist within the Phase III OWS project work areas at the Refinery. The boring locations were also checked for potential underground utility conflicts using Refinery underground utility plans provided by Phillips 66. Prior to initiating intrusive soil sampling activities, each boring location was also cleared for utilities to a depth of 5 feet below ground surface (bgs) using a Vactor excavator operated by Western Refinery Services (WRS). Soil boring drilling and sample

collection was performed by a Washington-state licensed driller (Cascade Drilling) under the direction of an experienced environmental professional from TRC. Soil boring and monitoring well locations are shown on **Figures 2**, **3A**, and **3B**.

2.1 Soil Investigation

After confirming that there were no potential underground utilities at each soil boring location, a continuous soil core was collected from 5 feet bgs to the total depth using DPT drilling equipment in 10 of the 11 borings. The boring B-3-25 location was near aboveground Refinery piping that prevented access for the drill rig and was therefore advanced using a decontaminated stainless-steel hand-auger and extensions following utility clearance. Soil cores and hand auger samples were logged for soil characterization using the Unified Soil Classification System (ASTM Method 2488D), and for any visual or olfactory indications of potential COCs. Soil was also screened in the field for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID). Soil conditions and lithology were recorded on the soil boring logs in Appendix A

2.2 Soil Sample Collection Procedures

The direct-push soil cores or hand augured soils from each interval were inspected and logged using the Unified Soil Classification System (USCS). Samples were also taken at the pre-determined depth intervals described in **Table 1** for PID field screening and laboratory analysis. A portion of these soils were placed into a sealed plastic bag and allowed to equilibrate for at least 10 minutes. The PID probe was then inserted into the bag to measure the presence of any VOCs that might be present within the headspace. The PID reading in parts per million (ppm) was then recorded in the assessor's field notes. Soil field screening data are shown on the soil boring logs and field notes in Appendix A

Soil coring, auger, and other non-disposable sampling tools were decontaminated prior to each use. Decontamination procedures included a tap water wash containing Alconox followed by a tap water rinse and then a second rinse with deionized water.

Soil borings were advanced to total depths ranging from 11.3 to 15 feet bgs (**Table 1**). Soil samples for VOC analyses were collected using a disposable measured core volume tool and placed into 40-milliliter (mL) glass sample containers supplied by the laboratory. All samples were collected using U.S. Environmental Protection Agency (EPA) Method 5035A kits. Samples for other compound analyses were placed directly into new laboratory-provided glass sample jars. Each sample container was then labeled with a unique sample number, date, time, requested analysis, and sampler's initials. Samples were placed directly into an iced cooler for transportation to the laboratory.

Soil samples were transported under standard chain-of-custody procedures to Pace Analytical National Laboratory (Pace), a Washington State certified laboratory located in Mt. Juliet, Tennessee. Samples were submitted under chain-of-custody procedures for standard or expedited turnaround times for one or more of the following analyses:

- Extractable petroleum hydrocarbons (EPH) by Northwest Total Petroleum Hydrocarbons (Method NWTPH) as EPH;
- Volatile petroleum hydrocarbons (VPH) by Method VPHWA;
- VOCs by EPA Method 8260D;
- Semivolatile organic compounds (SVOCs) and cPAHs by EPA Method 8270E-SIM; and
- Arsenic, cadmium, hexavalent chromium, chromium III, lead, nickel, mercury, and zinc by EPA Methods 6010D, 7471B, or 3060A/7196A.

Waste soil generated during drilling activities was placed into a 55-gallon drum and transferred by WRS to the refinery petroleum-contaminated soil storage location for temporary storage pending analytical characterization and disposal.

2.3 Groundwater Sampling

On November 6, 2025, a groundwater sample and a quality assurance/quality control (QA/QC) duplicate sample were collected from monitoring well MW-OWS-4 using low-flow purging and sampling techniques via peristaltic pump equipped with new, single use polyethylene tubing. Prior to sampling MW-OWS-4, the depth to water was measured to the nearest 0.01 foot relative to the top of the well casing using a decontaminated electronic oil/water interface probe. Purging was accomplished by starting the pump system at a low-flow rate of approximately 100 milliliters per minute. Purge water was discharged through a flow cell for field parameter measurements and collected in a graduated 5-gallon bucket to measure purge volume.

During purging, discharge water was measured for field parameters including pH, specific conductivity, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP). Field parameters were measured at 3-minute intervals using a YSI Model ProQuatro Multiparameter Digital Water Quality Meter. The groundwater sample was collected when the discharge parameters had met the purge stabilization criteria. The groundwater purge stabilization criteria are based on achieving three successive readings within the stabilization criteria (EPA 2017). The stabilized groundwater field parameter measurement data are recorded in the field notes in **Appendix A**.

The MW-OWS-4 groundwater sample and duplicate were transferred directly from the pump discharge tubing into sample containers provided by the laboratory. The sample containers were placed in a cooler with ice and transported under standard chain-of-custody procedures to Pace. The samples were analyzed for the following parameters:

- EPH by Method NWTPH-EPH;
- VPH by Method VPHWA;
- VOCs by EPA Method 8260D;
- SVOCs and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270 SIM; and
- Arsenic, cadmium, hexavalent chromium, chromium III, lead, nickel, mercury, and zinc by EPA Methods 6010D, 7470A, and 3500Cr-C-2011.

Purge water was placed in a steel 55-gallon drum and stored on site pending treatment or characterization and disposal by the Refinery.

3.0 ASSESSMENT DATA EVALUATION

3.1 Soil Samples

Other than shallow gravel fill and paving materials, soils encountered during the Phase III boring installations at all locations appear consistent with native soils and surficial deposits (Unit II) and weathered glaciomarine drift (Unit III) that were characterized during previous investigations at the Refinery and are summarized in Apprendix B of the IRP (Phillips 66 2022). Based on the proximity of the Phase III borings to the OWS segments it is possible that some soils logged from surface to the depth of the OWS piping segments were previously disturbed when the facility was constructed. Soils observed from the DPT cores and hand auger samples were described as primarily sandy silt or silty sand, with some thinner layers of well graded or poorly-graded sand.

Soil boring logs are presented in **Appendix A**. Soil samples screened using the PID during drilling indicated slightly elevated concentrations in soil borings B-1-25 and B-2-25. The highest PID concentration in soil was measured in boring B-3-25 at 7.5 feet bgs (154 ppm). PID field screening measurements in soil from borings B-6-25 through B-11-25 were low (ranging from 0.2 ppm to 4 ppm) and appear indicative of background concentrations based on the lack of detections of VOCs noted in laboratory analytical results from these borings. Soil lithology and field screening data are presented on the boring logs in **Appendix A**.

3.2 Soil Sample Analytical Results

Laboratory analytical results for soil samples from borings B-1-25 through B-11-25 are presented in **Table 2**. Analytical results were compared against applicable MTCA Method A Industrial, MTCA Method C (cancer), and MTCA Method C (non-cancer) cleanup levels (CULs).

Specific analytes from these soil samples that were detected during laboratory analyses are shown in bold font in **Table 2**. Any analyte concentration that exceeds an applicable CUL for a soil sample is shaded gray in **Table 2**. Copies of the laboratory analytical reports are provided in **Appendix B**.

According to Pace there were no factors identified that may have compromised the quality or validity of the reported laboratory analytical results. All appropriate holding times were met, and all laboratory QA/QC results were within acceptable limits. Any other conditions that potentially affected the sample analyses or individual sample reporting limits are described in the laboratory analytical report Case Narrative and Qualifiers in **Appendix B**.

The soil analytical result findings are discussed below.

3.2.1 Inorganic Constituents

Apart from cadmium and hexavalent chromium (which were not detected in any sample), concentrations of one or more inorganic constituents (arsenic, cadmium, chromium III, lead, nickel, mercury, and zinc) were detected in all 12 soil samples. Arsenic was detected in soil samples B-1-25:7, B-2-25:7.2, B-4-25:7, B-5-25:6.3, B-6-25:7.8, B-7-25:7.8, B-8-25:7, B-9-25:7,

and B-10-25:7 at concentrations ranging between 4.56 mg/kg and 7.01 mg/kg. These concentrations exceed the MTCA Method C Soil CUL – Direct Contact (Cancer) level of 4.1 mg/kg. The other inorganic constituent detections in the 12 soil samples analyzed were either at low concentrations (less than applicable CULs) and/or are indicative of background metals concentrations in the soil of Western Washington.

3.2.2 Volatile Organic Compounds

Concentrations of several VOCs were detected in soil samples B-1-25:7, B-2-25:7.2, B-3-25:7.5, B-3-25:11.5, B-4-25:7, and B-5-25:6.3, mostly at concentrations just exceeding reporting limits and less than CULs. However, soil sample BH-3-25:7.5 contained slightly higher concentrations of several VOCs including benzene at a concentration of 0.0561 mg/kg, and naphthalene at a concentration of 6.29 mg/kg. These concentrations exceed the respective MTCA Method A Industrial soil CULs (0.03 mg/kg benzene and 5 mg/kg naphthalene).

3.2.3 Semivolatile Organic Compounds

Concentrations of several SVOCs were detected in soil samples B-1-25:7, B-2-25:7.2, B-3-25:7.5, B-3-25:11.5, B-4-25:7, and B-7-25:7.8, mostly at concentrations slightly exceeding reporting limits and less than CULs. However, soil sample BH-3-25:7.5 contained slightly higher concentrations of several SVOCs including naphthalene at a concentration of 5.59 mg/kg. This concentration slightly exceeds the MTCA Method A Industrial CUL of 5 mg/kg for naphthalene. Naphthalene is an analyte reported on both the EPA Method 8270E for SVOCs and EPA Method 8260D for VOCs analytical methods.

3.2.4 Carcinogenic Polycyclic Aromatic Hydrocarbons

Concentrations of cPAHs were only detected in soil samples B-3-25:7.5 and B-3-25:11.5. The cPAHs concentrations in these samples did not exceed the CUL for total cPAHs toxicity equivalency factors (TEFs) calculated under WAC 173-340-708(e) in accordance with Table 708-2 (in WAC 173-340-900).

3.2.5 Extractable Petroleum Hydrocarbons

Concentrations of EPH fractions were detected in soil samples B-1-25:7, B-3-25:7.5, B-3-25:11, and B-5-25:6.3. Sample B-3-25:7.5 contained a total EPH concentration (2,480.30 mg/kg) that exceeds the MTCA Method A Industrial CUL of 2,000 mg/kg. Concentrations of total EPH fractions in the other three soil samples were all significantly less than the MTCA Method A Industrial CUL.

3.2.6 Volatile Petroleum Hydrocarbons

Concentrations of VPH fractions were detected in soil samples B-3-25:7.5 and B-3-25:11. Sample B-3-25:7.5 contained a total VPH concentration (229 mg/kg) that exceeds the MTCA Method A Industrial CUL of 30 mg/kg. The total VPH concentration detected in sample B-3-25:11 was less than the MTCA Method A Industrial CUL of 30 mg/kg.

3.3 Groundwater Analytical Results

Laboratory analytical results for groundwater sample MW-OWS-4 are presented in **Table 3**. Analytical results were compared against applicable MTCA Method A, MTCA Method C (cancer) and MTCA Method C (non-cancer) groundwater CULs.

Specific analytes that were detected during analyses from these soil samples are shown in bold font in **Table 3**. Any analyte concentration that exceeded an applicable CUL for a groundwater sample is shaded gray. Copies of the laboratory analytical reports are provided in Appendix B. A summary of findings for the groundwater analytical testing is provided below.

Analytical results were compared against applicable MTCA Method A CULs. Copies of the laboratory analytical reports are provided in **Appendix B**. A summary of groundwater analytical results is provided below.

3.3.1 Total Petroleum Hydrocarbons – Gasoline-Range Organics

Gasoline-range organics (GRO) analyzed by Northwest Total Petroleum Hydrocarbons as Gasoline Extended (NWTPH-Gx) were detected in groundwater sample MW-OWS-4 at a concentration of 480 micrograms per liter (µg/L). This result is less than the MTCA Method A Groundwater CUL for GRO of 800 µg/L.

3.3.2 Total Petroleum Hydrocarbons – Diesel-Range Organics and Residual-Range Organics

Diesel-range organics (DRO) analyzed by NWTPH as Diesel Extended (NWTPH-Dx) were detected in groundwater sample MW-OWS-4 at a concentration of 2,330 µg/L. Residual-range organics (RRO) were not detected in this sample at a concentration of <500 µg/L. The combined DRO+RRO analytical result of 2,580 µg/L exceeds the MTCA Method A Groundwater CUL of 500 µg/L.

3.3.3 Inorganic Constituents

Concentrations of inorganic constituents (arsenic, cadmium, chromium III, chromium VI, lead, mercury, nickel, and zinc) were not detected in groundwater sample MW-OWS-4 or the QA/QC duplicate. The detection limit for arsenic, 10 µg/L exceeded the Method A and both Method C groundwater CULs of 5, 0.027, and 2.1 µg/L, respectively.

3.3.4 Volatile Organic Compounds

Concentrations of four VOCs were detected in groundwater sample MW-OWS-4 (isopropylbenzene, n-butylbenzene, n-propylbenzene, and sec-butylbenzene). None of these VOC detections exceeded applicable Method C groundwater CULs.

3.3.5 Semivolatile Organic Compounds

Six SVOCs were detected in groundwater sample MW-OWS-4 (1-methylnaphthalene, acenaphthene, fluorene, naphthalene, phenanthrene, and pyrene). Only the concentration of 1−methylnapthalene (56.6 µg/L) exceeded the Method C (cancer) groundwater CUL of 8.6 µg/L.

3.3.6 Carcinogenic Polycyclic Aromatic Hydrocarbons

Concentrations of cPAHs were not detected in groundwater sample MW-OWS-4 or the QA/QC duplicate.

3.4 Groundwater Analytical QA/QC Review

There were no factors identified that may have compromised the quality or validity of the field sampling or laboratory analytical results. All appropriate holding times were met, and all laboratory QA/QC results were within acceptable limits. Any other conditions that potentially affected the sample analyses or individual sample reporting limits are described in the laboratory analytical report Case Narrative and Qualifiers in **Appendix B**.

A blind duplicate groundwater sample (DUP-1) was also analyzed for the same parameters as the MW-OWS-4 sample. TRC's calculation of the relative percent difference (RPD) between detected analyte concentrations in the MW-OWS-4 and DUP-1 groundwater samples varied depending on the analytical method being used. Only analytical results where both the MW-OWS-4 and DUP-1 samples had datable concentrations reported were used for reviewing RPD. The following RPD results were noted:

- For GRO and DRO analyses the RPD ranged from 9.3 to14.9 percent between the MW-OWS-4 and DUP-1 samples, which is within the generally acceptable limit of less than or equal to 20 percent.

- For VOC analyses the RPD ranged from 37.7 to 43.3 percent among the MW-OWS-4 and DUP-1 samples, which falls outside of the acceptable limit of less than or equal to 20 percent. However, this result might be influenced by the very few numbers of VOCs detected in both MW-OWS-4 and DUP-1 analyses. The VOC results were also less than the CULs, so the smaller variance in the low concentrations reported might more easily skew the percentage range.

- For SVOC analyses the RPD ranged from 13.9 to 31.4 percent among the MW-OWS-4 and DUP-1 samples, which falls above the acceptable limit of less than or equal to 20 percent. This RPD might also be influenced because of the few SVOCs detected. The reportable SVOC results consisted of six analyte detections, mostly concentrations less than the CULs. Only one SVOC analyte (1-Methylnaphthalene) detection exceeded a CUL. This MW-OWS-4 and DUP-1 analyte result had the 13.9 percent RPD.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Soil Assessment Results

Except for boring B-3-25, the results from this investigation did not identify obvious field evidence of COC impacts to soil in boring locations explored to a maximum total depth of 15 feet bgs (**Figures 3A** and **3B**).

Soil samples B-1-25:7, B-2-25:7.2, B-4-25:7:14, B-5-25:6.3, B-6-25:7.8, B-7-25:7.8, B-8-25:7, B-9-25:7 and B-10-25:7 contained concentrations of arsenic that exceed the MTCA Method C Soil CUL for Direct Contact (Cancer). The exposure scenario for this CUL assumes regular ingestion of a dose of 50 milligrams (mg) of soil containing arsenic at a concentration exceeding the CUL and an exposure duration of 20 years. This is not a reasonably likely exposure pathway at the refinery, because the area where these samples were collected is at depth, covered by pavement or other surfacing, and is within the refinery facility with multiple structures, storage tanks, and piping. It is within a secure area where all work activities require safety plans and protocols and are controlled by refinery operations. The detected arsenic concentrations in these soil samples also fall within the range of background concentrations of arsenic in the Puget Sound region and are less than the MTCA Method A Industrial CUL for arsenic.

Field evidence of COC impacts was noted in boring B-3-25, which due to access limitations was advanced with a stainless-steel hand auger. While advancing this boring to collect the soil sample just below the OWS depth, wet soil was encountered from 5 to 7.5 feet bgs that appeared to have an oily sheen and a petroleum odor. Soil sample B-3-25:7.5 from this location exceeded MTCA Method A Industrial CULs for benzene, naphthalene, combined VPH fractions (compared to total GRO), and combined EPH fractions (compared to total DRO+RRO).

A deeper soil sample collected at 11.5 feet bgs in B-3-25 (B-3-25:11.5) encountered denser and drier soils. Analysis of sample B-3-25:11.5 did not detect any COC concentrations that exceed applicable MTCA Method A Industrial or Method C CULs. This sample provides vertical delineation of the COC impacts in soil detected at 7.5 feet bgs in boring B-3-25.

The detection of benzene in soil sample B-3-25:7.5 at a concentration of 0.0561 mg/kg slightly exceeds the MTCA Method A Soil CUL for Industrial Properties (0.03 mg/kg). The detections of naphthalene at a concentration of 6.29 mg/kg, GRO at a concentration of 229 mg/kg, and DRO+RRO at a concentration of 2,580 mg/kg also exceed the MTCA Method A Soil CUL for Industrial Properties of 30 mg/kg and 2,000 mg/kg, respectively. Because the Method A Soil CULs are based on protection of groundwater, exceedance of these CULs in soil sample BH-3-25:7.5 indicates assessment of groundwater near this location is required per Section 3.4 of the IRP and AO Section VII.A(8) (Phillips 66 2022). Lateral delineation of soil impacts in the vicinity of boring B-3-25 is also required in accordance with Ecology's "Guidance for Remediation of Petroleum Contaminated Sites" (Ecology 2016).

4.2 Groundwater Assessment Results

The November 2025 quarterly groundwater sample from monitoring well MW-OWS-4 contained detections of several VOC compounds, several SVOC compounds, and GRO that were all less than the MTCA Method A or Method C groundwater CULs. The concentration of DRO+RRO in

groundwater (2,580 µg/L) exceeds the MTCA Method A Groundwater CUL of 500 µg/L. The concentration of SVOC 1−methylnapthalene (56.6 µg/L) exceeds the Method C Groundwater CUL (Cancer) of 8.6 µg/L.

Compared to the initial MW-OWS-4 groundwater sampling event in August 2025, the concentrations of GRO, DRO+RRO, VOCs, and most of the detected SVOCs increased in November 2025. However, none of the inorganic constituents detected during the August 2025 sampling event were detected in the November sampling event. This may be due to decreased turbidity in the groundwater since the initial sampling event. The specific VOC and SVOC analytes detected in groundwater have remained relatively consistent across both sampling events. The groundwater elevation difference between the two sampling events was only 0.05 foot, so that variance is unlikely to be related to the increased concentrations. TRC recommends continued quarterly sampling of monitoring well MW-OWS-4 for two additional quarters. The next sampling event is anticipated to occur in first quarter of 2026 (February 2026) followed by the second quarter of 2026 (May 2026). The additional monitoring is recommended to identify any trends in COC concentrations.

5.0 LIMITATIONS

To the extent that preparation of this report has required the application of best professional judgment and the application of scientific principles, certain results of this work have been based on subjective interpretation. TRC makes no warranties express or implied, including and without limitation, warranties as to merchantability or fitness for a particular purpose. The information provided in this report is not to be construed as legal advice.

This report was prepared solely for Phillips 66 Ferndale Refinery, and the contents herein may not be used or relied upon by any other person without the express written consent and authorization of TRC.

6.0 REFERENCES

Phillips 66. 2022. *Investigation and Response Plan, SWMU 14 – Oily Water Sewer, Phillips 66 Ferndale Refinery*, 11 January.

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Tables

Table 2
Soil Analytical Results
Phase III Soil and Groundwater Investigation Report
Phillips 66 Ferndale Refinery

														Cleanup Levels		
	Sample ID	**B-1-25:7**	**B-2-25:7.2**	**B-3-25:7.5**	**B-3-25:11.5**	**B-4-25:7**	**B-5-25:6.3**	**B-6-25:7.8**	**B-7-25:7.8**	**B-8-25:7**	**B-9-25:7**	**B-10-25:7**	**B-11-25:13**	**MTCA Method A Soil Cleanup Level Industrial Properties[a]**	**MTCA Method C Soil Cleanup Level Direct Contact (Cancer)[b]**	**MTCA Method C Soil Cleanup Level Direct Contact (Noncancer)[b]**
	Sample Depth (feet)	**7**	**7.2**	**7.5**	**11.5**	**7**	**6.3**	**7.8**	**7.8**	**7**	**7**	**7**	**13**			
	Sample Date	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**			
Metals[c]	Arsenic	**4.56**	**5.89**	<2.28	**3.66**	**5.25**	**5.59**	**5.86**	**7.01**	**4.97**	**5.44**	**5.81**	**3.6**	**20**	**4.1**	**210**
	Cadmium	<0.608	<0.616	<0.569	<0.583	<0.594	<0.590	<0.587	<0.589	<0.557	<0.576	<0.617	<0.603	**2**	**NVE**	**3,500**
	Chromium[d]	**38.5**	**51.3**	**12.2**	**27.7**	**38.8**	**31.8**	**44.1**	**40.5**	**37.6**	**37.9**	**41.3**	**74.4**	**NA[m]**	**NA[m]**	**NA[m]**
	Chromium (III)[e]	**38.5**	**51.3**	**12.2**	**27.7**	**38.8**	**31.8**	**44.1**	**40.5**	**37.6**	**37.9**	**41.3**	**72.2**	**2,000**	**NVE**	**5,300,000**
	Chromium, hexavalent[f]	<2.43	<2.47	<2.28	<2.33	<2.38	<2.36	<2.35	<2.35	<2.23	<2.31	<2.47	<2.41	**19**	**820**	**3,200**
	Lead	**4.58**	**5.28**	**3.07**	**2.64**	**5.17**	**3.7**	**4.16**	**5.22**	**4.41**	**4.57**	**4.69**	**3.38**	**1,000**	**NVE**	**NVE**
	Mercury[g]	<0.0487	<0.0493	<0.0455	<0.0466	<0.0475	<0.0472	<0.0469	**0.108**	<0.0446	<0.0461	<0.0493	**0.0934**	**2**	**NVE**	**NVE**
	Nickel	**32.8**	**43.2**	**9.89**	**21.1**	**32.9**	**31.6**	**36**	**41.6**	**32.2**	**36.4**	**38.7**	**26.9**	**NVE**	**NVE**	**70,000**
	Zinc	**48.8**	**61.3**	**20.7**	**32.8**	**48.7**	**41.6**	**48.9**	**54.6**	**55.3**	**52.8**	**55**	**31.2**	**NVE**	**NVE**	**1,100,000**
VOCs[h]	1,1,1,2-Tetrachloroethane	<0.00373	<0.00366	<0.133	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**5,000**	**110,000**
	1,1,1-Trichloroethane	<0.00373	<0.00366	<0.133 J3	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**2**	**NVE**	**7,000,000**
	1,1,2,2-Tetrachloroethane	<0.00373 C3	<0.00366 C3	<0.133 C3 J3	<0.00347 C3	<0.00359 C3	<0.00356 C3	<0.00350 C3	<0.00354 C3	<0.00319 C3	<0.00341 C3	<0.00391 C3	<0.00363 C3	**NVE**	**660**	**70,000**
	1,1,2-Trichloroethane	<0.00373	<0.00366	<0.133	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**2,300**	**14,000**
	1,1-Dichloroethane	<0.00373	<0.00366	<0.133 J3	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**23,000**	**700,000**
	1,1-Dichloroethene	<0.00373	<0.00366	<0.133 J3	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**NVE**	**180,000**
	1,1-Dichloropropene	<0.00746	<0.00733	<0.267 J3	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**NVE**
	1,2,3-Trichlorobenzene	<0.0186	<0.0183 C3	<0.667 C3	<0.0173	<0.0180 C3	<0.0178 C3	<0.0175 C3	<0.0177 C3	<0.0159 C3	<0.0171 C3	<0.0196 C3	<0.0182	**NVE**	**NVE**	**2,800**
	1,2,3-Trichloropropane	<0.0186 C3	<0.0183	<0.667	<0.0173 C3	<0.0180	<0.0178	<0.0175	<0.0177	<0.0159	<0.0171	<0.0196	<0.0182 C3	**NVE**	**4.4**	**14,000**
	1,2,3-Trimethylbenzene	<0.00746	<0.00733	**1.3**	**0.0177**	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**35,000**
	1,2,4-Trichlorobenzene	<0.0186	<0.0183	<0.667	<0.0173	<0.0180	<0.0178	<0.0175	<0.0177	<0.0159	<0.0171	<0.0196	<0.0182	**NVE**	**4,500**	**35,000**
	1,2,4-Trimethylbenzene	<0.00746	<0.00733	**2.96**	**0.0219**	<0.00719	**0.0654**	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**35,000**
	1,2-Dibromo-3-chloropropane	<0.0373	<0.0366	<1.33	<0.0347	<0.0359	<0.0356	<0.0350	<0.0354	<0.0319	<0.0341	<0.0391	<0.0363	**NVE**	**160**	**700**
	1,2-Dibromoethane	<0.00373	<0.00366	<0.133	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**0.005**	**66**	**32,000**
	1,2-Dichlorobenzene	<0.00746	<0.00733	<0.267	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**320,000**
	1,2-Dichloroethane	<0.00373	<0.00366	<0.133	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**1,400**	**21,000**
	1,2-Dichloropropane	<0.00746	<0.00733	<0.267	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**3,500**	**140,000**
	1,3,5-Trimethylbenzene	<0.00746	<0.00733	**0.754 J3**	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**35,000**
	1,3-Dichlorobenzene	<0.00746	<0.00733	<0.267	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**NVE**
	1,3-Dichloropropane	<0.00746	<0.00733	<0.267	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**70,000**
	1,4-Dichlorobenzene	<0.00746	<0.00733 C3	<0.267 C3	<0.00693	<0.00719 C3	<0.00713 C3	<0.00699 C3	<0.00707 C3	<0.00638 C3	<0.00683 C3	<0.00782 C3	<0.00726	**NVE**	**24,000**	**250,000**
	2,2-Dichloropropane	<0.00373	<0.00366	<0.133 J3	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**NVE**	**NVE**
	2-Butanone	<0.149	<0.147	<5.34 J5	<0.139	**0.181 C5**	<0.143	<0.140	<0.141	<0.128	<0.137	<0.156	<0.145	**NVE**	**NVE**	**2,100,000**
	2-Chlorotoluene	<0.00373	<0.00366	<0.133 J3	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**NVE**	**70,000**
	4-Chlorotoluene	<0.00746	<0.00733	<0.267 J3	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**70,000**
	4-Isopropyltoluene	<0.00746	<0.00733	**0.296**	**0.00865**	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**14,000**
	4-Methyl-2-pentanone	<0.0373	<0.0366	**4.63**	<0.0347	<0.0359	<0.0356	<0.0350	<0.0354	<0.0319	<0.0341	<0.0391	<0.0363	**NVE**	**NVE**	**280,000**
	Acetone	<0.149	<0.147	<5.34 J3	<0.139	<0.144	<0.143	<0.140	<0.141	<0.128	**0.55**	<0.156	<0.145	**NVE**	**NVE**	**3,200,000**
	Acrylonitrile	<0.0186	<0.0183	<0.667	<0.0173	<0.0180	<0.0178	<0.0175	<0.0177	<0.0159	<0.0171	<0.0196	<0.0182	**NVE**	**240**	**3,500**
	Benzene	<0.00149	<0.00147	**0.0561**	**0.00157**	<0.00144	<0.00143	<0.00140	<0.00141	<0.00128	<0.00137	<0.00156	<0.00145	**0.03**	**2,400**	**14,000**
	Bromobenzene	<0.0186 C3	<0.0183	<0.667 J3	<0.0173 C3	<0.0180	<0.0178	<0.0175	<0.0177	<0.0159	<0.0171	<0.0196	<0.0182 C3	**NVE**	**NVE**	**28,000**
	Bromodichloromethane	<0.00373	<0.00366	<0.133	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**2,100**	**70,000**
	Bromoform	<0.0373	<0.0366	<1.33 J3	<0.0347	<0.0359	<0.0356	<0.0350	<0.0354	<0.0319	<0.0341	<0.0391	<0.0363	**NVE**	**17,000**	**70,000**

Table 2
Soil Analytical Results
Phase III Soil and Groundwater Investigation Report
Phillips 66 Ferndale Refinery

														Cleanup Levels		
	Sample ID	**B-1-25:7**	**B-2-25:7.2**	**B-3-25:7.5**	**B-3-25:11.5**	**B-4-25:7**	**B-5-25:6.3**	**B-6-25:7.8**	**B-7-25:7.8**	**B-8-25:7**	**B-9-25:7**	**B-10-25:7**	**B-11-25:13**	**MTCA Method A Soil Cleanup Level Industrial Properties[a]**	**MTCA Method C Soil Cleanup Level Direct Contact (Cancer)[b]**	**MTCA Method C Soil Cleanup Level Direct Contact (Noncancer)[b]**
	Sample Depth (feet)	**7**	**7.2**	**7.5**	**11.5**	**7**	**6.3**	**7.8**	**7.8**	**7**	**7**	**7**	**13**			
	Sample Date	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**			
VOCs[h]	Bromomethane	<0.0186	<0.0183 C3	<0.667 C3 J3 J	<0.0173	<0.0180 C3	<0.0178 C3	<0.0175 C3	<0.0177 C3	<0.0159 C3	<0.0171 C3	<0.0196 C3	<0.0182	**NVE**	**NVE**	**4,900**
	Carbon tetrachloride	<0.00746	<0.00733	<0.267 J3	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**1,900**	**14,000**
	Chlorobenzene	<0.00373	<0.00366	<0.133	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**NVE**	**70,000**
	Chloroethane	<0.0149	<0.0147 C3	<0.534 C3 J3 J	<0.0139	<0.0144 C3	<0.0143 C3	<0.0140 C3	<0.0141 C3	<0.0128 C3	<0.0137 C3	<0.0156 C3	<0.0145	**NVE**	**NVE**	**NVE**
	Chloroform	<0.00373	<0.00366	<0.133 J3	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**4,200**	**35,000**
	Chloromethane	<0.0186	<0.0183	<0.667	<0.0173	<0.0180	<0.0178	<0.0175	<0.0177	<0.0159	<0.0171	<0.0196	<0.0182	**NVE**	**NVE**	**NVE**
	cis-1,2-Dichloroethene	<0.00373	<0.00366	<0.133 J3	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**NVE**	**7,000**
	cis-1,3-Dichloropropene	<0.00373	<0.00366	<0.133	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**NVE**	**NVE**
	Chlorodibromomethane	<0.00373	<0.00366	<0.133	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**1,600**	**70,000**
	Dibromomethane	<0.00746	<0.00733	<0.267	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**35,000**
	Dichlorodifluoromethane (Freon 12)	<0.00746	<0.00733	<0.267	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**700,000**
	Di-isopropyl ether	<0.00149	<0.00147	<0.0534 J3	<0.00139	<0.00144	<0.00143	<0.00140	<0.00141	<0.00128	<0.00137	<0.00156	<0.00145	**NVE**	**NVE**	**NVE**
	Ethylbenzene	<0.00373	<0.00366	**1.08**	**0.038**	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**6**	**NVE**	**350,000**
	Hexachloro-1,3-butadiene	<0.0373	<0.0366	<1.33	<0.0347	<0.0359	<0.0356	<0.0350	<0.0354	<0.0319	<0.0341	<0.0391	<0.0363	**NVE**	**1,700**	**3,500**
	Isopropylbenzene (Cumene)	**0.0177**	<0.00366	**0.661 J3**	**0.135**	**0.0932**	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**NVE**	**NVE**	**350,000**
	Methyl tert-butyl ether (MTBE)	<0.00149	<0.00147	<0.0534 J3	<0.00139	<0.00144	<0.00143	<0.00140	<0.00141	<0.00128	<0.00137	<0.00156	<0.00145	**0.1**	**73,000**	**NVE**
	Methylene chloride	<0.0373	<0.0366	<1.33 J3	<0.0347	<0.0359	<0.0356	<0.0350	<0.0354	<0.0319	<0.0341	<0.0391	<0.0363	**0.02**	**66,000**	**21,000**
	Naphthalene	**0.026**	**0.0331**	**6.29**	**0.737**	<0.0180	<0.0178	<0.0175	<0.0177	<0.0159	<0.0171	<0.0196	<0.0182	**5**	**NVE**	**70,000**
	n-Butylbenzene	**0.0236**	<0.0183	**0.912**	**0.155**	**0.0972**	**0.0388**	<0.0175	<0.0177	<0.0159	<0.0171	<0.0196	<0.0182	**NVE**	**NVE**	**180,000**
	n-Propylbenzene	**0.0395**	<0.00733	**1.83 J3**	**0.304**	**0.155**	**0.00714**	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**350,000**
	sec-Butylbenzene	**0.0195**	**0.0259**	**0.798**	**0.121**	**0.0518**	<0.0178	<0.0175	<0.0177	<0.0159	<0.0171	<0.0196	<0.0182	**NVE**	**NVE**	**350,000**
	Styrene	<0.0186	<0.0183	**12.0 J3 J5**	**0.075**	<0.0180	<0.0178	<0.0175	<0.0177	<0.0159	<0.0171	<0.0196	<0.0182	**NVE**	**NVE**	**700,000**
	tert-Butylbenzene	<0.00746	<0.00733	<0.267	**0.00951**	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**350,000**
	Tetrachloroethene	<0.00373	<0.00366	<0.133	<0.00347	<0.00359	<0.00356	<0.00350	<0.00354	<0.00319	<0.00341	<0.00391	<0.00363	**0.05**	**63,000**	**21,000**
	Toluene	<0.00746	<0.00733	**0.478**	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**7**	**NVE**	**280,000**
	trans-1,2-Dichloroethene	<0.00746	<0.00733	<0.267 J3	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**70,000**
	trans-1,3-Dichloropropene	<0.00746	<0.00733	<0.267	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**NVE**
	Trichloroethene	<0.00149	<0.00147	<0.0534	<0.00139	<0.00144	<0.00143	<0.00140	<0.00141	<0.00128	<0.00137	<0.00156	<0.00145	**0.03**	**2,900**	**1,800**
	Trichlorofluoromethane (Freon 11)	<0.00597	<0.00586	<0.214 J3 J5	<0.00555	<0.00575	<0.00570	<0.00559	<0.00566	<0.00510	<0.00546	<0.00626	<0.00581	**NVE**	**NVE**	**1,100,000**
	Trichlorotrifluoroethane (Freon 113)	<0.00746	<0.00733	<0.267 J3	<0.00693	<0.00719	<0.00713	<0.00699	<0.00707	<0.00638	<0.00683	<0.00782	<0.00726	**NVE**	**NVE**	**110,000,000**
	Vinyl chloride	<0.00373	<0.00366 C3	<0.133 C3 J3 J	<0.00347	<0.00359 C3	<0.00356 C3	<0.00350 C3	<0.00354 C3	<0.00319 C3	<0.00341 C3	<0.00391 C3	<0.00363	**NVE**	**88**	**11,000**
	Xylenes, total	<0.00970	<0.00953	**1.95**	**0.0211**	<0.00935	<0.00927	<0.00909	<0.00919	<0.00829	<0.00887	<0.0102	<0.00944	**9**	**NVE**	**700,000**
SVOCs[i]	1-Methylnaphthalene	**0.207**	**0.0256**	**33.8**	**0.801**	<0.0238	**0.0658**	<0.0235	<0.0235	<0.0223	<0.0231	<0.0247	<0.0241	**NVE**	**2,600**	**250,000**
	2-Chloronaphthalene	<0.0243	<0.0247	<0.228	<0.0233	<0.0238	<0.0236	<0.0235	<0.0235	<0.0223	<0.0231	<0.0247	<0.0241	**NVE**	**NVE**	**280,000**
	2-Methylnaphthalene	**0.343**	**0.0398**	**27.8**	**0.907**	<0.0238	**0.0243**	<0.0235	<0.0235	<0.0223	<0.0231	<0.0247	<0.0241	**NVE**	**NVE**	**14,000**
	Acenaphthene	**0.0208**	<0.00740	**3.31**	**0.0803**	<0.00713	**0.0391**	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723	**NVE**	**NVE**	**210,000**
	Acenaphthylene	<0.00730	<0.00740	**0.836**	**0.016**	<0.00713	**0.0099**	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723	**NVE**	**NVE**	**NVE**
	Anthracene	<0.00730	<0.00740	**1.17**	<0.00700	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723	**NVE**	**NVE**	**1,100,000**
	Benzo(g,h,i)perylene	<0.00730	<0.00740	**0.263**	**0.0139**	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723	**NVE**	**NVE**	**NVE**
	Fluoranthene	<0.00730	<0.00740	**0.867**	**0.0284**	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723	**NVE**	**NVE**	**140,000**
	Fluorene	**0.0266**	<0.00740	**4.23**	**0.11**	<0.00713	**0.0264**	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723	**NVE**	**NVE**	**140,000**
	Naphthalene	<0.0243	<0.0247	**5.59**	**0.166**	<0.0238	<0.0236	<0.0235	<0.0235	<0.0223	<0.0231	<0.0247	<0.0241	**5**	**NVE**	**70,000**

Table 2
Soil Analytical Results
Phase III Soil and Groundwater Investigation Report
Phillips 66 Ferndale Refinery

														Cleanup Levels		
	Sample ID	**B-1-25:7**	**B-2-25:7.2**	**B-3-25:7.5**	**B-3-25:11.5**	**B-4-25:7**	**B-5-25:6.3**	**B-6-25:7.8**	**B-7-25:7.8**	**B-8-25:7**	**B-9-25:7**	**B-10-25:7**	**B-11-25:13**	**MTCA Method A Soil Cleanup Level Industrial Properties[a]**	**MTCA Method C Soil Cleanup Level Direct Contact (Cancer)[b]**	**MTCA Method C Soil Cleanup Level Direct Contact (Noncancer)[b]**
	Sample Depth (feet)	**7**	**7.2**	**7.5**	**11.5**	**7**	**6.3**	**7.8**	**7.8**	**7**	**7**	**7**	**13**			
	Sample Date	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**	**11/6/2025**			
SVOCs[i]	Phenanthrene	**0.0858**	**0.0134**	**17.9**	**0.45**	**0.012**	**0.0878**	<0.00704	**0.00882**	<0.00669	<0.00692	<0.00740	<0.00723	**NVE**	**NVE**	**NVE**
	Pyrene	**0.0208**	<0.00740	**5.26**	**0.136**	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723	**NVE**	**NVE**	**110,000**
cPAHs[i]	Benzo(a)pyrene	<0.00730	<0.00740	**0.749**	**0.0342**	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723	**See Cleanup Level for TEF-Adjusted Total cPAHs**	**See Cleanup Level for TEF-Adjusted Total cPAHs**	**See Cleanup Level for TEF-Adjusted Total cPAHs**
	Benzo(a)anthracene	<0.00730	<0.00740	**0.983**	**0.0554**	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723			
	Benzo(b)fluoranthene	<0.00730	<0.00740	**0.311**	**0.016**	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723			
	Benzo(k)fluoranthene	<0.00730	<0.00740	<0.0683	<0.00700	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723			
	Chrysene	<0.00730	<0.00740	**1.56**	**0.0602**	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723			
	Dibenz(a,h)anthracene	<0.00730	<0.00740	**0.133**	<0.00700	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723			
	Indeno(1,2,3-cd)pyrene	<0.00730	<0.00740	**0.0973**	<0.00700	<0.00713	<0.00708	<0.00704	<0.00706	<0.00669	<0.00692	<0.00740	<0.00723			
TEF-Adjusted Total cPAHs[j]		ND	ND	**0.9204**	**0.0430**	ND	ND	ND	ND	ND	ND	ND	ND	**2**	**130**	**1,100**
EPH[k]	C10-C12 Aliphatics	<6.08 J4	<6.16 J4	**97.3 J4**	<5.83 J4	<17.8 J4	<5.9 J4	<5.87 J4	<5.89 J4	<16.2 J4	<17.3 J4	<18.5 J4	<6.03 J4	**2,000**	**NVE**	**NVE**
	C12-C16 Aliphatics	<6.08 J4	<6.16 J4	**618 J4**	**28.8 J4**	<17.8 J4	**7.3 J4**	<5.87 J4	<5.89 J4	<16.2 J4	<17.3 J4	<18.5 J4	<6.03 J4			
	C16-C21 Aliphatics	<6.08 J4	<6.16 J4	<85.3 J4	**34.7 J4**	<17.8 J4	**7.37 J4**	<5.87 J4	<5.89 J4	<16.2 J4	<17.3 J4	<18.5 J4	<6.03 J4			
	C21-C34 Aliphatics	<6.08 J4	<6.16 J4	**369 J4**	**39.9 J4**	<17.8	<5.9 J4	<5.87 J4	<5.89 J4	<16.2	<17.3	<18.5	<6.03 J4			
	C10-C12 Aromatics	<6.08 J4	<6.16 J4	**37 J4**	<5.83 J4	<17.8 J4	<5.9	<5.87 J4	<5.89 J4	<16.2 J4	<17.3 J4	<18.5 J4	<6.03 J4			
	C12-C16 Aromatics	<6.08 J4	<6.16 J4	**303 J4**	**19 J4**	<17.8 J4	**22.8 J4**	<5.87 J4	<5.89 J4	<16.2 J4	<17.3 J4	<18.5 J4	<6.03 J4			
	C16-C21 Aromatics	**9.93 J4**	<6.16 J4	**731 J4**	**50.1 J4**	<17.8 J4	**53.6 J4**	<5.87 J4	<5.89 J4	<16.2 J4	<17.3 J4	<18.5 J4	<6.03 J4			
	C21-C34 Aromatics	<6.08 J4	<6.16 J4	**282 J4**	**50.4 J4**	<17.8 J4	<5.9	<5.87 J4	<5.89 J4	<16.2 J4	<17.3 J4	<18.5 J4	<6.03 J4			
VPH[l]	C5-C6 Aliphatics (Adjusted)	<7.45	<7.81	<66.4	<6.96	<7.19	<7.06	<6.97	<6.96	<6.27	<6.78	<7.67	<7.26	**30**	**NVE**	**NVE**
	C5-C6 Aliphatics (Unadjusted)	<7.45	<7.81	<66.4	<6.96	<7.19	<7.06	<6.97	<6.96	<6.27	<6.78	<7.67	<7.26			
	C6-C8 Aliphatics (Adjusted)	<7.45	<7.81	<66.4	<6.96	<7.19	<7.06	<6.97	<6.96	<6.27	<6.78	<7.67	<7.26			
	C6-C8 Aliphatics (Unadjusted)	<7.45	<7.81	<66.4	<6.96	<7.19	<7.06	<6.97	<6.96	<6.27	<6.78	<7.67	<7.26			
	C8-C10 Aliphatics (Adjusted)	<7.45	<7.81	**89.4**	<6.96	<7.19	<7.06	<6.97	<6.96	<6.27	<6.78	<7.67	<7.26			
	C8-C10 Aliphatics (Unadjusted)	<7.45	<7.81	**92.9**	**7.02**	<7.19	<7.06	<6.97	<6.96	<6.27	<6.78	<7.67	<7.26			
	C8-C10 Aromatics	<7.45	<7.81	**73.2**	<6.96	<7.19	<7.06	<6.97	<6.96	<6.27	<6.78	<7.67	<7.26			
Total Solids[m]	Total Solids (TS)	**82.2**	**81.1**	**87.9**	**85.8**	**84.1**	**84.7**	**85.2**	**84.9**	**89.8**	**86.7**	**81.1**	**83**	**NVE**	**NVE**	**NVE**

Notes:

Total solids presented in percent, all other results presented in milligrams/kilogram (mg/kg).

Bold Bold result exceeds the laboratory reporting limit.

Shaded result exceeds the applicable MTCA Method A or Method C cleanup level.

< Result is less than the laboratory reporting limit.

a Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Industrial Properties, Table 745-1, Washington Admir

b MTCA Method C Soil Cleanup Levels from Cleanup Levels and Risk Calculations (CLARC).

c Analyzed by EPA Method 6010D unless otherwise indicated.

d Total Chromium cleanup level assumes no verification of Hexavalent Chromium concentration performed.

e Chromium,Trivalent calculated by Pace Laboratories, Inc. = (Total Cr - Hexavalent Cr)

f Analyzed by Method 3060A/7196A.

g Analyzed by EPA Method 7471B.

h Analyzed by EPA Method 8260D.

i Analyzed by EPA Method 8270E SIM.

j Toxicity Equivalency Factors (TEFs) calculated under WAC 173-340-708(e) in accordance with Table 708-2 (in WAC 173-

k Analyzed by Method EPH.

l Analyzed by Method VPHWA.

m Analyzed by Method 2540 G-2011.

ND None of the analyzed compounds were detected at a concentration exceeding the laboratory reporting limit.

NVE No value established.

CCS Continuing Calibration Standard

Qualifiers:

C3 The reported concentration is an estimate. The CCS associated with this data responded low. Method sensitivity check is acceptable.

C5 The reported concentration is an estimate. The CCS associated with this data responded high. Data is likely to show a high bias concerning the result.

J The identification of the analyte is acceptable, the reported value is an estimate.

J3 The associated batch QC was outside the established quality control range for precision.

J4 The associated batch QC was outside the established quality control range for accuracy.

J5 The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Compounds:

VOCs Volatile organic compounds

SVOCs Semivolatile organic compounds

cPAHs Carcinogenic polycyclic aromatic hydrocarbons

EPH Extractable petroleum hydrocarbons

VPH Volatile petroleum hydrocarbons

Table 3
Groundwater Analytical Results
Phase III Soil and Groundwater Investigation Report
Phillips 66 Ferndale Refinery
3901 Unick Road, Ferndale, WA 98248

Analytical Results					Cleanup Levels		
	Sample ID	MW-OWS-4			MTCA Method A Groundwater Cleanup Levels[a]	MTCA Method C Groundwater Cleanup Levels (Cancer)[b]	MTCA Method C Groundwater Cleanup Levels (Noncancer)[b]
	Sample Date	08/19/2025	11/6/2025	11/6/2025 (Duplicate)			
TPH	Gasoline-Range Organics (GRO)[c]	**223**	**480**	**380**	**800**	**NVE**	**NVE**
	Diesel-Range Organics (DRO)[d]	**546**	**2,330**	**2,670**	**500**	**NVE**	**NVE**
	Residual-Range Organics (RRO)[d]	<250	<500	**327**	**500**	**NVE**	**NVE**
Metals[e]	Arsenic	<10.0	<10.0	<10.0	**5**	**0.027**	**2.1**
	Cadmium	**0.900 J**	<2.00	<2.00	**5**	**NVE**	**18**
	Chromium[f]	**11.4**	<10.0	<10.0	**50**	**NVE**	**NVE**
	Chromium (III)[g]	**11.4**	<0.500	<0.500	**NVE**	**NVE**	**53,000**
	Chromium, hexavalent[h]	<0.500	<0.500	<0.500	**NVE**	**5.5**	**32**
	Lead	**10.2**	<6.00	<6.00	**15**	**NVE**	**NVE**
	Mercury[i]	<0.200	<0.200	<0.200	**2**	**NVE**	**NVE**
	Nickel	**14.2**	<10.0	<10.0	**NVE**	**NVE**	**700**
	Zinc	**54.3**	<50.0	<50.0	**NVE**	**NVE**	**11,000**
VOCs[j]	1,1,1,2-Tetrachloroethane	<1.00	<1.00	<1.00	**NVE**	**17**	**530**
	1,1,1-Trichloroethane	<1.00	<1.00	<1.00	**200**	**NVE**	**35,000**
	1,1,2,2-Tetrachloroethane	<1.00	<1.00	<1.00	**NVE**	**2.2**	**350**
	1,1,2-Trichloroethane	<1.00	<1.00	<1.00	**NVE**	**7.7**	**70**
	1,1-Dichloroethane	<1.00	<1.00	<1.00	**NVE**	**77**	**3,500**
	1,1-Dichloroethene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**880**
	1,1-Dichloropropene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**NVE**
	1,2,3-Trichlorobenzene	<1.00 C3	<1.00	<1.00	**NVE**	**NVE**	**14**
	1,2,3-Trichloropropane	<2.50	<2.50	<2.50	**NVE**	**0.015**	**70**
	1,2,3-Trimethylbenzene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**180**
	1,2,4-Trichlorobenzene	<2.00 C3	<2.00	<2.00	**NVE**	**15**	**180**
	1,2,4-Trimethylbenzene	<2.00	<2.00	<2.00	**NVE**	**NVE**	**180**
	1,2-Dibromo-3-chloropropane	<5.00 C3	<5.00	<5.00	**NVE**	**0.55**	**3.5**
	1,2-Dibromoethane	<1.00	<1.00	<1.00	**0.01**	**0.22**	**160**
	1,2-Dichlorobenzene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**1,600**
	1,2-Dichloroethane	<1.00	<1.00	<1.00	**5**	**4.8**	**110**
	1,2-Dichloropropane	<1.00	<1.00	<1.00	**NVE**	**12**	**700**
	1,3,5-Trimethylbenzene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**180**
	1,3-Dichlorobenzene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**NVE**
	1,3-Dichloropropane	<1.00	<1.00	<1.00	**NVE**	**NVE**	**350**
	1,4-Dichlorobenzene	<1.00	<1.00	<1.00	**NVE**	**81**	**1,200**
	2,2-Dichloropropane	<1.00	<1.00	<1.00	**NVE**	**NVE**	**NVE**
	2-Butanone	<20.0	<20.0	<20.0	**NVE**	**NVE**	**11,000**
	2-Chlorotoluene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**350**
	4-Chlorotoluene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**350**
	4-Isopropyltoluene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**70**
	4-Methyl-2-pentanone	<20.0	<20.0	<20.0	**NVE**	**NVE**	**1,400**
	Acetone	<50.0	<50.0	<50.0	**NVE**	**NVE**	**16,000**
	Acrolein	<50.0 C3	<50.0	<50.0	**NVE**	**NVE**	**8.8**
	Acrylonitrile	<10.0	<10.0	<10.0	**NVE**	**0.81**	**18**
	Benzene	<1.00	<1.00	<1.00	**5**	**8**	**70**
	Bromobenzene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**140**
	Bromodichloromethane	<1.00	<1.00	<1.00	**NVE**	**7.1**	**350**
	Bromoform	<1.00	<1.00	<1.00	**NVE**	**55**	**350**
	Bromomethane	<5.00	<5.00	<5.00	**NVE**	**NVE**	**25**
	Carbon tetrachloride	<1.00	<1.00	<1.00	**NVE**	**6.3**	**70**
	Chlorobenzene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**350**
	Chloroethane	<5.00	<5.00	<5.00	**NVE**	**NVE**	**NVE**
	Chloroform	<5.00	<5.00	<5.00	**NVE**	**14**	**180**
	Chloromethane	<5.00	<5.00	<5.00	**NVE**	**NVE**	**NVE**
	cis-1,2-Dichloroethene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**35**
	cis-1,3-Dichloropropene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**NVE**
	Chlorodibromomethane	<1.00	<1.00	<1.00	**NVE**	**5.2**	**350**
	Dibromomethane	<1.00	<1.00	<1.00	**NVE**	**NVE**	**180**
	Dichlorodifluoromethane (Freon 12)	<5.00	<5.00 J4	<5.00 J4	**NVE**	**NVE**	**3,500**
	Di-isopropyl ether	<1.00	<1.00	<1.00	**NVE**	**NVE**	**NVE**
	Ethylbenzene	<1.00	<1.00	<1.00	**700**	**NVE**	**1,800**
	Hexachloro-1,3-butadiene	<2.00 C3	<2.00	<2.00	**NVE**	**5.6**	**18**
	Isopropylbenzene (Cumene)	**1.25**	**6.22**	**3.26**	**NVE**	**NVE**	**1,800**
	Methyl tert-butyl ether (MTBE)	<1.00	<1.00	<1.00	**20**	**240**	**NVE**
	Methylene chloride	<5.00	<5.00	<5.00	**5**	**220**	**110**
	Naphthalene	<5.00	<5.00	<5.00	**160**	**NVE**	**350**

Table 3
Groundwater Analytical Results
Phase III Soil and Groundwater Investigation Report
Phillips 66 Ferndale Refinery
3901 Unick Road, Ferndale, WA 98248

Analytical Results					Cleanup Levels		
	Sample ID	MW-OWS-4			MTCA Method A Groundwater Cleanup Levels[a]	MTCA Method C Groundwater Cleanup Levels (Cancer)[b]	MTCA Method C Groundwater Cleanup Levels (Noncancer)[b]
	Sample Date	08/19/2025	11/6/2025	11/6/2025 (Duplicate)			
VOCs[j]	n-Butylbenzene	**1.2**	**2.72**	<1.00	**NVE**	**NVE**	**880**
	n-Propylbenzene	**3.44**	**15.8**	**7.36**	**NVE**	**NVE**	**1,800**
	sec-Butylbenzene	**1.62**	**6.13**	**2.93**	**NVE**	**NVE**	**1,800**
	Styrene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**3,500**
	tert-Butylbenzene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**1,800**
	Tetrachloroethene	<1.00	<1.00	<1.00	**5**	**210**	**110**
	Toluene	<1.00	<1.00	<1.00	**1,000**	**NVE**	**1,400**
	trans-1,2-Dichloroethene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**350**
	trans-1,3-Dichloropropene	<1.00	<1.00	<1.00	**NVE**	**NVE**	**NVE**
	Trichloroethene	<1.00	<1.00	<1.00	**5**	**9.5**	**8.8**
	Trichlorofluoromethane (Freon 11)	<5.00	<5.00	<5.00	**NVE**	**NVE**	**5,300**
	Trichlorotrifluoroethane (Freon 113)	<1.00	<1.00	<1.00	**NVE**	**NVE**	**530,000**
	Vinyl chloride	<1.00	<1.00	<1.00	**0.2**	**0.29**	**53**
	Xylenes, total	<3.00	<3.00	<3.00	**1,000**	**NVE**	**3,500**
SVOCs[k]	1-Methylnaphthalene	**30.2**	**56.6**	**45.6**	**NVE**	**8.6**	**1,200**
	2-Chloronaphthalene	<1.00	<0.250	<0.250	**NVE**	**NVE**	**1,400**
	2-Methylnaphthalene	**3.9**	<0.250	<0.250	**NVE**	**NVE**	**70**
	Acenaphthene	**4.58**	**9.00**	**6.56**	**NVE**	**NVE**	**1,100**
	Acenaphthylene	<0.200	<0.0500	<0.0500	**NVE**	**NVE**	**NVE**
	Anthracene	**0.190 J**	<0.0500	<0.0500	**NVE**	**NVE**	**5,300**
	Benzo(g,h,i)perylene	<0.200	<0.0500	<0.0500	**NVE**	**NVE**	**NVE**
	Fluoranthene	<0.200	<0.0500	<0.0500	**NVE**	**NVE**	**1,400**
	Fluorene	**6.27**	**7.81**	**4.63**	**NVE**	**NVE**	**700**
	Naphthalene	<1.00	**2.1**	**1.45**	**160**	**NVE**	**350**
	Phenanthrene	**8.3**	**6.6**	**4.1**	**NVE**	**NVE**	**NVE**
	Pyrene	**0.223**	**0.0895**	**0.0641**	**NVE**	**NVE**	**530**
cPAHs[k]	Benzo(a)pyrene	<0.200	<0.0500	<0.0500	**See Cleanup Level for TEF-Adjusted Total cPAHs**	**See Cleanup Level for TEF-Adjusted Total cPAHs**	**See Cleanup Level for TEF-Adjusted Total cPAHs**
	Benzo(a)anthracene	<0.200	<0.0500	<0.0500			
	Benzo(b)fluoranthene	<0.200	<0.0500	<0.0500			
	Benzo(k)fluoranthene	<0.200	<0.0500	<0.0500			
	Chrysene	<0.200	<0.0500	<0.0500			
	Dibenz(a,h)anthracene	<0.200	<0.0500	<0.0500			
	Indeno(1,2,3-cd)pyrene	<0.200	<0.0500	<0.0500			
TEF-Adjusted Total cPAHs[l]		ND	ND	ND	**0.1**	**0.88**	**11**

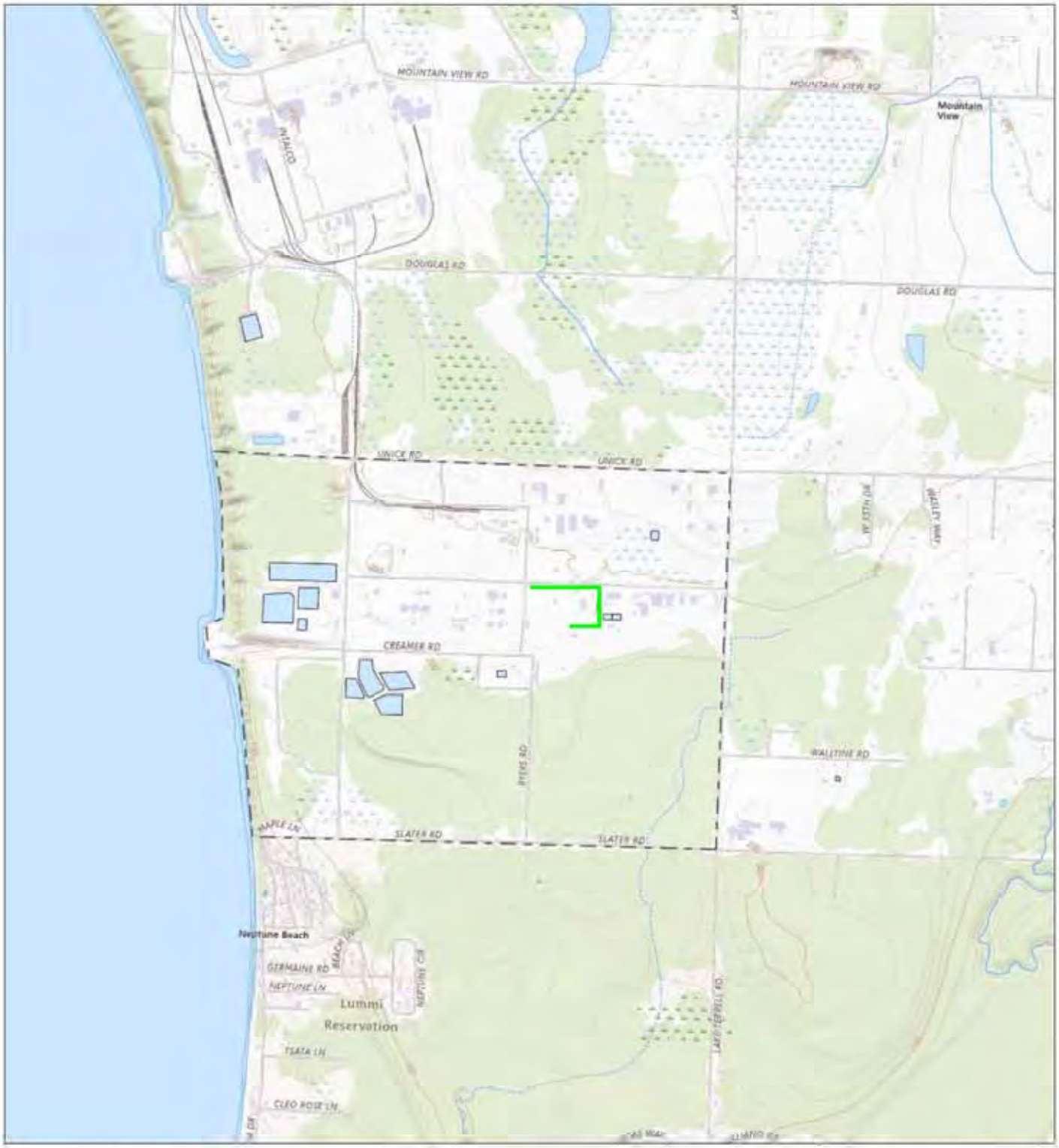
Notes:
All results presented in micrograms per liter (µg/L).

Bold Bold result exceeds the laboratory reporting limit.
Shaded result exceeds the applicable MTCA Method A or Method C cleanup level.
< Result is less than the laboratory reporting limit.
a Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1, Washington Administrative Code (WAC) 173-340-900, February 2025.
b MTCA Method C Groundwater Cleanup Levels from Cleanup Levels and Risk Calculations (CLARC).
c Analyzed by NWTPH-Gx.
d Analyzed by NWTPH-Dx.
e Analyzed by EPA Method 6010D unless otherwise indicated.
f Total Chromium (Cr) = Cr(III) + Cr(VI) concentration.
g Chromium,Trivalent calculated by Pace Laboratories, Inc. = (Total Cr - Hexavalent Cr)
h Analyzed by Method 3500Cr C-2011.
i Analyzed by EPA Method 7470A.
j Analyzed by EPA Method 8260D.
k Analyzed by EPA Method 8270E SIM.
l Toxicity Equivalency Factors (TEFs) calculated under WAC 173-340-708(e) in accordance with Table 708-2 (in WAC 173-340-900).
ND None of the analyzed compounds were detected at a concentration exceeding the laboratory reporting limit.
NVE No value established.

Qualifiers:
C3 The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J The identification of the analyte is acceptable, the reported value is an estimate.
J4 The associated batch QC was outside the established quality control range for accuracy.

Compounds:
VOCs Volatile organic compounds
SVOCs Semivolatile organic compounds
cPAHs Carcinogenic polycyclic aromatic hydrocarbons

Figures



PHASE III OWS PROJECT AREA

– – – APPOXIMATE PROPERTY BOUNDARY

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'



PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

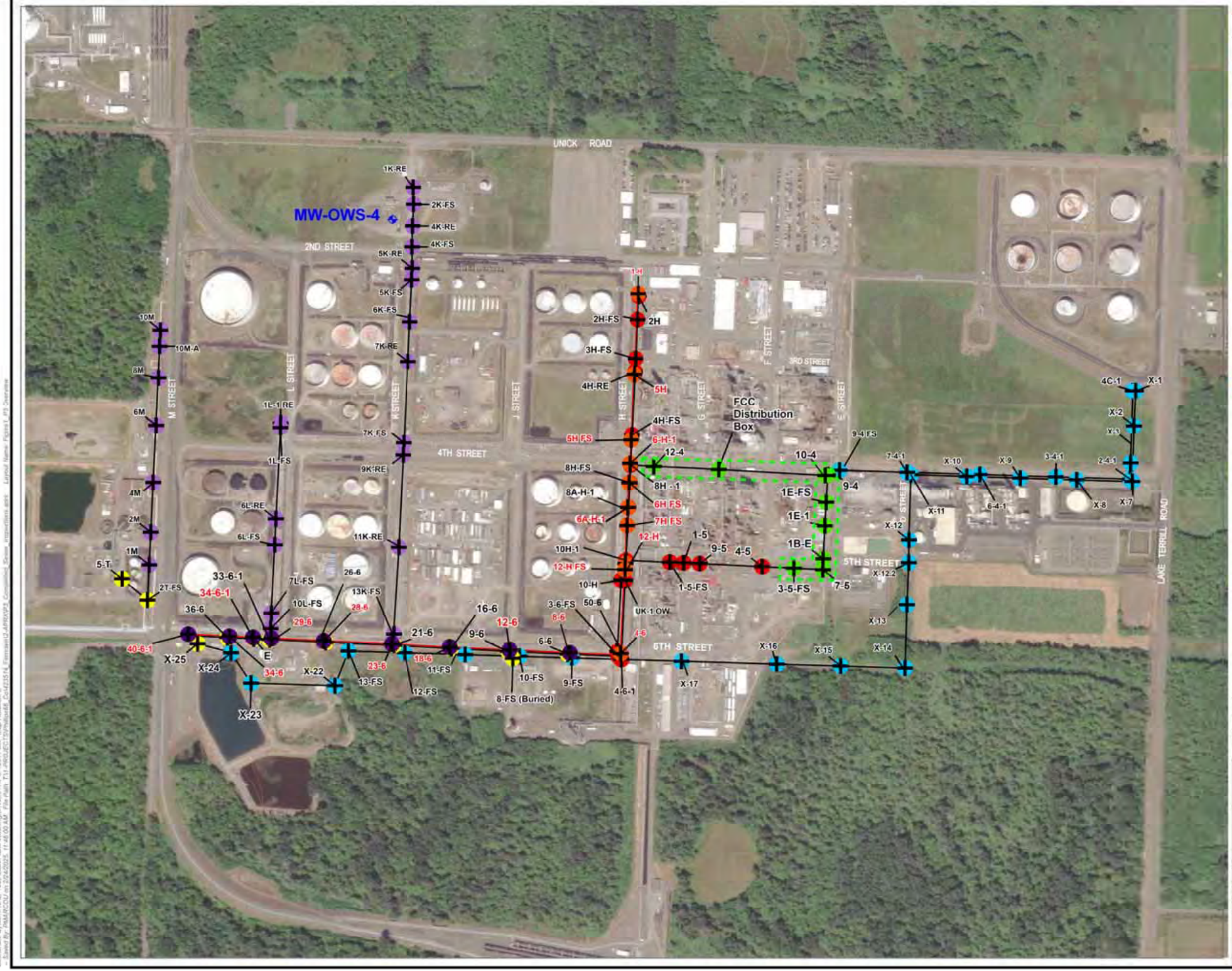
TITLE: GENERAL VICINITY MAP
PHASE III OWS SOIL AND
GROUNDWATER INVESTIGATION

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	E. LARSEN		FIGURE 1
APPROVED BY:	J. BERNTHAL		
DATE:	REVISED DECEMBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PHASEIII_OWS_SOIL_AND_GW_INVESTIGATION

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE WASH... SOUTH FIPS 4602 FT US; MAP ROTATION: 0
-- SAVED BY RCOLLINS ON 6/6/2025, 10:13:60 AM; FILE PATH: ...PROJECTS\PHILLIPS66_CO\670297_FERNDALE\3-ARCGIS\P66_PHASEIII_SAP.APRX; LAYOUT NAME: FIGURE 1 GVIM



PHENOLIC SEWER MAJOR TRUNK LINE

OILY WATER SEWER MAJOR TRUNK LINE

5H FS PHENOLIC SEWER MANHOLE

1E-FS OILY WATER SEWER MANHOLE

GROUNDWATER MONITORING WELL

OILY AND PHENOLIC SEWER LINE MANHOLES AND INSPECTION PHASES:

- PHASE I
- PHASE II
- PHASE III
- PHASE IV A
- PHASE IV B
- PHASE IV C
- PHASE IV

PHASE III OWS SOIL INVESTIGATION AREA.

N

1:6,000

1" = 500'

0 250 500 FEET

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER. DATA SOURCES: TRC

PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

TITLE: PHASE III OWS SOIL AND GROUNDWATER INVESTIGATION LOCATION

DRAWN BY:	P. MARCOU	PROJ. NO.:	670297.0000.0000
CHECKED BY:	E. LARSEN		FIGURE 2
APPROVED BY:	J. BERNNTHAL		
DATE:	REVISED DECEMBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE #440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PHASEIII_OWS_SOIL_AND_GW_INVESTIGATION

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4601 Feet Map Rotation: 0
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POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

CONTINUOUS DEFECTS

- ENVIRONMENTAL RATING = 3

OILY AND PHENOLIC SEWER MANHOLES

- PHASE III
- PHASE IVA
- PHASE IVB
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- PHENOLIC SEWER MAJOR TRUNK LINE
- OILY WATER SEWER MAJOR TRUNK LINE
- PHASE III OWS SOIL BORING / SAMPLE LOCATION

B-5-25

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC

PHASE III OWS INSPECTION LOCATION



1:845
1" = 70'
0 35 70 FEET

PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

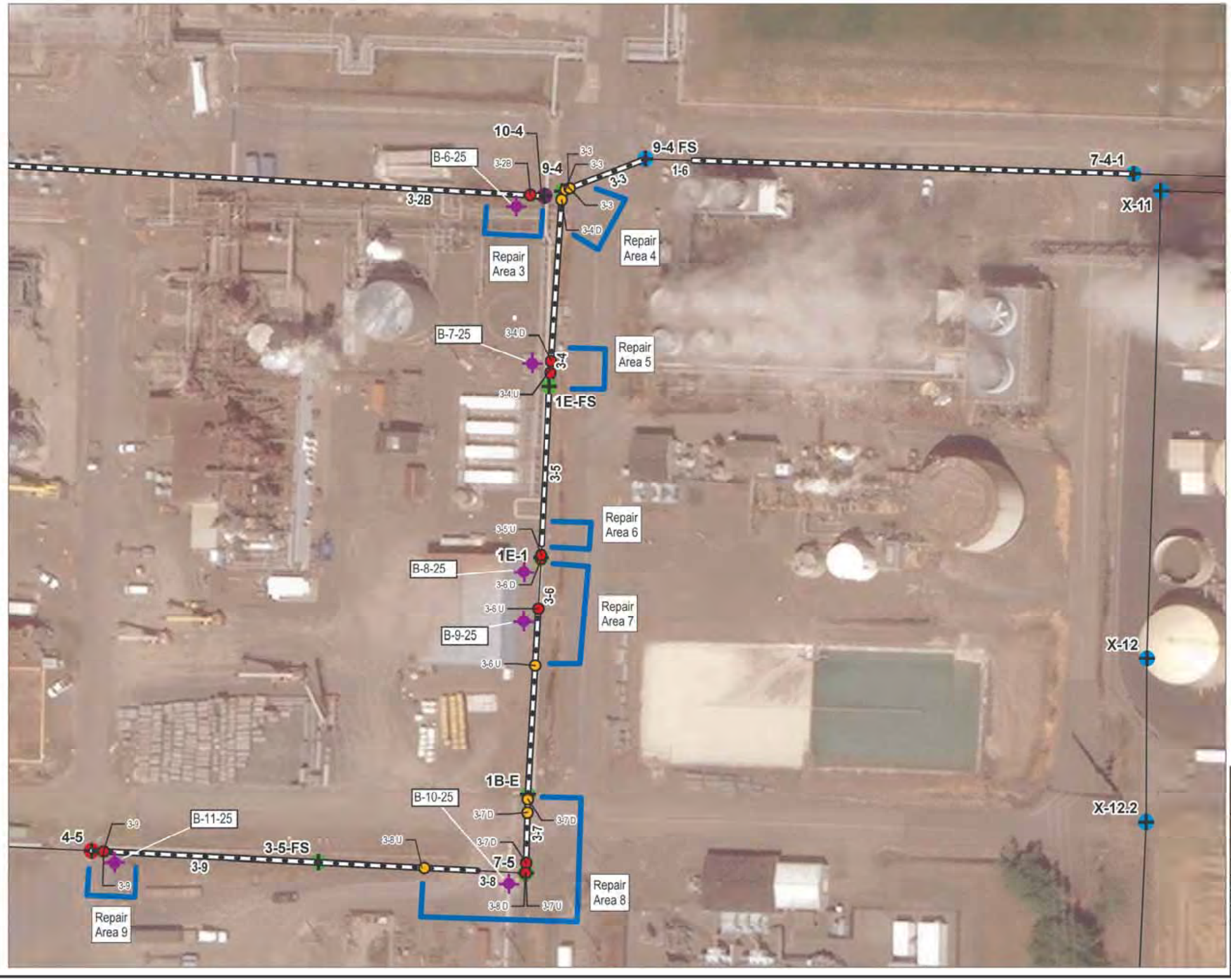
TITLE: PHASE III SEWER INSPECTION REPAIR AREAS
SOIL AND GROUNDWATER INVESTIGATION
PHASE III OWS SOIL BORING LOCATIONS

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	D. MILLER		FIGURE 3A
APPROVED BY:	E. LARSEN		
DATE:	DECEMBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PhaseIII_SAP.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
Saved By: RCOLLINS on 8/4/2025 11:00:44 AM File Path: T:\1_PROJECTS\Phillips66_Cat2\670297_Ferndale\5 APROX\P66_PhaseIII_SAP.aprx Layout Name: Figure 2A_2B_P3 Defects



POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

OILY AND PHENOLIC SEWER MANHOLES

- PHASE I
- PHASE III
- PHASE IVA
- PHASE IVD
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- OILY WATER SEWER MAJOR TRUNK LINE
- PHASE III OWS SOIL BORING / SAMPLE LOCATION

B-10-25

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC

PHASE III OWS INSPECTION LOCATION



N

1:845
1" = 70'
0 35 70
FEET

PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

TITLE: PHASE III SEWER INSPECTION REPAIR AREAS
SOIL AND GROUNDWATER INVESTIGATION
PHASE III OWS SOIL BORING LOCATIONS

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	D.MILLER		FIGURE 3B
APPROVED BY:	E. LARSEN		
DATE:	DECEMBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PhaseIII_SAP.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
Plotted By: RCOLLINS on 5/5/2025 at 10:44 AM; File Path: Y:\PROJECTS\Phillips66_Cal67029\2_Formats\C.APRXDPAE_PhaseIII_SAP.aprx; Layout Name: Figure 2A_2B - P3 Defects

Appendix A
Boring Logs and Field Notes

TRC

BORING ID: B-1-25

SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/5/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No recovery (cleared with vacuum truck)					
1							
2							
3	--		0				
4							
5		ELASTIC SILT WITH SAND; olive gray; damp; stiff; medium plasticity; mostly silt, minor fine sand					
6							
7				25.5	B-1-25:7		
8		8': Increase sand	100				
9							
10	MH	10'–11': moist, soft					
11		11': becomes medium stiff					
12				0.4	B-1-25:12		
13		13': becomes grayish brown	100				
14							
15		END OF BOREHOLE					
16							
17							
18							
19							
20							

NOTES: Ground surface at boring location = 0.8 ft below ground surface at OWS pipe location

TRC

BORING ID: B-2-25

SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/5/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**

DECOMMISSIONING MATERIAL:
Bentonite

BOREHOLE SIZE:
2.25"

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	ML	SILT WITH SAND; olive gray; damp; stiff; nonplastic; mostly silt, minor sand	100	63.6	B-2-25:7.2		Slough on top
11		11': becomes grayish brown	70	15.8	B-2-25:12.2		
15		END OF BOREHOLE					

NOTES: Ground surface at boring location = 0.6 ft below ground surface at OWS pipe location

TRC

BORING ID: B-3-25

SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Hand auger**	DATE: **11/5/2025**
DRILLING METHOD: **Hand auger**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **11.5' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **4"**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	SP-SM	POORLY-GRADED SAND WITH GRAVEL; grayish brown; wet; very loose; mostly fine to medium sand, minor gravel	100	154	B-3-25:7.5		
8	--	Not logged from auger					
11	SP	POORLY-GRADED SAND; grayish brown; wet; very loose; mostly fine to medium sand, trace gravel		60	B-3-25:11.5		
12		END OF BOREHOLE					

NOTES: Ground surface at boring location = 0.3 ft below ground surface at OWS pipe location

TRC

BORING ID: B-4-25

SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/5/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	ML	SILT WITH SAND; grayish brown; damp; medium stiff; mostly silt, few sand	100	4	B-4-25:7		
10		9.5'–10': increase to minor fine sand 10': becomes soft					
11		11': becomes medium stiff					
12		12': becomes olive gray	50	0.8	B-4-25:12		
13		No recovery					
15		END OF BOREHOLE					

NOTES: Ground surface at boring location = 0.8 ft below ground surface at OWS pipe location

BORING ID: B-5-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/5/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No recovery (cleared with vacuum truck)					
1							
2							
3	--		0				
4							
5	SM	SILTY SAND WITH GRAVEL; grayish brown; wet; loose; mostly fine to medium sand, some silt, few gravel; appears to be slough					
6		SILT WITH SAND; olive gray; damp; stiff; mostly silt, few sand, trace gravel		5.5	B-5-25:6.3		
7			100				
8				0.8			
9							
10	ML						
11		10.5': becomes soft; moist		1.5	B-5-25:11.3		
12		12': becomes damp; stiff					
13		12.5'–13.5': lens of mostly fine sand	100	0.8			
14							
15		END OF BOREHOLE		0.2			
16							
17							
18							
19							
20							

*: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%

NOTES: Ground surface at boring location = 1.5 ft below ground surface at OWS pipe location

TRC

BORING ID: B-6-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other. *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No recovery (cleared with vacuum truck)					
1							
2							
3	--		0				
4							
5	SM	SANDY SILT; olive gray; wet; very stiff; low plasticity; mostly silt, some fine sand		0.2			5.5'-5.8': lens of poorly-graded sand
6	MH	ELASTIC SILT WITH SAND; olive gray; wet; very stiff; high plasticity; mostly silt, few fine sand, trace gravel					
7		7': becomes damp	100				
8				0.5	B-6-25:7.8		
9							Moisture most likely due to infiltration since hole was left open overnight
10				0.5			Wet silty sand slough at top of tube
11		10.5': becomes grayish brown					
12							
13			80	0.5	B-6-25: 12.8		
14		No recovery		0.5			
15		END OF BOREHOLE					
16							
17							
18							
19							
20							

NOTES:

BORING ID: B-7-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No recovery (cleared with vacuum truck)					
1							
2							
3	--		0				
4							
5	ML	SILT WITH SAND; grayish brown; wet; stiff; low plasticity; mostly silt, few fine sand, trace gravel		0.4			
6	SM	SILTY SAND; grayish brown; wet; dense; mostly fine sand, some silt					
7		7': becomes damp	100				
8				0.3	B-7-25:7.8		
9		ELASTIC SILT WITH SAND; grayish brown; damp; very stiff; high plasticity; mostly silt, few fine sand, trace gravel					
10				0.6			
11	MH						
12				0.4	B-7-25:12.8		
13			100				
14							
15		END OF BOREHOLE		0.4			
16							
17							
18							
19							
20							

*: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%

NOTES:

TRC

BORING ID: B-8-25

SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**

DECOMMISSIONING MATERIAL:
Bentonite

BOREHOLE SIZE:
2.25"

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No recovery (cleared with vacuum truck)					
1							
2							
3	--		0				
4							
5				0.5			
6	SM	SILTY SAND WITH GRAVEL; light olive brown; wet; loose; mostly fine to medium sand, some silt, few gravel					
7		ELASTIC SILT WITH SAND; grayish brown; damp; very stiff; high plasticity; mostly silt, few fine sand		4	B-8-25:7		
8			100				
9							
10	MH			0.3			
11							
12				0.9	B-8-25:12		
13		13': becomes stiff; increase fines (feels like more clay than above)	80				
14		No recovery		0.4			
15	--	END OF BORELOG					
16							
17							
18							
19							
20							

NOTES:

TRC

BORING ID: B-9-25

SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No recovery (cleared with vacuum truck)					
1							
2	--		0				
3							
4							
5	SW	WELL-GRADED SAND WITH GRAVEL; grayish brown; wet; very loose; mostly fine to coarse sand, minor gravel, trace silt		2			
6	MH	ELASTIC SILT WITH SAND; grayish brown; moist; stiff; mostly silt, few fine sand					
7				1.1	B-9-25:7		
8		No recovery	50				
9	--						
10		Same as above		2.1			
11	MH						
12		No recovery		1.1	B-9-25:12		
13			40				
14	--						
15		END OF BOREHOLE					
16							
17							
18							
19							
20							

NOTES:

TRC

BORING ID: B-10-25

SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**

DECOMMISSIONING MATERIAL:
Bentonite

BOREHOLE SIZE:
2.25"

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No recovery (cleared with vacuum truck)					
1							
2							
3	--		0				
4							
5	SW	WELL-GRADED SAND WITH GRAVEL; grayish brown; wet; loose; mostly fine to coarse sand, minor gravel, trace silt		0.4			
6	MH	ELASTIC SILT WITH SAND; grayish brown; moist; medium dense; high plasticity; mostly silt, few fine sand					
7				0.9	B-10-25:7		
8		No recovery	50				
9	--						
10		Same as above		0.6			
11		10.5': becomes very soft					
12	MH	12': becomes soft		0.6	B-10-25:12		
13			100				
14		14': becomes medium stiff					
15		END OF BOREHOLE		0.8			
16							
17							
18							
19							
20							

NOTES:

BORING ID: B-11-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		No recovery (cleared with vacuum truck)					
1							
2	--		0				
3							
4							
5	SM	SILTY SAND WITH GRAVEL; grayish brown; wet; very loose; mostly fine to medium sand, some silt, minor gravel		0.8			
6							
7		No recovery	40	0.9			
8	--						
9							
10	SM	Same as above		1			
11							
12			100				
13				0.8	B-11-25:13		
14	MH	ELASTIC SILT WITH SAND; olive gray; damp; soft; high elasticity; mostly silt, few sand					
15		END OF BOREHOLE		0.7	B-11-25:15		Refusal at 15' bgs
16							
17							
18							
19							
20							

*: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%

NOTES:

Phillips 66 Fasndale
3901 Unick Rd
Personnel: D. Miller, M. Taylor
Scope: Soil Borings
Subs: Cascade - Tim + Alex
Weather: On and off rain, 40s - 50s

Site escort: Xavier Gallegos

0645 All TRC + Cascade on site, check in at security
0710 Waiting for Phillips 66 - Josh G + Xavier G.
0725 Phillips 66 crew arrives at main entrance, safety review
0735 Enter through contractor gate
0745 Acquiring work permit
0800 Acquired permit # FRN-PTW-25-133666
Drive to work area.
0805 Locating boring locations, meet with WRS, WRS marks out storm and OWS lines. We need to go downhill 5 feet from OWS line, about 1.5 feet lower elevation
0835 WRS starts clearing B-5-25
Measure out remaining borings in this area
0910 Calibrate PID. Span = 100.0 ppm.
WRS starts clearing B-4-25
0923 Start drilling at B-5-25
0930 Done drilling
0935 Collect B-5-25:6.3. PID = 5.5 ppm
0940 Collect B-5-25:11.5. PID = 1.5 ppm
1001 Move to B-4-25, drilling. Only 0.8 ft lower than pipe corner, sheen on water nearby.
1010 WRS clearing B-3-25 to 5ft. Near pipe so this will need hand auger.
1020 Both 5-10 and 10-15 sections pulled up.
1030 Collect B-4-25:7. PID = 4.0 ppm
1040 Collect B-4-25:12. PID = 0.8 ppm
1050 WRS done clearing B-3-25. Wood and clay pipe

debris in hole. Hand auger will fit. Sheen on first hand auger sample. WRS moves to B-2-25

1105 Collect B-3-25: 7.5. PID= 154.0 ppm

1120 Collect B-3-25: 11.5. PID= 60.0 ppm

1130 WRS done clearing B-2-25 and B-1-25 to 5ft.

1137 Cascade start drilling at B-2-25.

1155 Reach 15ft at B-2-25. Collect GPS coordinates of B-1405

1200 Collect B-2-25: 7.2. PID= 63.6 ppm

1210 Collect B-2-25: 12.2. PID= 16.8 ppm

1220 Cascade done drilling at B-1-25.

1235 Collect B-1-25: 7. PID= 25.5 ppm

1245 Collect B-1-25: 12. PID= 0.4 ppm

1300 Packing up rig, equipment to move to next work area

1315 Call Xavier G and Josh G. No answer.

1326 Josh calls back, will contact Xavier

1335 Xavier back. Drive to control room to close out permit, get new one

1349 Acquire new permit # FRN-PTW-25-13418

1355 Reach second work area, sign permit

1400 Mark out boring locations with WRS, Cascade, PGE.

1425 WRS mobilizes truck to B-6-25.

1440 WRS still hasn't started clearing hole

1455 Xavier back after getting utility maps
WRS starts clearing
Cascade parks trailer in area approved by Xavier.

1510 Cascade signs out of permit, leaves area to head off site.

1535 WRS done clearing B-6-25. They will try to clear B-7-25 today.

1541 Sign out of permit

1550 All TRC off site

11/5/25

Table 1
OWS Phase III Soil Boring Sample Designation and Depths

Proposed Soil Boring	OWS Line Depth (feet bgs)	Proposed Soil Sampling Depths (feet bgs)	Drilling Method	OWS Line Segment	Closest Manhole	Phase III OWS Repair Area
B-1-25	6.83	7.8, 12.8 12	DP	3-1	MH 8H-1	1
B-2-25	6.83	7.2 7.8, 12.8[1] 12.2	DP HA[1]	3-1	MH 8H-1	1
B-3-25	6.8	7.5 7.8, ~~12.8~~ 11.5	~~DP~~ HA	3-2A	MH 12-4	2
B-4-25	6.8	7 7.8, 12.8[1] 12	~~HA~~ DP	3-2A	MH 12-4	2
B-5-25	6.8	6.3 7.8, 12.8 11.3	DP	3-2A	MH 12-4	2
B-6-25	6.8	7.8, 12.8	DP	3-2B	MH 10-4	3
B-7-25	6.8	7.8, 12.8	DP	3-4	MH 1E-FS	5
B-8-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7
B-9-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7
B-10-25	6.0[2]	7.0, 12.0	DP	3-8	MH 7-5	8
B-11-25	12	13.0, 18.0	DP	3-9	MH 4-5	9

Notes:
1 Hand auger sampling might not be feasible at all planned depths.
2 Depth estimated. Line 3-8 slopes more steeply than other segments.
bgs Below ground surface.
DP Direct-push technology drill rig.
HA Hand auger.



POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

CONTINUOUS DEFECTS

- ENVIRONMENTAL RATING = 3

OILY AND PHENOLIC SEWER MANHOLES

- PHASE III
- PHASE IVA
- PHASE IVB
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- PHENOLIC SEWER MAJOR TRUNK LINE
- OILY WATER SEWER MAJOR TRUNK LINE
- PROPOSED SOIL BORING / SAMPLE LOCATION

B-5-25

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC



1:845
1" = 70'
0 35 70
FEET

PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

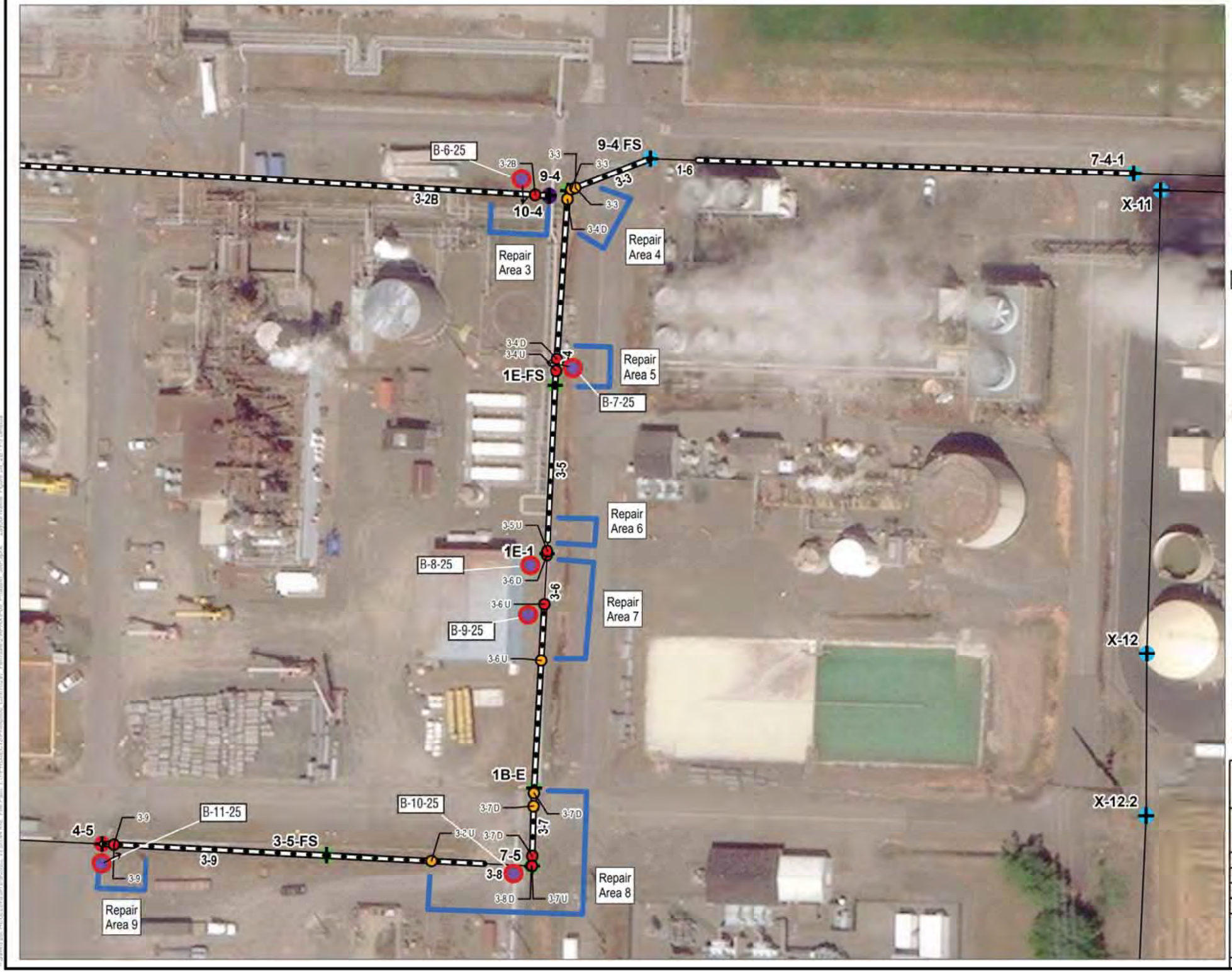
TITLE: PHASE III SEWER INSPECTION REPAIR AREAS
SOIL AND GROUNDWATER INVESTIGATION
PROPOSED SOIL BORING LOCATIONS

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	J. WINDSOR		FIGURE 1A
APPROVED BY:	E. LARSEN		
DATE:	OCTOBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PhaseIII_SAP.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet Map Rotation: 0
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POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

OILY AND PHENOLIC SEWER MANHOLES

- PHASE I
- PHASE III
- PHASE IVA
- PHASE IVD
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- OILY WATER SEWER MAJOR TRUNK LINE
- PROPOSED SOIL BORING / SAMPLE LOCATION

B-10-25

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC



1:845
1" = 70'
0 35 70 FEET

PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

TITLE: PHASE III SEWER INSPECTION REPAIR AREAS
SOIL AND GROUNDWATER INVESTIGATION
PROPOSED SOIL BORING LOCATIONS

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	J. WINDSOR		FIGURE 1B
APPROVED BY:	E. LARSEN		
DATE:	OCTOBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PhaseIII_SAP.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet Map Rotation: 0
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Phillips 66 Fasndale
3901 Unick Rd
Personnel: D. Miller, M. Taylor
Scope: Soil Borings, GW sampling
Subs: Cascade - Tim + Alex
Weather: 0° and .ft rain, 40s - 50s

Site escort: Xavier Gallegos

0645 All TRC + Cascade on site, check in at security
0705 Drive to control center, call Xavier to meet us there
0724 Acquire permit # FRW-PTW-25-13418, drive to work area
0730 Xavier informs us UXOS won't be available to clear holes until lunch time. Cascade sets up at B-6-25. Only B-6 and B-7 are already cleared.
0748 Calibrate PID. Span = 100.0 ppm
0750 B-6-25 hole full of water to ~ 2.5 ft bgs
0752 Start drilling at B-6-25.
0800 Collect B-6-25: 7.8. PID = 0.5 ppm
0805 Reach end of boring.
0820 Collect B-6-25: 12.8. PID = 0.5 ppm
0835 Move rig to B-7-25. Water in hole at 4ft.
0843 Start drilling at B-7-25.
0850 Reach 15 ft.
0900 Collect B-7-25: 7.8 PID = 0.3 ppm
0915 Collect B-7-25: 12.8 PID = 0.4 ppm
0939 Call Xavier to inform ready to GW sample
1000 Xavier arrives, escorts us to monitoring well
1015 Issues getting through gate.
1025 Through gate to monitoring well.
1035 Open well
1037 Calibrate YSI &.
1100 Begin purging well
1150 Collect MW-OWS-4 + DUP-1

Slow recharge at well
1230 WRS arrives at drilling work area.
Wrapping up at monitoring well.
1300 TRC head to boring locations
1330 Large rocks struck in vac multiple times. Very difficult to clear.
1345 WRS done clearing B-8-25 to 5ft, move to B-9-25
1350 Cascade drilling at B-8-25.
1355 Cascade reaches 15 ft at B-8-25
1356 WRS done clearing B-9-25 to 5 ft. Next to large pipe. water flowing into hole quickly, sheen on water.
1400 WRS clearing B-10-25.
1410 Collect B-8-25:7. PID=0.4 ppm
Cascade starts drilling B-9-25.
1417 Cascade done drilling at B-9-25. WRS done clearing B-10-25
1420 Collect B-8-25:12. PID=0.9 ppm
1420 WRS heads over to clear B-11-25
1429 Cascade starts drilling at B-10-25.
1435 Collect B-9-25:7. PID=1.1 ppm
WRS done clearing B-11-25.
1444 Cascade done drilling at B-10-25.
1445 Collect B-9-25:12. PID=1.1 ppm
1505 Collect B-10-25:7. PID=0.9 ppm
1515 Cascade says something very hard at 15 ft at B-11-25, Very close to 3 manholes. After confering w/PM E. Lawson, decide to stop. will try to collect 13 + 15 ft samples
1520 Collect B-10-25:12. PID=0.6 ppm
Cascade wraps up at B-11-25, begins to pack up equipment.
1550 Collect B-11-25:13. PID=0.8 ppm
1600 Collect B-11-25:15. PID=0.7 ppm
1605 Cascade signs out of permit, returns H_2S monitors, heads off site
1610 Take GPS coordinates at B-6-25 to B-11-25.
Xavier arrives at work area. Walk through locations with him, noting that a few are missing cones to mark holes. Point out drums of purge water + decon water. 5 gallon bucket of soil.

Filling out COCs, packing up equipment.
1635 Head to control center, escorted by Xavier
1640 Sign out of and close work permit
1647 Badge out of site, return vehicle pass
1649 All TRC off site.

11/6/25

Table 1
OWS Phase III Soil Boring Sample Designation and Depths

Proposed Soil Boring	OWS Line Depth (feet bgs)	Proposed Soil Sampling Depths (feet bgs)	Drilling Method	OWS Line Segment	Closest Manhole	Phase III OWS Repair Area
B-1-25	6.83	7, 7.8, 12.8 12	DP	3-1	MH 8H-1	1
B-2-25	6.83	7.2 7.8, 12.8[1] 12.2	DP HA[1]	3-1	MH 8H-1	1
B-3-25	6.8	7.5 7.8, ~~12.8~~ 11.5	~~DP~~ HA	3-2A	MH 12-4	2
B-4-25	6.8	7 7.8, 12.8[1] 12	~~HA~~ DP	3-2A	MH 12-4	2
B-5-25	6.8	6.3 7.8, 12.8 11.3	DP	3-2A	MH 12-4	2
B-6-25	6.8	7.8, 12.8	DP	3-2B	MH 10-4	3
B-7-25	6.8	7.8, 12.8	DP	3-4	MH 1E-FS	5
B-8-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7
B-9-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7
B-10-25	6.0[2]	7.0, 12.0	DP	3-8	MH 7-5	8
B-11-25	12	13.0, ~~18.0~~ 15	DP	3-9	MH 4-5	9

Notes:
1 Hand auger sampling might not be feasible at all planned depths.
2 Depth estimated. Line 3-8 slopes more steeply than other segments.
bgs Below ground surface.
DP Direct-push technology drill rig.
HA Hand auger.



POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

CONTINUOUS DEFECTS

- ENVIRONMENTAL RATING = 3

OILY AND PHENOLIC SEWER MANHOLES

- PHASE III
- PHASE IVA
- PHASE IVB
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- PHENOLIC SEWER MAJOR TRUNK LINE
- OILY WATER SEWER MAJOR TRUNK LINE
- PROPOSED SOIL BORING / SAMPLE LOCATION

B-5-25

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC



1:845
1" = 70'
0 35 70
FEET

PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

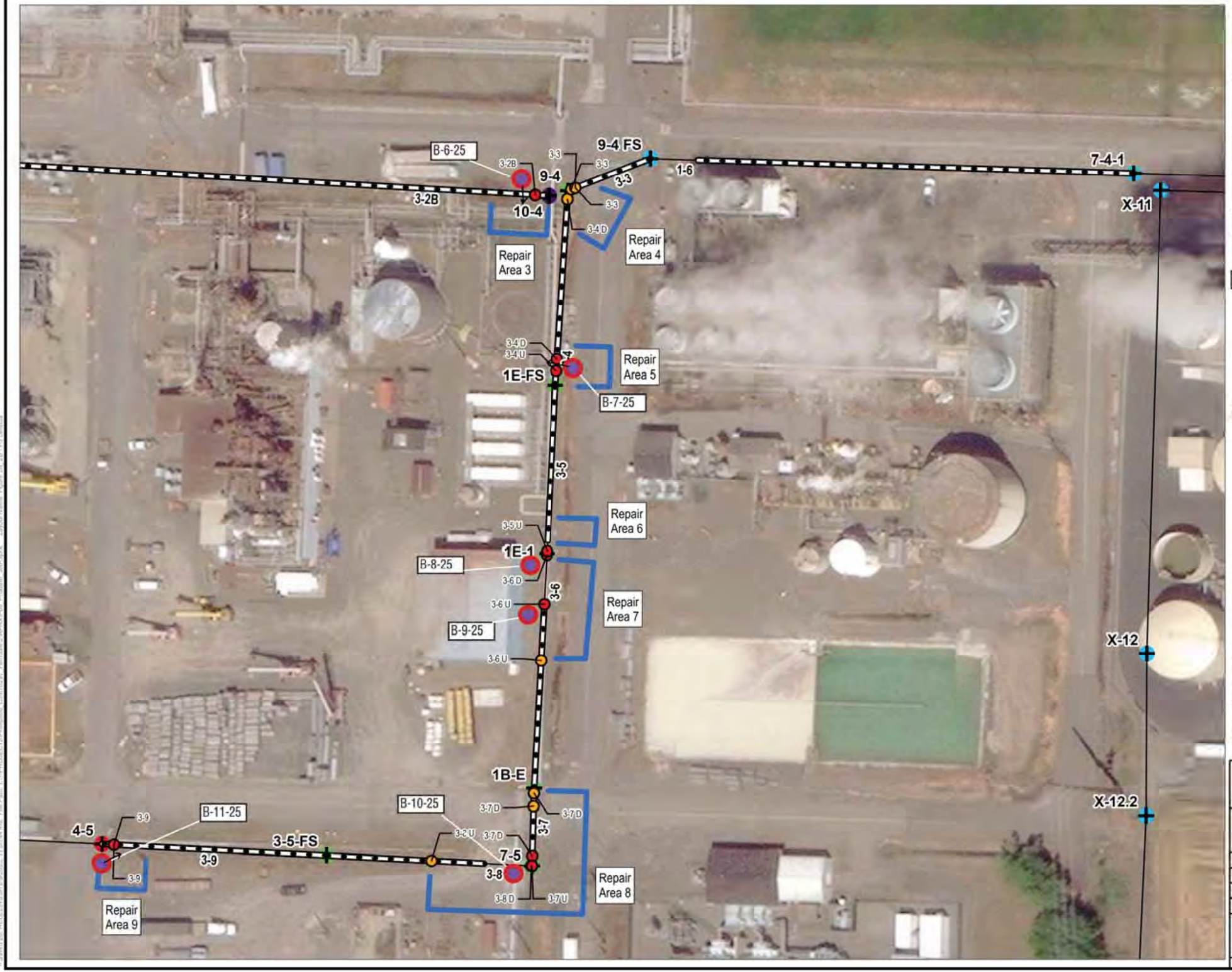
TITLE: PHASE III SEWER INSPECTION REPAIR AREAS
SOIL AND GROUNDWATER INVESTIGATION
PROPOSED SOIL BORING LOCATIONS

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	J. WINDSOR		FIGURE 1A
APPROVED BY:	E. LARSEN		
DATE:	OCTOBER 2025		

TRC
13810 SE EASTGATE WAY
SUITE 440
BELLEVUE, WA 98005
PHONE: 425.395.0010

FILE: P66_PhaseIII_SAP.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet Map Rotation: 0
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POINT DEFECTS

- ENVIRONMENTAL RATING = 4
- ENVIRONMENTAL RATING = 3

OILY AND PHENOLIC SEWER MANHOLES

- PHASE I
- PHASE III
- PHASE IVA
- PHASE IVD
- 1-A-X PHENOLIC MANHOLES
- PHASE III SEWER INSPECTION ROUTE
- OILY WATER SEWER MAJOR TRUNK LINE
- PROPOSED SOIL BORING / SAMPLE LOCATION

B-10-25

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
DATA SOURCES: TRC



1:845
1" = 70'
0 35 70 FEET

PROJECT: PHILLIPS 66 FERNDALE REFINERY
3901 UNICK ROAD
FERNDALE, WASHINGTON

TITLE: PHASE III SEWER INSPECTION REPAIR AREAS
SOIL AND GROUNDWATER INVESTIGATION
PROPOSED SOIL BORING LOCATIONS

DRAWN BY:	R. COLLINS	PROJ. NO.:	670297.0000.0000
CHECKED BY:	J. WINDSOR		FIGURE 1B
APPROVED BY:	E. LARSEN		
DATE:	OCTOBER 2025		

TRC
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FILE: P66_PhaseIII_SAP.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet Map Rotation: 0
Saved By: KRISTOFFER.BOSTIC on 9/30/2025 at 11:14:44 AM File Path: T:\PROJECTS\Portland\Clients\P66 Ferndale\670297 Ferndale 2JR\GIS\P66_Phase III SAP.aprx Layout Name: Figure 2A -2B - P3 Defects

TRC Groundwater Sampling Field Data

Project Name:	Phillips 66 OWS Phase III		
Project Number:	670297		
Well ID:	MW-OWS-4	Date	11/6/25
Sample ID:	MW-OWS-4-	Field Team: (Initials)	DM MT
Field Conditions	Overcast, light rain, 50s		

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	7.88
Initial Depth to Water (ft.)	4.44
Depth of Water Column	
1 Casing Volumes	
3 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump / Bladder Pump / (Peristaltic Pump) / Other: : _____

Start Time	1100
End Time	1142
Total Gallons Purged	1.3
Final Depth to Water (ft.)	6.34

Time	Volume Gallons	pH	Conductivity mS/cm	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Depth to Water ft.	Appearance/Notes
1103	0.1	6.26	0.4586	3.89	14.1	131.2	6.02	4.57	clear no odor
1106	0.2	6.24	0.4770	2.88	14.0	124.6	5.21	4.61	
1109	0.3	6.24	0.545	1.81	14.0	117.0	4.53	4.66	
1112	0.4	6.24	0.577	1.34	14.1	110.6	4.59	4.69	
1115	0.5	6.24	0.734	0.91	14.0	108.0	4.55	4.73	
1118	0.6	6.25	0.749	0.84	14.0	104.9	4.10	4.77	
1121	0.7	6.26	0.817	0.73	14.0	103.2	3.69	4.86	
1124	0.8	6.27	0.872	0.68	14.0	99.5	3.64	5.00	
1127	0.9	6.28	0.895	0.64	14.1	96.7	3.63	5.30	
1130	1.0	6.29	0.913	0.61	14.0	93.5	3.48	5.54	
1133	1.1	6.30	0.924	0.74	14.1	90.5	4.01	5.71	
1136	1.2	6.30	0.910	0.69	14.1	89.6	4.22	5.90	
1139	1.3	6.34	0.902	0.68	14.1	83.6	4.14	6.18	
1142	1.4	6.36	0.915	0.70	14.2	80.4	4.26	6.34	
Stabilization Criteria		± 0.1	± 3%	± 10% if > 0.5	± 3%	± 20 mV	± 10% if > 5 NTU	--	--

Sample Information

Sample Method(s) : ~~Peristaltic pump~~ / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1150	2x 40mL V	HCl	
NWTPH-Gx		3x 40mL V	HCl	
BTEX + hVOCs 8260		3x 40mL V	HCl	
Naphthalene + cPAHs 8270		2x 40mL V	None	
Hexavalent Chromium		50mL P	Plunger/Filter, $(NH_4)_2SO_4$, NH_4OH	
Trivalent Chromium		250mL P	None	
Metals		250mL P	HNO_3	
End Time				

Comments / Exceptions:

Presence of floating product? YES / (NO) Presence of sinking product? YES / (NO)

Collected DUP-1

Ecology tag BQK 212

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

Appendix B
Laboratory Analytical Reports

ANALYTICAL REPORT

November 19, 2025

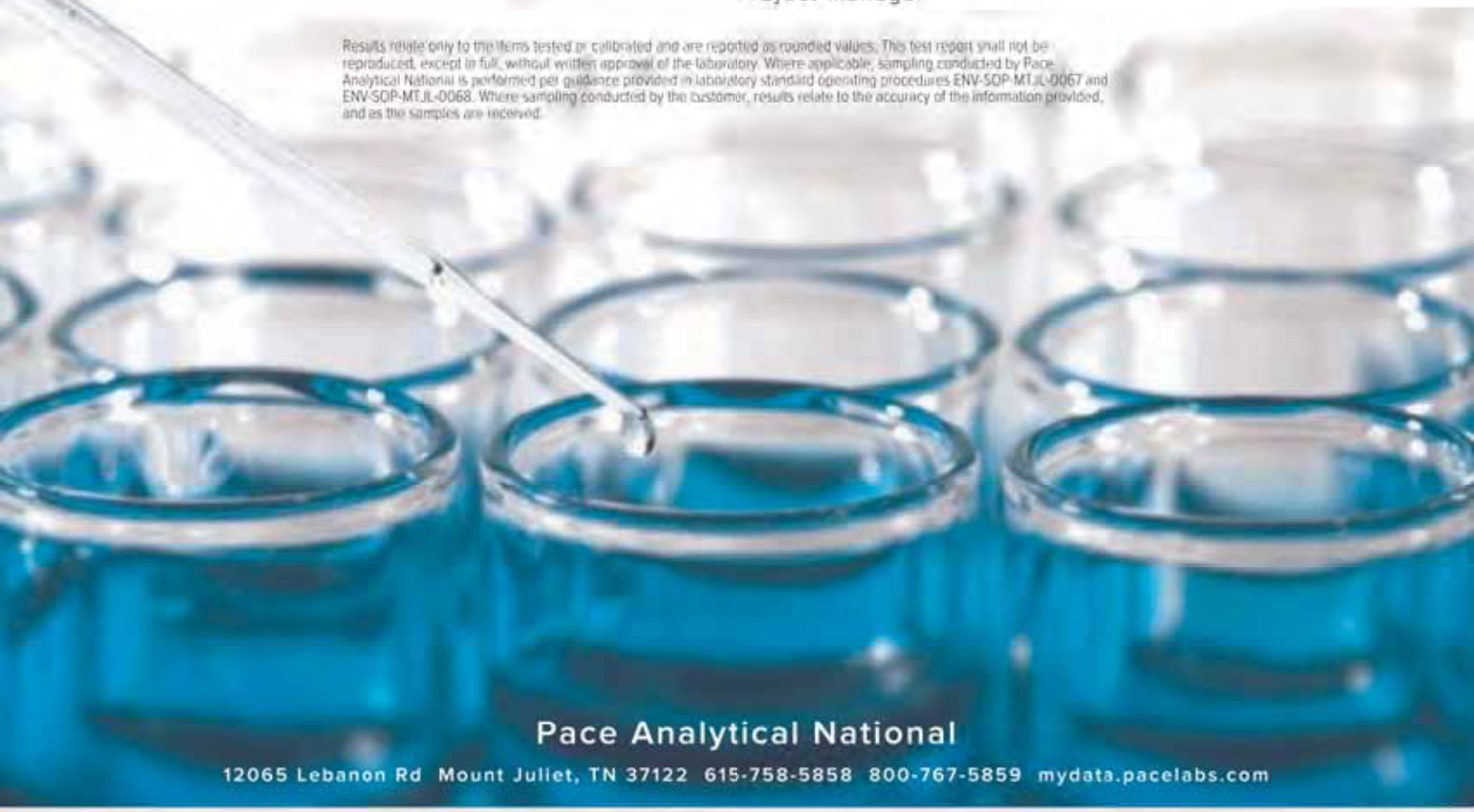
Phillips 66 - TRC

Sample Delivery Group:	L1916315
Samples Received:	11/08/2025
Project Number:	670297
Description:	Phillips 66
Site:	FERNDALE, WA
Report To:	Madison Taylor 13810 SE Eastgate Way Suite 440 Bellevue, WA 98005

Entire Report Reviewed By:

Naomi M Sackett
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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SAMPLE SUMMARY

MW-OWS-4 L1916315-01

Collected by: MT/DM | Collected date/time: 11/06/25 11:50 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2637201	1	11/13/25 21:02	11/13/25 21:02	EKB	Mt. Juliet, TN
Wet Chemistry by Method 3500Cr C-2011	WG2636109	1	11/13/25 21:02	11/13/25 21:02	EKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2637056	1	11/12/25 14:24	11/14/25 12:00	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2637201	1	11/12/25 13:17	11/12/25 17:47	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2637753	1	11/12/25 04:15	11/12/25 04:15	GMV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638062	1	11/11/25 17:26	11/11/25 17:26	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2637873	2	11/11/25 16:44	11/14/25 08:52	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2637665	1	11/11/25 12:51	11/12/25 11:52	KGB	Mt. Juliet, TN

DUP-1 L1916315-02

Collected by: MT/DM | Collected date/time: 11/06/25 00:00 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2637201	1	11/13/25 21:15	11/13/25 21:15	EKB	Mt. Juliet, TN
Wet Chemistry by Method 3500Cr C-2011	WG2636109	1	11/13/25 21:15	11/13/25 21:15	EKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2637056	1	11/12/25 14:24	11/14/25 12:09	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2637201	1	11/12/25 13:17	11/12/25 17:50	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2637753	1	11/12/25 04:35	11/12/25 04:35	GMV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638062	1	11/11/25 17:47	11/11/25 17:47	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2642203	1	11/13/25 06:23	11/17/25 22:53	JAJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2637665	1	11/11/25 12:51	11/12/25 12:10	KGB	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Naomi M Sackett
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1916315-02	DUP-1	3500Cr C-2011

Calculated Results

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	ND		0.500	1	11/13/2025 21:02	WG2637201

Wet Chemistry by Method 3500Cr C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.500	1	11/13/2025 21:02	WG2636109

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	11/14/2025 12:00	WG2637056

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	ND		10.0	1	11/12/2025 17:47	WG2637201
Cadmium	ND		2.00	1	11/12/2025 17:47	WG2637201
Chromium	ND		10.0	1	11/12/2025 17:47	WG2637201
Lead	ND		6.00	1	11/12/2025 17:47	WG2637201
Nickel	ND		10.0	1	11/12/2025 17:47	WG2637201
Zinc	ND		50.0	1	11/12/2025 17:47	WG2637201

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	480		100	1	11/12/2025 04:15	WG2637753
(S) a,a,a-Trifluorotoluene(FID)	*112*		*78.0-120*		*11/12/2025 04:15*	WG2637753

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2025 17:26	WG2638062
Acrolein	ND		50.0	1	11/11/2025 17:26	WG2638062
Acrylonitrile	ND		10.0	1	11/11/2025 17:26	WG2638062
Benzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Bromobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Bromodichloromethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Bromoform	ND		1.00	1	11/11/2025 17:26	WG2638062
Bromomethane	ND		5.00	1	11/11/2025 17:26	WG2638062
n-Butylbenzene	2.72		1.00	1	11/11/2025 17:26	WG2638062
sec-Butylbenzene	6.13		1.00	1	11/11/2025 17:26	WG2638062
tert-Butylbenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Carbon tetrachloride	ND		1.00	1	11/11/2025 17:26	WG2638062
Chlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Chlorodibromomethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Chloroethane	ND		5.00	1	11/11/2025 17:26	WG2638062
Chloroform	ND		5.00	1	11/11/2025 17:26	WG2638062
Chloromethane	ND		5.00	1	11/11/2025 17:26	WG2638062
2-Chlorotoluene	ND		1.00	1	11/11/2025 17:26	WG2638062
4-Chlorotoluene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2025 17:26	WG2638062
1,2-Dibromoethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Dibromomethane	ND		1.00	1	11/11/2025 17:26	WG2638062

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,3-Dichlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,4-Dichlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Dichlorodifluoromethane	ND	J4	5.00	1	11/11/2025 17:26	WG2638062
1,1-Dichloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2-Dichloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1-Dichloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2-Dichloropropane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1-Dichloropropene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,3-Dichloropropane	ND		1.00	1	11/11/2025 17:26	WG2638062
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2025 17:26	WG2638062
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2025 17:26	WG2638062
2,2-Dichloropropane	ND		1.00	1	11/11/2025 17:26	WG2638062
Di-isopropyl ether	ND		1.00	1	11/11/2025 17:26	WG2638062
Ethylbenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Hexachloro-1,3-butadiene	ND		2.00	1	11/11/2025 17:26	WG2638062
Isopropylbenzene	6.22		1.00	1	11/11/2025 17:26	WG2638062
p-Isopropyltoluene	ND		1.00	1	11/11/2025 17:26	WG2638062
2-Butanone (MEK)	ND		20.0	1	11/11/2025 17:26	WG2638062
Methylene Chloride	ND		5.00	1	11/11/2025 17:26	WG2638062
4-Methyl-2-pentanone (MIBK)	ND		20.0	1	11/11/2025 17:26	WG2638062
Methyl tert-butyl ether	ND		1.00	1	11/11/2025 17:26	WG2638062
Naphthalene	ND		5.00	1	11/11/2025 17:26	WG2638062
n-Propylbenzene	15.8		1.00	1	11/11/2025 17:26	WG2638062
Styrene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Tetrachloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
Toluene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2,4-Trichlorobenzene	ND		2.00	1	11/11/2025 17:26	WG2638062
1,1,1-Trichloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1,2-Trichloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Trichloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
Trichlorofluoromethane	ND		5.00	1	11/11/2025 17:26	WG2638062
1,2,3-Trichloropropane	ND		2.50	1	11/11/2025 17:26	WG2638062
1,2,4-Trimethylbenzene	ND		2.00	1	11/11/2025 17:26	WG2638062
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Vinyl chloride	ND		1.00	1	11/11/2025 17:26	WG2638062
Xylenes, Total	ND		3.00	1	11/11/2025 17:26	WG2638062
(S) Toluene-d8	*99.1*		*80.0-120*		*11/11/2025 17:26*	WG2638062
(S) 4-Bromofluorobenzene	*95.2*		*77.0-126*		*11/11/2025 17:26*	WG2638062
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*11/11/2025 17:26*	WG2638062

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2330		400	2	11/14/2025 08:52	WG2637873
Residual Range Organics (RRO)	ND		500	2	11/14/2025 08:52	WG2637873
(S) o-Terphenyl	*100*		*52.0-156*		*11/14/2025 08:52*	WG2637873

Sample Narrative:

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch

L1916315-01 WG2637873: Sample resembles laboratory standard for Diesel.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Acenaphthene	9.00		0.0500	1	11/12/2025 11:52	WG2637665
Acenaphthylene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(a)anthracene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(a)pyrene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(b)fluoranthene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(g,h,i)perylene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(k)fluoranthene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Chrysene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Dibenz(a,h)anthracene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Fluoranthene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Fluorene	7.81		0.0500	1	11/12/2025 11:52	WG2637665
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Naphthalene	2.10		0.250	1	11/12/2025 11:52	WG2637665
Phenanthrene	6.60		0.0500	1	11/12/2025 11:52	WG2637665
Pyrene	0.0895		0.0500	1	11/12/2025 11:52	WG2637665
1-Methylnaphthalene	56.6		0.250	1	11/12/2025 11:52	WG2637665
2-Methylnaphthalene	ND		0.250	1	11/12/2025 11:52	WG2637665
2-Chloronaphthalene	ND		0.250	1	11/12/2025 11:52	WG2637665
(S) 2-Fluorobiphenyl	*122*		*48.0-148*		*11/12/2025 11:52*	WG2637665
(S) p-Terphenyl-d14	*115*		*37.0-146*		*11/12/2025 11:52*	WG2637665
(S) 2-Methylnaphthalene-d10	*140*		*50.0-150*		*11/12/2025 11:52*	WG2637665

Calculated Results

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	ND		0.500	1	11/13/2025 21:15	WG2637201

Wet Chemistry by Method 3500Cr C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.500	1	11/13/2025 21:15	WG2636109

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	11/14/2025 12:09	WG2637056

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	ND		10.0	1	11/12/2025 17:50	WG2637201
Cadmium	ND		2.00	1	11/12/2025 17:50	WG2637201
Chromium	ND		10.0	1	11/12/2025 17:50	WG2637201
Lead	ND		6.00	1	11/12/2025 17:50	WG2637201
Nickel	ND		10.0	1	11/12/2025 17:50	WG2637201
Zinc	ND		50.0	1	11/12/2025 17:50	WG2637201

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	380		100	1	11/12/2025 04:35	WG2637753
(S) a,a,a-Trifluorotoluene(FID)	*116*		*78.0-120*		*11/12/2025 04:35*	WG2637753

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2025 17:47	WG2638062
Acrolein	ND		50.0	1	11/11/2025 17:47	WG2638062
Acrylonitrile	ND		10.0	1	11/11/2025 17:47	WG2638062
Benzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Bromobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Bromodichloromethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Bromoform	ND		1.00	1	11/11/2025 17:47	WG2638062
Bromomethane	ND		5.00	1	11/11/2025 17:47	WG2638062
n-Butylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
sec-Butylbenzene	2.93		1.00	1	11/11/2025 17:47	WG2638062
tert-Butylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Carbon tetrachloride	ND		1.00	1	11/11/2025 17:47	WG2638062
Chlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Chlorodibromomethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Chloroethane	ND		5.00	1	11/11/2025 17:47	WG2638062
Chloroform	ND		5.00	1	11/11/2025 17:47	WG2638062
Chloromethane	ND		5.00	1	11/11/2025 17:47	WG2638062
2-Chlorotoluene	ND		1.00	1	11/11/2025 17:47	WG2638062
4-Chlorotoluene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2025 17:47	WG2638062
1,2-Dibromoethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Dibromomethane	ND		1.00	1	11/11/2025 17:47	WG2638062

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,3-Dichlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,4-Dichlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Dichlorodifluoromethane	ND	J4	5.00	1	11/11/2025 17:47	WG2638062
1,1-Dichloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2-Dichloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1-Dichloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2-Dichloropropane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1-Dichloropropene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,3-Dichloropropane	ND		1.00	1	11/11/2025 17:47	WG2638062
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2025 17:47	WG2638062
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2025 17:47	WG2638062
2,2-Dichloropropane	ND		1.00	1	11/11/2025 17:47	WG2638062
Di-isopropyl ether	ND		1.00	1	11/11/2025 17:47	WG2638062
Ethylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Hexachloro-1,3-butadiene	ND		2.00	1	11/11/2025 17:47	WG2638062
Isopropylbenzene	3.26		1.00	1	11/11/2025 17:47	WG2638062
p-Isopropyltoluene	ND		1.00	1	11/11/2025 17:47	WG2638062
2-Butanone (MEK)	ND		20.0	1	11/11/2025 17:47	WG2638062
Methylene Chloride	ND		5.00	1	11/11/2025 17:47	WG2638062
4-Methyl-2-pentanone (MIBK)	ND		20.0	1	11/11/2025 17:47	WG2638062
Methyl tert-butyl ether	ND		1.00	1	11/11/2025 17:47	WG2638062
Naphthalene	ND		5.00	1	11/11/2025 17:47	WG2638062
n-Propylbenzene	7.36		1.00	1	11/11/2025 17:47	WG2638062
Styrene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Tetrachloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
Toluene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2,4-Trichlorobenzene	ND		2.00	1	11/11/2025 17:47	WG2638062
1,1,1-Trichloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1,2-Trichloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Trichloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
Trichlorofluoromethane	ND		5.00	1	11/11/2025 17:47	WG2638062
1,2,3-Trichloropropane	ND		2.50	1	11/11/2025 17:47	WG2638062
1,2,4-Trimethylbenzene	ND		2.00	1	11/11/2025 17:47	WG2638062
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Vinyl chloride	ND		1.00	1	11/11/2025 17:47	WG2638062
Xylenes, Total	ND		3.00	1	11/11/2025 17:47	WG2638062
(S) Toluene-d8	*101*		*80.0-120*		*11/11/2025 17:47*	WG2638062
(S) 4-Bromofluorobenzene	*97.3*		*77.0-126*		*11/11/2025 17:47*	WG2638062
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*11/11/2025 17:47*	WG2638062

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2670		200	1	11/17/2025 22:53	WG2642203
Residual Range Organics (RRO)	327		250	1	11/17/2025 22:53	WG2642203
(S) o-Terphenyl	*111*		*52.0-156*		*11/17/2025 22:53*	WG2642203

Sample Narrative:

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch

L1916315-02 WG2642203: Sample resembles laboratory standard for Diesel.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Acenaphthene	6.56		0.0500	1	11/12/2025 12:10	WG2637665
Acenaphthylene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(a)anthracene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(a)pyrene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(b)fluoranthene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(g,h,i)perylene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(k)fluoranthene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Chrysene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Dibenz(a,h)anthracene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Fluoranthene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Fluorene	4.63		0.0500	1	11/12/2025 12:10	WG2637665
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Naphthalene	1.45		0.250	1	11/12/2025 12:10	WG2637665
Phenanthrene	4.10		0.0500	1	11/12/2025 12:10	WG2637665
Pyrene	0.0641		0.0500	1	11/12/2025 12:10	WG2637665
1-Methylnaphthalene	45.6		0.250	1	11/12/2025 12:10	WG2637665
2-Methylnaphthalene	ND		0.250	1	11/12/2025 12:10	WG2637665
2-Chloronaphthalene	ND		0.250	1	11/12/2025 12:10	WG2637665
(S) 2-Fluorobiphenyl	*113*		*48.0-148*		*11/12/2025 12:10*	WG2637665
(S) p-Terphenyl-d14	*114*		*37.0-146*		*11/12/2025 12:10*	WG2637665
(S) 2-Methylnaphthalene-d10	*140*		*50.0-150*		*11/12/2025 12:10*	WG2637665

QUALITY CONTROL SUMMARY

L1916315-01,02

Method Blank (MB)

(MB) R4301109-1 11/13/25 16:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Hexavalent Chromium	U		0.100	0.500

L1916063-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1916063-02 11/13/25 17:37 • (DUP) R4301109-3 11/13/25 17:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Hexavalent Chromium	ND	ND	1	0.000		20

L1917145-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1917145-01 11/13/25 19:45 • (DUP) R4301111-1 11/13/25 19:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Hexavalent Chromium	ND	ND	1	3.23		20

Laboratory Control Sample (LCS)

(LCS) R4301109-2 11/13/25 17:11

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Hexavalent Chromium	2.00	1.99	99.3	90.0-110	

L1916673-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1916673-01 11/14/25 12:30 • (MS) R4301114-1 11/14/25 12:42

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Hexavalent Chromium	50.0	ND	49.1	98.2	1	90.0-110	

L1916437-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916437-29 11/13/25 21:28 • (MS) R4301111-2 11/13/25 21:41 • (MSD) R4301111-3 11/13/25 21:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Hexavalent Chromium	50.0	ND	49.2	49.2	98.4	98.4	1	90.0-110			0.0364	20

QUALITY CONTROL SUMMARY

L1916315-01,02

Method Blank (MB)

(MB) R4301089-1 11/14/25 11:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0700	0.200

Laboratory Control Sample (LCS)

(LCS) R4301089-2 11/14/25 11:11

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Mercury	3.00	3.13	104	80.0-120	

L1916380-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916380-08 11/14/25 11:14 • (MS) R4301089-4 11/14/25 11:20 • (MSD) R4301089-5 11/14/25 11:22

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	ND	2.94	2.95	94.4	94.8	1	75.0-125			0.395	20

Method Blank (MB)

(MB) R4300480-1 11/12/25 16:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		7.83	10.0
Cadmium	U		0.538	2.00
Chromium	U		1.51	10.0
Lead	U		2.43	6.00
Nickel	U		1.96	10.0
Zinc	U		4.67	50.0

Laboratory Control Sample (LCS)

(LCS) R4300480-2 11/12/25 16:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	1000	962	96.2	80.0-120	
Cadmium	1000	970	97.0	80.0-120	
Chromium	1000	1010	101	80.0-120	
Lead	1000	969	96.9	80.0-120	
Nickel	1000	954	95.4	80.0-120	
Zinc	1000	998	99.8	80.0-120	

L1916211-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916211-01 11/12/25 16:50 • (MS) R4300480-4 11/12/25 16:54 • (MSD) R4300480-5 11/12/25 16:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	1000	ND	962	966	96.2	96.6	1	75.0-125			0.387	20
Cadmium	1000	ND	971	978	97.1	97.8	1	75.0-125			0.644	20
Chromium	1000	ND	1010	1020	101	102	1	75.0-125			1.53	20
Lead	1000	ND	969	981	96.9	98.1	1	75.0-125			1.24	20
Nickel	1000	ND	954	960	95.4	96.0	1	75.0-125			0.676	20
Zinc	1000	ND	996	1000	99.6	100	1	75.0-125			0.721	20

Method Blank (MB)

(MB) R4300541-2 11/11/25 21:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		78.6	100
(S) a,a,a-Trifluorotoluene(FID)	*107*			*78.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300541-1 11/11/25 20:54 • (LCSD) R4300541-3 11/12/25 01:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5000	4910	4980	98.2	99.6	70.0-124			1.42	20
(S) a,a,a-Trifluorotoluene(FID)				*116*	*112*	*78.0-120*				

Method Blank (MB)

(MB) R4301207-2 11/11/25 12:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		46.9	50.0
Acrolein	U		25.0	50.0
Acrylonitrile	U		8.09	10.0
Benzene	U		0.320	1.00
Bromobenzene	U		0.277	1.00
Bromodichloromethane	U		0.371	1.00
Bromoform	U		0.548	1.00
Bromomethane	U		4.85	5.00
n-Butylbenzene	U		0.516	1.00
sec-Butylbenzene	U		0.355	1.00
tert-Butylbenzene	U		0.314	1.00
Carbon tetrachloride	U		0.360	1.00
Chlorobenzene	U		0.266	1.00
Chlorodibromomethane	U		0.398	1.00
Chloroethane	U		2.79	5.00
Chloroform	U		1.28	5.00
Chloromethane	U		1.70	5.00
2-Chlorotoluene	U		0.273	1.00
4-Chlorotoluene	U		0.256	1.00
1,2-Dibromo-3-Chloropropane	U		1.25	5.00
1,2-Dibromoethane	U		0.341	1.00
Dibromomethane	U		0.422	1.00
1,2-Dichlorobenzene	U		0.304	1.00
1,3-Dichlorobenzene	U		0.282	1.00
1,4-Dichlorobenzene	U		0.277	1.00
Dichlorodifluoromethane	U		2.41	5.00
1,1-Dichloroethane	U		0.389	1.00
1,2-Dichloroethane	U		0.395	1.00
1,1-Dichloroethene	U		0.422	1.00
cis-1,2-Dichloroethene	U		0.323	1.00
trans-1,2-Dichloroethene	U		0.348	1.00
1,2-Dichloropropane	U		0.427	1.00
1,1-Dichloropropene	U		0.359	1.00
1,3-Dichloropropane	U		0.283	1.00
cis-1,3-Dichloropropene	U		0.348	1.00
trans-1,3-Dichloropropene	U		0.313	1.00
2,2-Dichloropropane	U		0.463	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.234	1.00
Hexachloro-1,3-butadiene	U		0.650	2.00

Method Blank (MB)

(MB) R4301207-2 11/11/25 12:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.345	1.00
2-Butanone (MEK)	U		9.00	20.0
Methylene Chloride	U		1.48	5.00
4-Methyl-2-pentanone (MIBK)	U		7.52	20.0
Methyl tert-butyl ether	U		0.357	1.00
Naphthalene	U		2.64	5.00
n-Propylbenzene	U		0.239	1.00
Styrene	U		0.342	1.00
1,1,1,2-Tetrachloroethane	U		0.381	1.00
1,1,2,2-Tetrachloroethane	U		0.354	1.00
1,1,2-Trichlorotrifluoroethane	U		0.643	1.00
Tetrachloroethene	U		0.358	1.00
Toluene	U		0.274	1.00
1,2,3-Trichlorobenzene	U		0.935	1.00
1,2,4-Trichlorobenzene	U		0.691	2.00
1,1,1-Trichloroethane	U		0.336	1.00
1,1,2-Trichloroethane	U		0.375	1.00
Trichloroethene	U		0.383	1.00
Trichlorofluoromethane	U		3.04	5.00
1,2,3-Trichloropropane	U		0.602	2.50
1,2,4-Trimethylbenzene	U		0.274	2.00
1,2,3-Trimethylbenzene	U		0.339	1.00
1,3,5-Trimethylbenzene	U		0.266	1.00
Vinyl chloride	U		0.458	1.00
Xylenes, Total	U		0.319	3.00
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.8*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4301207-1 11/11/25 11:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	50.0	48.3	96.6	19.0-160	J
Acrolein	50.0	65.1	130	10.0-160	
Acrylonitrile	50.0	50.4	101	55.0-149	
Benzene	10.0	10.1	101	70.0-123	

Laboratory Control Sample (LCS)

(LCS) R4301207-1 11/11/25 11:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromobenzene	10.0	10.2	102	73.0-121	
Bromodichloromethane	10.0	10.0	100	75.0-120	
Bromoform	10.0	8.71	87.1	68.0-132	
Bromomethane	10.0	15.2	152	10.0-160	
n-Butylbenzene	10.0	10.6	106	73.0-125	
sec-Butylbenzene	10.0	10.4	104	75.0-125	
tert-Butylbenzene	10.0	10.4	104	76.0-124	
Carbon tetrachloride	10.0	10.4	104	68.0-126	
Chlorobenzene	10.0	10.3	103	80.0-121	
Chlorodibromomethane	10.0	9.27	92.7	77.0-125	
Chloroethane	10.0	13.5	135	47.0-150	
Chloroform	10.0	10.5	105	73.0-120	
Chloromethane	10.0	12.3	123	41.0-142	
2-Chlorotoluene	10.0	10.9	109	76.0-123	
4-Chlorotoluene	10.0	10.5	105	75.0-122	
1,2-Dibromo-3-Chloropropane	10.0	8.23	82.3	58.0-134	
1,2-Dibromoethane	10.0	10.0	100	80.0-122	
Dibromomethane	10.0	10.5	105	80.0-120	
1,2-Dichlorobenzene	10.0	10.4	104	79.0-121	
1,3-Dichlorobenzene	10.0	10.6	106	79.0-120	
1,4-Dichlorobenzene	10.0	10.6	106	79.0-120	
Dichlorodifluoromethane	10.0	16.2	162	51.0-149	J4
1,1-Dichloroethane	10.0	10.3	103	70.0-126	
1,2-Dichloroethane	10.0	10.9	109	70.0-128	
1,1-Dichloroethene	10.0	10.3	103	71.0-124	
cis-1,2-Dichloroethene	10.0	10.1	101	73.0-120	
trans-1,2-Dichloroethene	10.0	10.4	104	73.0-120	
1,2-Dichloropropane	10.0	10.0	100	77.0-125	
1,1-Dichloropropene	10.0	10.4	104	74.0-126	
1,3-Dichloropropane	10.0	10.3	103	80.0-120	
cis-1,3-Dichloropropene	10.0	9.96	99.6	80.0-123	
trans-1,3-Dichloropropene	10.0	10.4	104	78.0-124	
2,2-Dichloropropane	10.0	10.4	104	58.0-130	
Di-isopropyl ether	10.0	9.76	97.6	58.0-138	
Ethylbenzene	10.0	10.1	101	79.0-123	
Hexachloro-1,3-butadiene	10.0	9.34	93.4	54.0-138	
Isopropylbenzene	10.0	10.1	101	76.0-127	
p-Isopropyltoluene	10.0	10.5	105	76.0-125	
2-Butanone (MEK)	50.0	49.3	98.6	44.0-160	
Methylene Chloride	10.0	10.4	104	67.0-120	

Laboratory Control Sample (LCS)

(LCS) R4301207-1 11/11/25 11:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	50.0	49.7	99.4	68.0-142	
Methyl tert-butyl ether	10.0	10.3	103	68.0-125	
Naphthalene	10.0	8.06	80.6	54.0-135	
n-Propylbenzene	10.0	10.7	107	77.0-124	
Styrene	10.0	9.76	97.6	73.0-130	
1,1,1,2-Tetrachloroethane	10.0	10.0	100	75.0-125	
1,1,2,2-Tetrachloroethane	10.0	10.3	103	65.0-130	
1,1,2-Trichlorotrifluoroethane	10.0	10.7	107	69.0-132	
Tetrachloroethene	10.0	9.94	99.4	72.0-132	
Toluene	10.0	10.4	104	79.0-120	
1,2,3-Trichlorobenzene	10.0	10.5	105	50.0-138	
1,2,4-Trichlorobenzene	10.0	9.29	92.9	57.0-137	
1,1,1-Trichloroethane	10.0	10.8	108	73.0-124	
1,1,2-Trichloroethane	10.0	10.2	102	80.0-120	
Trichloroethene	10.0	10.3	103	78.0-124	
Trichlorofluoromethane	10.0	12.1	121	59.0-147	
1,2,3-Trichloropropane	10.0	10.0	100	73.0-130	
1,2,4-Trimethylbenzene	10.0	10.5	105	76.0-121	
1,2,3-Trimethylbenzene	10.0	10.5	105	77.0-120	
1,3,5-Trimethylbenzene	10.0	10.6	106	76.0-122	
Vinyl chloride	10.0	12.7	127	67.0-131	
Xylenes, Total	30.0	30.0	100	79.0-123	
(S) Toluene-d8			*100*	*80.0-120*	
(S) 4-Bromofluorobenzene			*97.9*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*104*	*70.0-130*	

Method Blank (MB)

(MB) R4300761-1 11/13/25 15:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		60.5	200
Residual Range Organics (RRO)	U		77.2	250
(S) o-Terphenyl	*107*			*52.0-156*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300761-2 11/13/25 16:12 • (LCSD) R4300761-3 11/13/25 16:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	1500	1410	1430	94.0	95.3	50.0-150			1.41	20
(S) o-Terphenyl				*96.0*	*88.0*	*52.0-156*				

Method Blank (MB)

(MB) R4302580-2 11/17/25 21:26

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		60.5	200
Residual Range Organics (RRO)	U		77.2	250
(S) o-Terphenyl	*112*			*52.0-156*

Laboratory Control Sample (LCS)

(LCS) R4302580-1 11/17/25 21:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	1500	1890	126	50.0-150	
(S) o-Terphenyl			*139*	*52.0-156*	

Method Blank (MB)

(MB) R4300172-3 11/11/25 19:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0210	0.0500
Acenaphthene	U		0.0202	0.0500
Acenaphthylene	U		0.0221	0.0500
Benzo(a)anthracene	U		0.0242	0.0500
Benzo(a)pyrene	U		0.0272	0.0500
Benzo(b)fluoranthene	U		0.0253	0.0500
Benzo(g,h,i)perylene	U		0.0335	0.0500
Benzo(k)fluoranthene	U		0.0254	0.0500
Chrysene	U		0.0257	0.0500
Dibenz(a,h)anthracene	U		0.0251	0.0500
Fluoranthene	U		0.0375	0.0500
Fluorene	U		0.0212	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0270	0.0500
Naphthalene	U		0.118	0.250
Phenanthrene	U		0.0279	0.0500
Pyrene	U		0.0416	0.0500
1-Methylnaphthalene	U		0.112	0.250
2-Methylnaphthalene	U		0.117	0.250
2-Chloronaphthalene	U		0.111	0.250
(S) 2-Fluorobiphenyl	*121*			*48.0-148*
(S) p-Terphenyl-d14	*122*			*37.0-146*
(S) 2-Methylnaphthalene-d10	*131*			*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300172-1 11/11/25 18:49 • (LCSD) R4300172-2 11/11/25 19:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	2.37	2.37	118	118	67.0-150			0.000	20
Acenaphthene	2.00	2.22	2.23	111	111	65.0-138			0.449	20
Acenaphthylene	2.00	2.34	2.34	117	117	66.0-140			0.000	20
Benzo(a)anthracene	2.00	2.40	2.40	120	120	61.0-140			0.000	20
Benzo(a)pyrene	2.00	2.25	2.29	112	115	60.0-143			1.76	20
Benzo(b)fluoranthene	2.00	2.06	2.10	103	105	58.0-141			1.92	20
Benzo(g,h,i)perylene	2.00	2.01	2.03	100	102	52.0-153			0.990	20
Benzo(k)fluoranthene	2.00	2.15	2.19	107	109	58.0-148			1.84	20
Chrysene	2.00	2.37	2.42	118	121	64.0-144			2.09	20
Dibenz(a,h)anthracene	2.00	2.16	2.19	108	109	52.0-155			1.38	20
Fluoranthene	2.00	2.58	2.62	129	131	69.0-153			1.54	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300172-1 11/11/25 18:49 • (LCSD) R4300172-2 11/11/25 19:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	2.00	2.45	2.46	122	123	64.0-136			0.407	20
Indeno(1,2,3-cd)pyrene	2.00	2.04	2.07	102	104	54.0-153			1.46	20
Naphthalene	2.00	2.42	2.44	121	122	61.0-137			0.823	20
Phenanthrene	2.00	2.32	2.35	116	117	62.0-137			1.28	20
Pyrene	2.00	2.26	2.31	113	115	60.0-142			2.19	20
1-Methylnaphthalene	2.00	2.66	2.68	133	134	66.0-142			0.749	20
2-Methylnaphthalene	2.00	2.48	2.50	124	125	62.0-136			0.803	20
2-Chloronaphthalene	2.00	2.18	2.17	109	108	64.0-140			0.460	20
(S) 2-Fluorobiphenyl				*119*	*118*	*48.0-148*				
(S) p-Terphenyl-d14				*116*	*117*	*37.0-146*				
(S) 2-Methylnaphthalene-d10				*130*	*130*	*50.0-150*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1,6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1,4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Phillips 66 - TRC

13810 SE Eastgate Way
Suite 440
Bellevue. WA 98005

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
cmcorp "

Pres Chk

Report to: Eric Larsen
~~Madison Taylor 425-512-7073~~ 425.566.0407

Email To: elarsen@trccompanies.com
~~MPTaylor@trccompanies.com~~;David Miller@trc

Project Description: Phillips 66

City/State Collected: Ferndale, WA

Please Circle: (PT) MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # 670297

Lab Project # PHILLIPSTRC-FERNDALE

Collected by (print): Madison Taylor

Site/Facility ID # FERNDALE, WA

P.O. # 4301690948

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X STD TAT

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1916315

A008

Acctnum: PHILL1PSTRC
Template: T283559
Prelogin: P1187936
PM: 3976 - Naomi M Sackett
PB: 11/03/25 mv
Shipped Via: FedEX Priority

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Metals 250mlHDPE-HNO3 *As,Cd,Pb,Ni,Hg,Zn	CR3 250mlHDPE-NoPres	CR6ICFFP 50mlTube/plungerPres	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVI 40mlAmb-NoPres-WT + methanol	V8260 40mlAmb-HCl			Remarks	Sample # (lab only)
MW-OWS-4	G	GW	—	11/6/25	1150	13	X	X	X	X	X	X	X				-01
DUP-1	G	GW	—	↓	—	13	X	X	X	X	X	X	X				-02
		GW															
		GW															

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg
8260: hVOOCs+BTEX

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 885851961147

Sample Receipt Checklist
COC Seal Present/Intact: __NP /Y __N
COC Signed/Accurate: X __N
Bottles arrive intact: X __N
Correct bottles used: X __N
Sufficient volume sent: X __N
If Applicable
VOA Zero Headspace: X __N
Preservation Correct/Checked: X __N
RAD Screen <0.5 mR/hr: X __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No (HCL) MeoH TBR	
Madison	11/7/25	0953		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.1 °C 4.1	Bottles Received: 26
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11.8.25	Time: 0900

If p... PH – 10BDH07251 TRC – 5090A93 ...e/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

November 25, 2025

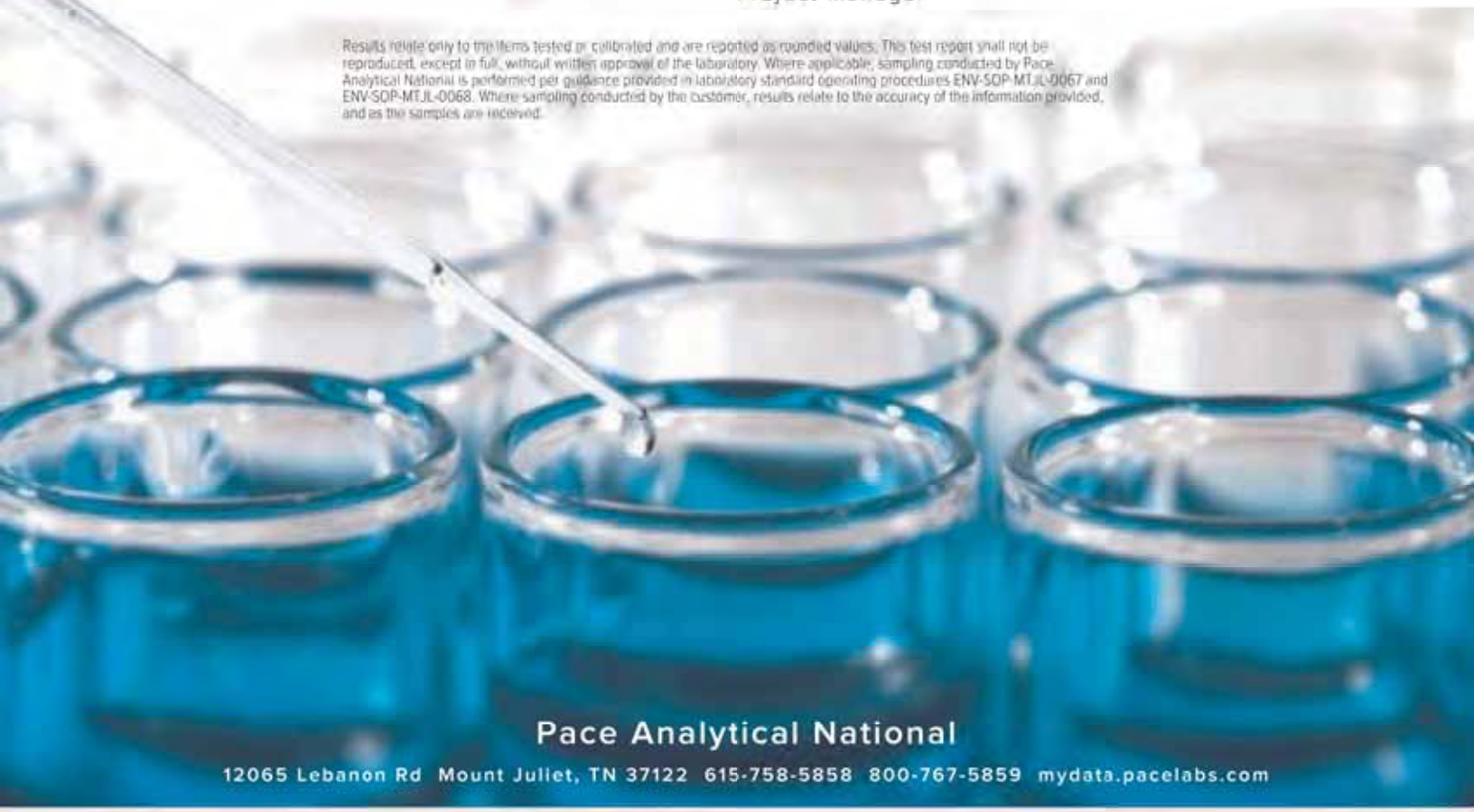
Phillips 66 - TRC

Sample Delivery Group:	L1916517
Samples Received:	11/08/2025
Project Number:	670297
Description:	Phillips 66
Site:	FERNDALE, WA
Report To:	Madison Taylor 13810 SE Eastgate Way Suite 440 Bellevue, WA 98005

Entire Report Reviewed By:

Shane Gambill
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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SAMPLE SUMMARY

B-5-25:6.3 L1916517-01

Collected by	Collected date/time	Received date/time
MT/DM	11/05/25 09:35	11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:22	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:22	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:14	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:02	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 09:35	11/14/25 10:14	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/05/25 09:35	11/12/25 04:45	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638956	1	11/11/25 11:30	11/14/25 22:17	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 16:50	CMF	Mt. Juliet, TN

B-4-25:7 L1916517-03

Collected by	Collected date/time	Received date/time
MT/DM	11/05/25 10:30	11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:22	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:22	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:17	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:03	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 10:30	11/14/25 10:51	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/05/25 10:30	11/12/25 05:05	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2641917	2.99	11/17/25 07:00	11/19/25 18:10	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 17:10	CMF	Mt. Juliet, TN

B-3-25:7.5 L1916517-05

Collected by	Collected date/time	Received date/time
MT/DM	11/05/25 11:05	11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:22	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:22	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:20	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:05	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2645014	10	11/05/25 11:05	11/21/25 13:02	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	40	11/05/25 11:05	11/12/25 08:23	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638865	15	11/12/25 09:55	11/16/25 15:42	RF	Mt. Juliet, TN
TPH by Method EPH	WG2638865	3	11/12/25 09:55	11/16/25 10:53	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	10	11/13/25 05:14	11/16/25 17:31	NJK	Mt. Juliet, TN

B-3-25:11.5 L1916517-06

Collected by	Collected date/time	Received date/time
MT/DM	11/05/25 11:25	11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:22	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:22	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:22	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:07	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 11:25	11/14/25 12:05	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2639828	1	11/05/25 11:25	11/14/25 13:29	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2641552	2	11/05/25 11:25	11/16/25 21:16	ADM	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 14:10	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 17:30	CMF	Mt. Juliet, TN

SAMPLE SUMMARY

B-2-25:7.2 L1916517-07

Collected by: MT/DM | Collected date/time: 11/05/25 12:00 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:25	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:09	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 12:00	11/14/25 12:42	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/05/25 12:00	11/12/25 05:44	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 05:56	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 17:50	CMF	Mt. Juliet, TN

B-1-25:7 L1916517-09

Collected by: MT/DM | Collected date/time: 11/05/25 12:35 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:28	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:10	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 12:35	11/14/25 13:19	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2639828	1	11/05/25 12:35	11/14/25 13:48	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2641552	1	11/05/25 12:35	11/16/25 21:35	ADM	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 06:19	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 18:10	CMF	Mt. Juliet, TN

B-6-25:7.8 L1916517-11

Collected by: MT/DM | Collected date/time: 11/06/25 08:00 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:30	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:12	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 08:00	11/14/25 13:56	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 08:00	11/12/25 06:24	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 06:42	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 18:30	CMF	Mt. Juliet, TN

B-7-25:7.8 L1916517-13

Collected by: MT/DM | Collected date/time: 11/06/25 09:00 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:33	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:17	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 09:00	11/14/25 14:33	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 09:00	11/12/25 06:44	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 07:05	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 18:50	CMF	Mt. Juliet, TN

SAMPLE SUMMARY

B-8-25:7 L1916517-15

Collected by	Collected date/time	Received date/time
MT/DM	11/06/25 14:10	11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638490	1	11/12/25 09:36	11/12/25 09:45	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:36	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:19	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 14:10	11/14/25 15:11	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 14:10	11/12/25 07:04	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2641917	2.89	11/17/25 07:00	11/19/25 18:33	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 19:10	CMF	Mt. Juliet, TN

B-9-25:7 L1916517-17

Collected by	Collected date/time	Received date/time
MT/DM	11/06/25 14:35	11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:24	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638490	1	11/12/25 09:36	11/12/25 09:45	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:24	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:38	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:20	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 14:35	11/14/25 15:48	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 14:35	11/12/25 07:24	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2641917	2.99	11/17/25 07:00	11/19/25 18:56	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 19:30	CMF	Mt. Juliet, TN

B-10-25:7 L1916517-19

Collected by	Collected date/time	Received date/time
MT/DM	11/06/25 15:05	11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638534	1	11/12/25 08:38	11/17/25 15:24	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638490	1	11/12/25 09:36	11/12/25 09:45	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:24	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638573	1	11/13/25 14:15	11/15/25 15:44	SDG	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638534	1	11/12/25 08:38	11/12/25 19:49	MAP	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 15:05	11/14/25 16:25	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 15:05	11/12/25 07:44	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2641917	2.99	11/17/25 07:00	11/19/25 19:19	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 19:50	CMF	Mt. Juliet, TN

B-11-25:13 L1916517-21

Collected by	Collected date/time	Received date/time
MT/DM	11/06/25 15:50	11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638534	1	11/12/25 08:38	11/17/25 15:24	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638490	1	11/12/25 09:36	11/12/25 09:45	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:24	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638573	1	11/13/25 14:15	11/15/25 15:47	SDG	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638534	1	11/12/25 08:38	11/12/25 18:46	MAP	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 15:50	11/14/25 17:02	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2639828	1	11/06/25 15:50	11/14/25 14:07	JAH	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 08:36	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 20:10	CMF	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Shane Gambill
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was performed from an improper container for the following samples.

Lab Sample ID	Project Sample ID	Method
L1916517-01	B-5-25.6.3	EPH

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	31.8		1.18	1	11/17/2025 15:22	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.7		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.36	1	11/17/2025 15:22	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0472	1	11/13/2025 16:14	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.59		2.36	1	11/12/2025 15:02	WG2638525
Cadmium	ND		0.590	1	11/12/2025 15:02	WG2638525
Chromium	31.8		1.18	1	11/12/2025 15:02	WG2638525
Lead	3.70		0.590	1	11/12/2025 15:02	WG2638525
Nickel	31.6		2.36	1	11/12/2025 15:02	WG2638525
Zinc	41.6		5.90	1	11/12/2025 15:02	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
C8-C10 Aromatics	ND		7.06	1	11/14/2025 10:14	WG2639771
(S) 2,5-Dibromotoluene(FID)	*102*		*60.0-140*		*11/14/2025 10:14*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*100*		*60.0-140*		*11/14/2025 10:14*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.143	1	11/12/2025 04:45	WG2638380
Acrylonitrile	ND		0.0178	1	11/12/2025 04:45	WG2638380
Benzene	ND		0.00143	1	11/12/2025 04:45	WG2638380
Bromobenzene	ND		0.0178	1	11/12/2025 04:45	WG2638380
Bromodichloromethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Bromoform	ND		0.0356	1	11/12/2025 04:45	WG2638380
Bromomethane	ND	C3	0.0178	1	11/12/2025 04:45	WG2638380
n-Butylbenzene	0.0388		0.0178	1	11/12/2025 04:45	WG2638380
sec-Butylbenzene	ND		0.0178	1	11/12/2025 04:45	WG2638380
tert-Butylbenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00713	1	11/12/2025 04:45	WG2638380
Chlorobenzene	ND		0.00356	1	11/12/2025 04:45	WG2638380
Chlorodibromomethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Chloroethane	ND	C3	0.0143	1	11/12/2025 04:45	WG2638380
Chloroform	ND		0.00356	1	11/12/2025 04:45	WG2638380
Chloromethane	ND		0.0178	1	11/12/2025 04:45	WG2638380
2-Chlorotoluene	ND		0.00356	1	11/12/2025 04:45	WG2638380
4-Chlorotoluene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0356	1	11/12/2025 04:45	WG2638380
1,2-Dibromoethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Dibromomethane	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,2-Dichlorobenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,3-Dichlorobenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00713	1	11/12/2025 04:45	WG2638380
Dichlorodifluoromethane	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,1-Dichloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
1,2-Dichloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
1,1-Dichloroethene	ND		0.00356	1	11/12/2025 04:45	WG2638380
cis-1,2-Dichloroethene	ND		0.00356	1	11/12/2025 04:45	WG2638380
trans-1,2-Dichloroethene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,2-Dichloropropane	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,1-Dichloropropene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,3-Dichloropropane	ND		0.00713	1	11/12/2025 04:45	WG2638380
cis-1,3-Dichloropropene	ND		0.00356	1	11/12/2025 04:45	WG2638380
trans-1,3-Dichloropropene	ND		0.00713	1	11/12/2025 04:45	WG2638380
2,2-Dichloropropane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Di-isopropyl ether	ND		0.00143	1	11/12/2025 04:45	WG2638380
Ethylbenzene	ND		0.00356	1	11/12/2025 04:45	WG2638380
Hexachloro-1,3-butadiene	ND		0.0356	1	11/12/2025 04:45	WG2638380
Isopropylbenzene	ND		0.00356	1	11/12/2025 04:45	WG2638380
p-Isopropyltoluene	ND		0.00713	1	11/12/2025 04:45	WG2638380
2-Butanone (MEK)	ND		0.143	1	11/12/2025 04:45	WG2638380
Methylene Chloride	ND		0.0356	1	11/12/2025 04:45	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0356	1	11/12/2025 04:45	WG2638380
Methyl tert-butyl ether	ND		0.00143	1	11/12/2025 04:45	WG2638380
Naphthalene	ND		0.0178	1	11/12/2025 04:45	WG2638380
n-Propylbenzene	0.00714		0.00713	1	11/12/2025 04:45	WG2638380
Styrene	ND		0.0178	1	11/12/2025 04:45	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00356	1	11/12/2025 04:45	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00713	1	11/12/2025 04:45	WG2638380
Tetrachloroethene	ND		0.00356	1	11/12/2025 04:45	WG2638380
Toluene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0178	1	11/12/2025 04:45	WG2638380
1,2,4-Trichlorobenzene	ND		0.0178	1	11/12/2025 04:45	WG2638380
1,1,1-Trichloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
1,1,2-Trichloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Trichloroethene	ND		0.00143	1	11/12/2025 04:45	WG2638380
Trichlorofluoromethane	ND		0.00570	1	11/12/2025 04:45	WG2638380
1,2,3-Trichloropropane	ND		0.0178	1	11/12/2025 04:45	WG2638380
1,2,4-Trimethylbenzene	0.0654		0.00713	1	11/12/2025 04:45	WG2638380
1,2,3-Trimethylbenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,3,5-Trimethylbenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380
Vinyl chloride	ND	C3	0.00356	1	11/12/2025 04:45	WG2638380
Xylenes, Total	ND		0.00927	1	11/12/2025 04:45	WG2638380
(S) Toluene-d8	*96.4*		*75.0-131*		*11/12/2025 04:45*	WG2638380

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*11/12/2025 04:45*	WG2638380
(S) 1,2-Dichloroethane-d4	*114*		*70.0-130*		*11/12/2025 04:45*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	5900	1	11/14/2025 22:17	WG2638956
C12-C16 Aliphatics	7300	J4	5900	1	11/14/2025 22:17	WG2638956
C16-C21 Aliphatics	7370	J4	5900	1	11/14/2025 22:17	WG2638956
C21-C34 Aliphatics	ND	J4	5900	1	11/14/2025 22:17	WG2638956
C10-C12 Aromatics	ND		5900	1	11/14/2025 22:17	WG2638956
C12-C16 Aromatics	22800	J4	5900	1	11/14/2025 22:17	WG2638956
C16-C21 Aromatics	53600	J4	5900	1	11/14/2025 22:17	WG2638956
C21-C34 Aromatics	ND		5900	1	11/14/2025 22:17	WG2638956
(S) o-Terphenyl	*51.7*		*50.0-150*		*11/14/2025 22:17*	WG2638956
(S) 1-Chloro-octadecane	*54.7*		*50.0-150*		*11/14/2025 22:17*	WG2638956
(S) 2-Fluorobiphenyl	*93.0*		*50.0-150*		*11/14/2025 22:17*	WG2638956
(S) 2-Bromonaphthalene	*93.4*		*50.0-150*		*11/14/2025 22:17*	WG2638956

Sample Narrative:

L1916517-01 WG2638956: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Acenaphthene	0.0391		0.00708	1	11/13/2025 16:50	WG2638729
Acenaphthylene	0.00990		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(a)anthracene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(a)pyrene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(b)fluoranthene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(g,h,i)perylene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(k)fluoranthene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Chrysene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Dibenz(a,h)anthracene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Fluoranthene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Fluorene	0.0264		0.00708	1	11/13/2025 16:50	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Naphthalene	ND		0.0236	1	11/13/2025 16:50	WG2638729
Phenanthrene	0.0878		0.00708	1	11/13/2025 16:50	WG2638729
Pyrene	ND		0.00708	1	11/13/2025 16:50	WG2638729
1-Methylnaphthalene	0.0658		0.0236	1	11/13/2025 16:50	WG2638729
2-Methylnaphthalene	0.0243		0.0236	1	11/13/2025 16:50	WG2638729
2-Chloronaphthalene	ND		0.0236	1	11/13/2025 16:50	WG2638729
(S) p-Terphenyl-d14	*81.8*		*23.0-120*		*11/13/2025 16:50*	WG2638729
(S) 2-Fluorobiphenyl	*71.1*		*34.0-125*		*11/13/2025 16:50*	WG2638729
(S) 2-Methylnaphthalene-d10	*77.7*		*50.0-150*		*11/13/2025 16:50*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	38.8		1.19	1	11/17/2025 15:22	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.1		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.38	1	11/17/2025 15:22	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0475	1	11/13/2025 16:17	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.25		2.38	1	11/12/2025 15:03	WG2638525
Cadmium	ND		0.594	1	11/12/2025 15:03	WG2638525
Chromium	38.8		1.19	1	11/12/2025 15:03	WG2638525
Lead	5.17		0.594	1	11/12/2025 15:03	WG2638525
Nickel	32.9		2.38	1	11/12/2025 15:03	WG2638525
Zinc	48.7		5.94	1	11/12/2025 15:03	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
C8-C10 Aromatics	ND		7.19	1	11/14/2025 10:51	WG2639771
(S) 2,5-Dibromotoluene(FID)	*103*		*60.0-140*		*11/14/2025 10:51*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*101*		*60.0-140*		*11/14/2025 10:51*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.144	1	11/12/2025 05:05	WG2638380
Acrylonitrile	ND		0.0180	1	11/12/2025 05:05	WG2638380
Benzene	ND		0.00144	1	11/12/2025 05:05	WG2638380
Bromobenzene	ND		0.0180	1	11/12/2025 05:05	WG2638380
Bromodichloromethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Bromoform	ND		0.0359	1	11/12/2025 05:05	WG2638380
Bromomethane	ND	C3	0.0180	1	11/12/2025 05:05	WG2638380
n-Butylbenzene	0.0972		0.0180	1	11/12/2025 05:05	WG2638380
sec-Butylbenzene	0.0518		0.0180	1	11/12/2025 05:05	WG2638380
tert-Butylbenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00719	1	11/12/2025 05:05	WG2638380
Chlorobenzene	ND		0.00359	1	11/12/2025 05:05	WG2638380
Chlorodibromomethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Chloroethane	ND	C3	0.0144	1	11/12/2025 05:05	WG2638380
Chloroform	ND		0.00359	1	11/12/2025 05:05	WG2638380
Chloromethane	ND		0.0180	1	11/12/2025 05:05	WG2638380
2-Chlorotoluene	ND		0.00359	1	11/12/2025 05:05	WG2638380
4-Chlorotoluene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0359	1	11/12/2025 05:05	WG2638380
1,2-Dibromoethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Dibromomethane	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2-Dichlorobenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,3-Dichlorobenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00719	1	11/12/2025 05:05	WG2638380
Dichlorodifluoromethane	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,1-Dichloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
1,2-Dichloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
1,1-Dichloroethene	ND		0.00359	1	11/12/2025 05:05	WG2638380
cis-1,2-Dichloroethene	ND		0.00359	1	11/12/2025 05:05	WG2638380
trans-1,2-Dichloroethene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2-Dichloropropane	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,1-Dichloropropene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,3-Dichloropropane	ND		0.00719	1	11/12/2025 05:05	WG2638380
cis-1,3-Dichloropropene	ND		0.00359	1	11/12/2025 05:05	WG2638380
trans-1,3-Dichloropropene	ND		0.00719	1	11/12/2025 05:05	WG2638380
2,2-Dichloropropane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Di-isopropyl ether	ND		0.00144	1	11/12/2025 05:05	WG2638380
Ethylbenzene	ND		0.00359	1	11/12/2025 05:05	WG2638380
Hexachloro-1,3-butadiene	ND		0.0359	1	11/12/2025 05:05	WG2638380
Isopropylbenzene	0.0932		0.00359	1	11/12/2025 05:05	WG2638380
p-Isopropyltoluene	ND		0.00719	1	11/12/2025 05:05	WG2638380
2-Butanone (MEK)	0.181	C5	0.144	1	11/12/2025 05:05	WG2638380
Methylene Chloride	ND		0.0359	1	11/12/2025 05:05	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0359	1	11/12/2025 05:05	WG2638380
Methyl tert-butyl ether	ND		0.00144	1	11/12/2025 05:05	WG2638380
Naphthalene	ND		0.0180	1	11/12/2025 05:05	WG2638380
n-Propylbenzene	0.155		0.00719	1	11/12/2025 05:05	WG2638380
Styrene	ND		0.0180	1	11/12/2025 05:05	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00359	1	11/12/2025 05:05	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00719	1	11/12/2025 05:05	WG2638380
Tetrachloroethene	ND		0.00359	1	11/12/2025 05:05	WG2638380
Toluene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0180	1	11/12/2025 05:05	WG2638380
1,2,4-Trichlorobenzene	ND		0.0180	1	11/12/2025 05:05	WG2638380
1,1,1-Trichloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
1,1,2-Trichloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Trichloroethene	ND		0.00144	1	11/12/2025 05:05	WG2638380
Trichlorofluoromethane	ND		0.00575	1	11/12/2025 05:05	WG2638380
1,2,3-Trichloropropane	ND		0.0180	1	11/12/2025 05:05	WG2638380
1,2,4-Trimethylbenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2,3-Trimethylbenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,3,5-Trimethylbenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
Vinyl chloride	ND	C3	0.00359	1	11/12/2025 05:05	WG2638380
Xylenes, Total	ND		0.00935	1	11/12/2025 05:05	WG2638380
(S) Toluene-d8	*95.3*		*75.0-131*		*11/12/2025 05:05*	WG2638380

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*11/12/2025 05:05*	WG2638380
(S) 1,2-Dichloroethane-d4	*116*		*70.0-130*		*11/12/2025 05:05*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C12-C16 Aliphatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C16-C21 Aliphatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C21-C34 Aliphatics	ND		17800	2.99	11/19/2025 18:10	WG2641917
C10-C12 Aromatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C12-C16 Aromatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C16-C21 Aromatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C21-C34 Aromatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
(S) o-Terphenyl	*64.8*		*50.0-150*		*11/19/2025 18:10*	WG2641917
(S) 1-Chloro-octadecane	*53.3*		*50.0-150*		*11/19/2025 18:10*	WG2641917
(S) 2-Fluorobiphenyl	*95.0*		*50.0-150*		*11/19/2025 18:10*	WG2641917
(S) 2-Bromonaphthalene	*98.7*		*50.0-150*		*11/19/2025 18:10*	WG2641917

Sample Narrative:

L1916517-03 WG2641917: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Acenaphthene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Acenaphthylene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(a)anthracene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(a)pyrene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(b)fluoranthene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(g,h,i)perylene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(k)fluoranthene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Chrysene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Dibenz(a,h)anthracene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Fluoranthene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Fluorene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Naphthalene	ND		0.0238	1	11/13/2025 17:10	WG2638729
Phenanthrene	0.0120		0.00713	1	11/13/2025 17:10	WG2638729
Pyrene	ND		0.00713	1	11/13/2025 17:10	WG2638729
1-Methylnaphthalene	ND		0.0238	1	11/13/2025 17:10	WG2638729
2-Methylnaphthalene	ND		0.0238	1	11/13/2025 17:10	WG2638729
2-Chloronaphthalene	ND		0.0238	1	11/13/2025 17:10	WG2638729
(S) p-Terphenyl-d14	*90.1*		*23.0-120*		*11/13/2025 17:10*	WG2638729
(S) 2-Fluorobiphenyl	*77.7*		*34.0-125*		*11/13/2025 17:10*	WG2638729
(S) 2-Methylnaphthalene-d10	*78.2*		*50.0-150*		*11/13/2025 17:10*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	12.2		1.14	1	11/17/2025 15:22	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.9		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.28	1	11/17/2025 15:22	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0455	1	11/13/2025 16:20	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.28	1	11/12/2025 15:05	WG2638525
Cadmium	ND		0.569	1	11/12/2025 15:05	WG2638525
Chromium	12.2		1.14	1	11/12/2025 15:05	WG2638525
Lead	3.07		0.569	1	11/12/2025 15:05	WG2638525
Nickel	9.89		2.28	1	11/12/2025 15:05	WG2638525
Zinc	20.7		5.69	1	11/12/2025 15:05	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		66.4	10	11/21/2025 13:02	WG2645014
Adjusted C5-C6 Aliphatics	ND		66.4	10	11/21/2025 13:02	WG2645014
Unadjusted C6-C8 Aliphatics	ND		66.4	10	11/21/2025 13:02	WG2645014
Adjusted C6-C8 Aliphatics	ND		66.4	10	11/21/2025 13:02	WG2645014
Unadjusted C8-C10 Aliphatics	92.9		66.4	10	11/21/2025 13:02	WG2645014
Adjusted C8-C10 Aliphatics	89.4		66.4	10	11/21/2025 13:02	WG2645014
C8-C10 Aromatics	73.2		66.4	10	11/21/2025 13:02	WG2645014
(S) 2,5-Dibromotoluene(FID)	*142*	J1	*60.0-140*		*11/21/2025 13:02*	WG2645014
(S) 2,5-Dibromotoluene(PID)	*106*		*60.0-140*		*11/21/2025 13:02*	WG2645014

Sample Narrative:

L1916517-05 WG2645014: Surrogate failure due to matrix interference

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND	J3	5.34	40	11/12/2025 08:23	WG2638380
Acrylonitrile	ND		0.667	40	11/12/2025 08:23	WG2638380
Benzene	0.0561		0.0534	40	11/12/2025 08:23	WG2638380
Bromobenzene	ND	J3	0.667	40	11/12/2025 08:23	WG2638380
Bromodichloromethane	ND		0.133	40	11/12/2025 08:23	WG2638380
Bromoform	ND	J3	1.33	40	11/12/2025 08:23	WG2638380
Bromomethane	ND	C3 J3 J5	0.667	40	11/12/2025 08:23	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
n-Butylbenzene	0.912		0.667	40	11/12/2025 08:23	WG2638380
sec-Butylbenzene	0.798		0.667	40	11/12/2025 08:23	WG2638380
tert-Butylbenzene	ND		0.267	40	11/12/2025 08:23	WG2638380
Carbon tetrachloride	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
Chlorobenzene	ND		0.133	40	11/12/2025 08:23	WG2638380
Chlorodibromomethane	ND		0.133	40	11/12/2025 08:23	WG2638380
Chloroethane	ND	C3 J3 J5	0.534	40	11/12/2025 08:23	WG2638380
Chloroform	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
Chloromethane	ND		0.667	40	11/12/2025 08:23	WG2638380
2-Chlorotoluene	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
4-Chlorotoluene	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
1,2-Dibromo-3-Chloropropane	ND		1.33	40	11/12/2025 08:23	WG2638380
1,2-Dibromoethane	ND		0.133	40	11/12/2025 08:23	WG2638380
Dibromomethane	ND		0.267	40	11/12/2025 08:23	WG2638380
1,2-Dichlorobenzene	ND		0.267	40	11/12/2025 08:23	WG2638380
1,3-Dichlorobenzene	ND		0.267	40	11/12/2025 08:23	WG2638380
1,4-Dichlorobenzene	ND	C3	0.267	40	11/12/2025 08:23	WG2638380
Dichlorodifluoromethane	ND		0.267	40	11/12/2025 08:23	WG2638380
1,1-Dichloroethane	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
1,2-Dichloroethane	ND		0.133	40	11/12/2025 08:23	WG2638380
1,1-Dichloroethene	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
cis-1,2-Dichloroethene	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
trans-1,2-Dichloroethene	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
1,2-Dichloropropane	ND		0.267	40	11/12/2025 08:23	WG2638380
1,1-Dichloropropene	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
1,3-Dichloropropane	ND		0.267	40	11/12/2025 08:23	WG2638380
cis-1,3-Dichloropropene	ND		0.133	40	11/12/2025 08:23	WG2638380
trans-1,3-Dichloropropene	ND		0.267	40	11/12/2025 08:23	WG2638380
2,2-Dichloropropane	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
Di-isopropyl ether	ND	J3	0.0534	40	11/12/2025 08:23	WG2638380
Ethylbenzene	1.08		0.133	40	11/12/2025 08:23	WG2638380
Hexachloro-1,3-butadiene	ND		1.33	40	11/12/2025 08:23	WG2638380
Isopropylbenzene	0.661	J3	0.133	40	11/12/2025 08:23	WG2638380
p-Isopropyltoluene	0.296		0.267	40	11/12/2025 08:23	WG2638380
2-Butanone (MEK)	ND	J5	5.34	40	11/12/2025 08:23	WG2638380
Methylene Chloride	ND	J3	1.33	40	11/12/2025 08:23	WG2638380
4-Methyl-2-pentanone (MIBK)	4.63		1.33	40	11/12/2025 08:23	WG2638380
Methyl tert-butyl ether	ND	J3	0.0534	40	11/12/2025 08:23	WG2638380
Naphthalene	6.29		0.667	40	11/12/2025 08:23	WG2638380
n-Propylbenzene	1.83	J3	0.267	40	11/12/2025 08:23	WG2638380
Styrene	12.0	J3 J5	0.667	40	11/12/2025 08:23	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.133	40	11/12/2025 08:23	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3 J3	0.133	40	11/12/2025 08:23	WG2638380
1,1,2-Trichlorotrifluoroethane	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
Tetrachloroethene	ND		0.133	40	11/12/2025 08:23	WG2638380
Toluene	0.478		0.267	40	11/12/2025 08:23	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.667	40	11/12/2025 08:23	WG2638380
1,2,4-Trichlorobenzene	ND		0.667	40	11/12/2025 08:23	WG2638380
1,1,1-Trichloroethane	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
1,1,2-Trichloroethane	ND		0.133	40	11/12/2025 08:23	WG2638380
Trichloroethene	ND		0.0534	40	11/12/2025 08:23	WG2638380
Trichlorofluoromethane	ND	J3 J5	0.214	40	11/12/2025 08:23	WG2638380
1,2,3-Trichloropropane	ND		0.667	40	11/12/2025 08:23	WG2638380
1,2,4-Trimethylbenzene	2.96		0.267	40	11/12/2025 08:23	WG2638380
1,2,3-Trimethylbenzene	1.30		0.267	40	11/12/2025 08:23	WG2638380
1,3,5-Trimethylbenzene	0.754	J3	0.267	40	11/12/2025 08:23	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Vinyl chloride	ND	C3 J3 J5	0.133	40	11/12/2025 08:23	WG2638380
Xylenes, Total	1.95		0.347	40	11/12/2025 08:23	WG2638380
(S) Toluene-d8	*94.9*		*75.0-131*		*11/12/2025 08:23*	WG2638380
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*11/12/2025 08:23*	WG2638380
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*11/12/2025 08:23*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	97300	J4	17100	3	11/16/2025 10:53	WG2638865
C12-C16 Aliphatics	618000	J4	85300	15	11/16/2025 15:42	WG2638865
C16-C21 Aliphatics	ND	J4	85300	15	11/16/2025 15:42	WG2638865
C21-C34 Aliphatics	369000	J4	17100	3	11/16/2025 10:53	WG2638865
C10-C12 Aromatics	37000	J4	17100	3	11/16/2025 10:53	WG2638865
C12-C16 Aromatics	303000	J4	85300	15	11/16/2025 15:42	WG2638865
C16-C21 Aromatics	731000	J4	85300	15	11/16/2025 15:42	WG2638865
C21-C34 Aromatics	282000	J4	17100	3	11/16/2025 10:53	WG2638865
(S) o-Terphenyl	*51.6*		*50.0-150*		*11/16/2025 15:42*	WG2638865
(S) o-Terphenyl	*45.0*	J2	*50.0-150*		*11/16/2025 10:53*	WG2638865
(S) 1-Chloro-octadecane	*43.9*	J2	*50.0-150*		*11/16/2025 10:53*	WG2638865
(S) 1-Chloro-octadecane	*45.4*	J2	*50.0-150*		*11/16/2025 15:42*	WG2638865
(S) 2-Fluorobiphenyl	*90.8*		*50.0-150*		*11/16/2025 10:53*	WG2638865
(S) 2-Fluorobiphenyl	*90.1*		*50.0-150*		*11/16/2025 15:42*	WG2638865
(S) 2-Bromonaphthalene	*61.9*		*50.0-150*		*11/16/2025 15:42*	WG2638865
(S) 2-Bromonaphthalene	*64.2*		*50.0-150*		*11/16/2025 10:53*	WG2638865

Sample Narrative:

L1916517-05 WG2638865: Dilution and surrogate failure due to matrix interference.

L1916517-05 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	1.17		0.0683	10	11/16/2025 17:31	WG2638729
Acenaphthene	3.31		0.0683	10	11/16/2025 17:31	WG2638729
Acenaphthylene	0.836		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(a)anthracene	0.983		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(a)pyrene	0.749		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(b)fluoranthene	0.311		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(g,h,i)perylene	0.263		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(k)fluoranthene	ND		0.0683	10	11/16/2025 17:31	WG2638729
Chrysene	1.56		0.0683	10	11/16/2025 17:31	WG2638729
Dibenz(a,h)anthracene	0.133		0.0683	10	11/16/2025 17:31	WG2638729
Fluoranthene	0.867		0.0683	10	11/16/2025 17:31	WG2638729
Fluorene	4.23		0.0683	10	11/16/2025 17:31	WG2638729
Indeno(1,2,3-cd)pyrene	0.0973		0.0683	10	11/16/2025 17:31	WG2638729
Naphthalene	5.59		0.228	10	11/16/2025 17:31	WG2638729
Phenanthrene	17.9		0.0683	10	11/16/2025 17:31	WG2638729
Pyrene	5.26		0.0683	10	11/16/2025 17:31	WG2638729
1-Methylnaphthalene	33.8		0.228	10	11/16/2025 17:31	WG2638729
2-Methylnaphthalene	27.8		0.228	10	11/16/2025 17:31	WG2638729
2-Chloronaphthalene	ND		0.228	10	11/16/2025 17:31	WG2638729
(S) p-Terphenyl-d14	*116*		*23.0-120*		*11/16/2025 17:31*	WG2638729
(S) 2-Fluorobiphenyl	*102*		*34.0-125*		*11/16/2025 17:31*	WG2638729
(S) 2-Methylnaphthalene-d10	*260*	J1	*50.0-150*		*11/16/2025 17:31*	WG2638729

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch

Sample Narrative:

L1916517-05 WG2638729: Surrogate failure due to matrix interference.

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	27.7		1.17	1	11/17/2025 15:22	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.8		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.33	1	11/17/2025 15:22	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0466	1	11/13/2025 16:22	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.66		2.33	1	11/12/2025 15:07	WG2638525
Cadmium	ND		0.583	1	11/12/2025 15:07	WG2638525
Chromium	27.7		1.17	1	11/12/2025 15:07	WG2638525
Lead	2.64		0.583	1	11/12/2025 15:07	WG2638525
Nickel	21.1		2.33	1	11/12/2025 15:07	WG2638525
Zinc	32.8		5.83	1	11/12/2025 15:07	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
Unadjusted C8-C10 Aliphatics	7.02		6.96	1	11/14/2025 12:05	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
C8-C10 Aromatics	ND		6.96	1	11/14/2025 12:05	WG2639771
(S) 2,5-Dibromotoluene(FID)	*78.1*		*60.0-140*		*11/14/2025 12:05*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*89.8*		*60.0-140*		*11/14/2025 12:05*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.139	1	11/14/2025 13:29	WG2639828
Acrylonitrile	ND		0.0173	1	11/14/2025 13:29	WG2639828
Benzene	0.00157		0.00139	1	11/14/2025 13:29	WG2639828
Bromobenzene	ND	C3	0.0173	1	11/14/2025 13:29	WG2639828
Bromodichloromethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Bromoform	ND		0.0347	1	11/14/2025 13:29	WG2639828
Bromomethane	ND		0.0173	1	11/14/2025 13:29	WG2639828
n-Butylbenzene	0.155		0.0173	1	11/14/2025 13:29	WG2639828
sec-Butylbenzene	0.121		0.0173	1	11/14/2025 13:29	WG2639828
tert-Butylbenzene	0.00951		0.00693	1	11/14/2025 13:29	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00693	1	11/14/2025 13:29	WG2639828
Chlorobenzene	ND		0.00347	1	11/14/2025 13:29	WG2639828
Chlorodibromomethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Chloroethane	ND		0.0139	1	11/14/2025 13:29	WG2639828
Chloroform	ND		0.00347	1	11/14/2025 13:29	WG2639828
Chloromethane	ND		0.0173	1	11/14/2025 13:29	WG2639828
2-Chlorotoluene	ND		0.00347	1	11/14/2025 13:29	WG2639828
4-Chlorotoluene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,2-Dibromo-3-Chloropropane	ND		0.0347	1	11/14/2025 13:29	WG2639828
1,2-Dibromoethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Dibromomethane	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,2-Dichlorobenzene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,3-Dichlorobenzene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,4-Dichlorobenzene	ND		0.00693	1	11/14/2025 13:29	WG2639828
Dichlorodifluoromethane	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,1-Dichloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
1,2-Dichloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
1,1-Dichloroethene	ND		0.00347	1	11/14/2025 13:29	WG2639828
cis-1,2-Dichloroethene	ND		0.00347	1	11/14/2025 13:29	WG2639828
trans-1,2-Dichloroethene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,2-Dichloropropane	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,1-Dichloropropene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,3-Dichloropropane	ND		0.00693	1	11/14/2025 13:29	WG2639828
cis-1,3-Dichloropropene	ND		0.00347	1	11/14/2025 13:29	WG2639828
trans-1,3-Dichloropropene	ND		0.00693	1	11/14/2025 13:29	WG2639828
2,2-Dichloropropane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Di-isopropyl ether	ND		0.00139	1	11/14/2025 13:29	WG2639828
Ethylbenzene	0.0380		0.00347	1	11/14/2025 13:29	WG2639828
Hexachloro-1,3-butadiene	ND		0.0347	1	11/14/2025 13:29	WG2639828
Isopropylbenzene	0.135		0.00347	1	11/14/2025 13:29	WG2639828
p-Isopropyltoluene	0.00865		0.00693	1	11/14/2025 13:29	WG2639828
2-Butanone (MEK)	ND		0.139	1	11/14/2025 13:29	WG2639828
Methylene Chloride	ND		0.0347	1	11/14/2025 13:29	WG2639828
4-Methyl-2-pentanone (MIBK)	ND		0.0347	1	11/14/2025 13:29	WG2639828
Methyl tert-butyl ether	ND		0.00139	1	11/14/2025 13:29	WG2639828
Naphthalene	0.737		0.0347	2	11/16/2025 21:16	WG2641552
n-Propylbenzene	0.304		0.00693	1	11/14/2025 13:29	WG2639828
Styrene	0.0750		0.0173	1	11/14/2025 13:29	WG2639828
1,1,1,2-Tetrachloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
1,1,2,2-Tetrachloroethane	ND	L3	0.00347	1	11/14/2025 13:29	WG2639828
1,1,2-Trichlorotrifluoroethane	ND		0.00693	1	11/14/2025 13:29	WG2639828
Tetrachloroethene	ND		0.00347	1	11/14/2025 13:29	WG2639828
Toluene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,2,3-Trichlorobenzene	ND		0.0173	1	11/14/2025 13:29	WG2639828
1,2,4-Trichlorobenzene	ND		0.0173	1	11/14/2025 13:29	WG2639828
1,1,1-Trichloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
1,1,2-Trichloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Trichloroethene	ND		0.00139	1	11/14/2025 13:29	WG2639828
Trichlorofluoromethane	ND		0.00555	1	11/14/2025 13:29	WG2639828
1,2,3-Trichloropropane	ND	L3	0.0173	1	11/14/2025 13:29	WG2639828
1,2,4-Trimethylbenzene	0.0219		0.00693	1	11/14/2025 13:29	WG2639828
1,2,3-Trimethylbenzene	0.0177		0.00693	1	11/14/2025 13:29	WG2639828
1,3,5-Trimethylbenzene	ND		0.00693	1	11/14/2025 13:29	WG2639828
Vinyl chloride	ND		0.00347	1	11/14/2025 13:29	WG2639828
Xylenes, Total	0.0211		0.00901	1	11/14/2025 13:29	WG2639828
(S) Toluene-d8	*92.4*		*75.0-131*		*11/14/2025 13:29*	WG2639828

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) Toluene-d8	*96.1*		*75.0-131*		*11/16/2025 21:16*	WG2641552
(S) 4-Bromofluorobenzene	*108*		*67.0-138*		*11/14/2025 13:29*	WG2639828
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*11/16/2025 21:16*	WG2641552
(S) 1,2-Dichloroethane-d4	*89.3*		*70.0-130*		*11/14/2025 13:29*	WG2639828
(S) 1,2-Dichloroethane-d4	*119*		*70.0-130*		*11/16/2025 21:16*	WG2641552

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	5830	1	11/16/2025 14:10	WG2638865
C12-C16 Aliphatics	28800	J4	5830	1	11/16/2025 14:10	WG2638865
C16-C21 Aliphatics	34700	J4	5830	1	11/16/2025 14:10	WG2638865
C21-C34 Aliphatics	39900	J4	5830	1	11/16/2025 14:10	WG2638865
C10-C12 Aromatics	ND	J4	5830	1	11/16/2025 14:10	WG2638865
C12-C16 Aromatics	19000	J4	5830	1	11/16/2025 14:10	WG2638865
C16-C21 Aromatics	50100	J4	5830	1	11/16/2025 14:10	WG2638865
C21-C34 Aromatics	50400	J4	5830	1	11/16/2025 14:10	WG2638865
(S) o-Terphenyl	*46.8*	J2	*50.0-150*		*11/16/2025 14:10*	WG2638865
(S) 1-Chloro-octadecane	*54.7*		*50.0-150*		*11/16/2025 14:10*	WG2638865
(S) 2-Fluorobiphenyl	*81.8*		*50.0-150*		*11/16/2025 14:10*	WG2638865
(S) 2-Bromonaphthalene	*82.3*		*50.0-150*		*11/16/2025 14:10*	WG2638865

Sample Narrative:

L1916517-06 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00700	1	11/13/2025 17:30	WG2638729
Acenaphthene	0.0803		0.00700	1	11/13/2025 17:30	WG2638729
Acenaphthylene	0.0160		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(a)anthracene	0.0554		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(a)pyrene	0.0342		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(b)fluoranthene	0.0160		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(g,h,i)perylene	0.0139		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(k)fluoranthene	ND		0.00700	1	11/13/2025 17:30	WG2638729
Chrysene	0.0602		0.00700	1	11/13/2025 17:30	WG2638729
Dibenz(a,h)anthracene	ND		0.00700	1	11/13/2025 17:30	WG2638729
Fluoranthene	0.0284		0.00700	1	11/13/2025 17:30	WG2638729
Fluorene	0.110		0.00700	1	11/13/2025 17:30	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00700	1	11/13/2025 17:30	WG2638729
Naphthalene	0.166		0.0233	1	11/13/2025 17:30	WG2638729
Phenanthrene	0.450		0.00700	1	11/13/2025 17:30	WG2638729
Pyrene	0.136		0.00700	1	11/13/2025 17:30	WG2638729
1-Methylnaphthalene	0.801		0.0233	1	11/13/2025 17:30	WG2638729
2-Methylnaphthalene	0.907		0.0233	1	11/13/2025 17:30	WG2638729
2-Chloronaphthalene	ND		0.0233	1	11/13/2025 17:30	WG2638729
(S) p-Terphenyl-d14	*82.8*		*23.0-120*		*11/13/2025 17:30*	WG2638729
(S) 2-Fluorobiphenyl	*75.2*		*34.0-125*		*11/13/2025 17:30*	WG2638729
(S) 2-Methylnaphthalene-d10	*85.4*		*50.0-150*		*11/13/2025 17:30*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	51.3		1.23	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.1		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.47	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0493	1	11/13/2025 16:25	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.89		2.47	1	11/12/2025 15:09	WG2638525
Cadmium	ND		0.616	1	11/12/2025 15:09	WG2638525
Chromium	51.3		1.23	1	11/12/2025 15:09	WG2638525
Lead	5.28		0.616	1	11/12/2025 15:09	WG2638525
Nickel	43.2		2.47	1	11/12/2025 15:09	WG2638525
Zinc	61.3		6.16	1	11/12/2025 15:09	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
C8-C10 Aromatics	ND		7.81	1	11/14/2025 12:42	WG2639771
(S) 2,5-Dibromotoluene(FID)	*107*		*60.0-140*		*11/14/2025 12:42*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*102*		*60.0-140*		*11/14/2025 12:42*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.147	1	11/12/2025 05:44	WG2638380
Acrylonitrile	ND		0.0183	1	11/12/2025 05:44	WG2638380
Benzene	ND		0.00147	1	11/12/2025 05:44	WG2638380
Bromobenzene	ND		0.0183	1	11/12/2025 05:44	WG2638380
Bromodichloromethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Bromoform	ND		0.0366	1	11/12/2025 05:44	WG2638380
Bromomethane	ND		0.0183	1	11/12/2025 05:44	WG2638380
n-Butylbenzene	ND		0.0183	1	11/12/2025 05:44	WG2638380
sec-Butylbenzene	0.0259		0.0183	1	11/12/2025 05:44	WG2638380
tert-Butylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00733	1	11/12/2025 05:44	WG2638380
Chlorobenzene	ND		0.00366	1	11/12/2025 05:44	WG2638380
Chlorodibromomethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Chloroethane	ND	C3	0.0147	1	11/12/2025 05:44	WG2638380
Chloroform	ND		0.00366	1	11/12/2025 05:44	WG2638380
Chloromethane	ND		0.0183	1	11/12/2025 05:44	WG2638380
2-Chlorotoluene	ND		0.00366	1	11/12/2025 05:44	WG2638380
4-Chlorotoluene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0366	1	11/12/2025 05:44	WG2638380
1,2-Dibromoethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Dibromomethane	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2-Dichlorobenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,3-Dichlorobenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00733	1	11/12/2025 05:44	WG2638380
Dichlorodifluoromethane	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,1-Dichloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
1,2-Dichloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
1,1-Dichloroethene	ND		0.00366	1	11/12/2025 05:44	WG2638380
cis-1,2-Dichloroethene	ND		0.00366	1	11/12/2025 05:44	WG2638380
trans-1,2-Dichloroethene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2-Dichloropropane	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,1-Dichloropropene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,3-Dichloropropane	ND		0.00733	1	11/12/2025 05:44	WG2638380
cis-1,3-Dichloropropene	ND		0.00366	1	11/12/2025 05:44	WG2638380
trans-1,3-Dichloropropene	ND		0.00733	1	11/12/2025 05:44	WG2638380
2,2-Dichloropropane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Di-isopropyl ether	ND		0.00147	1	11/12/2025 05:44	WG2638380
Ethylbenzene	ND		0.00366	1	11/12/2025 05:44	WG2638380
Hexachloro-1,3-butadiene	ND		0.0366	1	11/12/2025 05:44	WG2638380
Isopropylbenzene	ND		0.00366	1	11/12/2025 05:44	WG2638380
p-Isopropyltoluene	ND		0.00733	1	11/12/2025 05:44	WG2638380
2-Butanone (MEK)	ND		0.147	1	11/12/2025 05:44	WG2638380
Methylene Chloride	ND		0.0366	1	11/12/2025 05:44	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0366	1	11/12/2025 05:44	WG2638380
Methyl tert-butyl ether	ND		0.00147	1	11/12/2025 05:44	WG2638380
Naphthalene	0.0331		0.0183	1	11/12/2025 05:44	WG2638380
n-Propylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
Styrene	ND		0.0183	1	11/12/2025 05:44	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00366	1	11/12/2025 05:44	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00733	1	11/12/2025 05:44	WG2638380
Tetrachloroethene	ND		0.00366	1	11/12/2025 05:44	WG2638380
Toluene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0183	1	11/12/2025 05:44	WG2638380
1,2,4-Trichlorobenzene	ND		0.0183	1	11/12/2025 05:44	WG2638380
1,1,1-Trichloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
1,1,2-Trichloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Trichloroethene	ND		0.00147	1	11/12/2025 05:44	WG2638380
Trichlorofluoromethane	ND		0.00586	1	11/12/2025 05:44	WG2638380
1,2,3-Trichloropropane	ND		0.0183	1	11/12/2025 05:44	WG2638380
1,2,4-Trimethylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2,3-Trimethylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,3,5-Trimethylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
Vinyl chloride	ND	C3	0.00366	1	11/12/2025 05:44	WG2638380
Xylenes, Total	ND		0.00953	1	11/12/2025 05:44	WG2638380
(S) Toluene-d8	55.9	J7	*75.0-131*		*11/12/2025 05:44*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*108*		*67.0-138*		*11/12/2025 05:44*	WG2638380
(S) 1,2-Dichloroethane-d4	*115*		*70.0-130*		*11/12/2025 05:44*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C12-C16 Aliphatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C16-C21 Aliphatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C21-C34 Aliphatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C10-C12 Aromatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C12-C16 Aromatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C16-C21 Aromatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C21-C34 Aromatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
(S) o-Terphenyl	*60.8*		*50.0-150*		*11/16/2025 05:56*	WG2638865
(S) 1-Chloro-octadecane	*59.3*		*50.0-150*		*11/16/2025 05:56*	WG2638865
(S) 2-Fluorobiphenyl	*83.7*		*50.0-150*		*11/16/2025 05:56*	WG2638865
(S) 2-Bromonaphthalene	*87.5*		*50.0-150*		*11/16/2025 05:56*	WG2638865

Sample Narrative:

L1916517-07 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Acenaphthene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Acenaphthylene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(a)anthracene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(a)pyrene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(b)fluoranthene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(g,h,i)perylene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(k)fluoranthene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Chrysene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Dibenz(a,h)anthracene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Fluoranthene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Fluorene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Naphthalene	ND		0.0247	1	11/13/2025 17:50	WG2638729
Phenanthrene	0.0134		0.00740	1	11/13/2025 17:50	WG2638729
Pyrene	ND		0.00740	1	11/13/2025 17:50	WG2638729
1-Methylnaphthalene	0.0256		0.0247	1	11/13/2025 17:50	WG2638729
2-Methylnaphthalene	0.0398		0.0247	1	11/13/2025 17:50	WG2638729
2-Chloronaphthalene	ND		0.0247	1	11/13/2025 17:50	WG2638729
(S) p-Terphenyl-d14	*92.3*		*23.0-120*		*11/13/2025 17:50*	WG2638729
(S) 2-Fluorobiphenyl	*82.9*		*34.0-125*		*11/13/2025 17:50*	WG2638729
(S) 2-Methylnaphthalene-d10	*86.5*		*50.0-150*		*11/13/2025 17:50*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	38.5		1.22	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.2		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.43	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0487	1	11/13/2025 16:28	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.56		2.43	1	11/12/2025 15:10	WG2638525
Cadmium	ND		0.608	1	11/12/2025 15:10	WG2638525
Chromium	38.5		1.22	1	11/12/2025 15:10	WG2638525
Lead	4.58		0.608	1	11/12/2025 15:10	WG2638525
Nickel	32.8		2.43	1	11/12/2025 15:10	WG2638525
Zinc	48.8		6.08	1	11/12/2025 15:10	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
C8-C10 Aromatics	ND		7.45	1	11/14/2025 13:19	WG2639771
(S) 2,5-Dibromotoluene(FID)	*100*		*60.0-140*		*11/14/2025 13:19*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*99.3*		*60.0-140*		*11/14/2025 13:19*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.149	1	11/14/2025 13:48	WG2639828
Acrylonitrile	ND		0.0186	1	11/14/2025 13:48	WG2639828
Benzene	ND		0.00149	1	11/14/2025 13:48	WG2639828
Bromobenzene	ND	C3	0.0186	1	11/14/2025 13:48	WG2639828
Bromodichloromethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Bromoform	ND		0.0373	1	11/14/2025 13:48	WG2639828
Bromomethane	ND		0.0186	1	11/14/2025 13:48	WG2639828
n-Butylbenzene	0.0236		0.0186	1	11/14/2025 13:48	WG2639828
sec-Butylbenzene	0.0195		0.0186	1	11/14/2025 13:48	WG2639828
tert-Butylbenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00746	1	11/14/2025 13:48	WG2639828
Chlorobenzene	ND		0.00373	1	11/14/2025 13:48	WG2639828
Chlorodibromomethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Chloroethane	ND		0.0149	1	11/14/2025 13:48	WG2639828
Chloroform	ND		0.00373	1	11/14/2025 13:48	WG2639828
Chloromethane	ND		0.0186	1	11/14/2025 13:48	WG2639828
2-Chlorotoluene	ND		0.00373	1	11/14/2025 13:48	WG2639828
4-Chlorotoluene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2-Dibromo-3-Chloropropane	ND		0.0373	1	11/14/2025 13:48	WG2639828
1,2-Dibromoethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Dibromomethane	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2-Dichlorobenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,3-Dichlorobenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,4-Dichlorobenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
Dichlorodifluoromethane	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,1-Dichloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
1,2-Dichloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
1,1-Dichloroethene	ND		0.00373	1	11/14/2025 13:48	WG2639828
cis-1,2-Dichloroethene	ND		0.00373	1	11/14/2025 13:48	WG2639828
trans-1,2-Dichloroethene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2-Dichloropropane	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,1-Dichloropropene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,3-Dichloropropane	ND		0.00746	1	11/14/2025 13:48	WG2639828
cis-1,3-Dichloropropene	ND		0.00373	1	11/14/2025 13:48	WG2639828
trans-1,3-Dichloropropene	ND		0.00746	1	11/14/2025 13:48	WG2639828
2,2-Dichloropropane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Di-isopropyl ether	ND		0.00149	1	11/14/2025 13:48	WG2639828
Ethylbenzene	ND		0.00373	1	11/14/2025 13:48	WG2639828
Hexachloro-1,3-butadiene	ND		0.0373	1	11/14/2025 13:48	WG2639828
Isopropylbenzene	0.0177		0.00373	1	11/14/2025 13:48	WG2639828
p-Isopropyltoluene	ND		0.00746	1	11/14/2025 13:48	WG2639828
2-Butanone (MEK)	ND		0.149	1	11/14/2025 13:48	WG2639828
Methylene Chloride	ND		0.0373	1	11/14/2025 13:48	WG2639828
4-Methyl-2-pentanone (MIBK)	ND		0.0373	1	11/14/2025 13:48	WG2639828
Methyl tert-butyl ether	ND		0.00149	1	11/14/2025 13:48	WG2639828
Naphthalene	0.0260		0.0186	1	11/16/2025 21:35	WG2641552
n-Propylbenzene	0.0395		0.00746	1	11/14/2025 13:48	WG2639828
Styrene	ND		0.0186	1	11/14/2025 13:48	WG2639828
1,1,1,2-Tetrachloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
1,1,2,2-Tetrachloroethane	ND	C3	0.00373	1	11/14/2025 13:48	WG2639828
1,1,2-Trichlorotrifluoroethane	ND		0.00746	1	11/14/2025 13:48	WG2639828
Tetrachloroethene	ND		0.00373	1	11/14/2025 13:48	WG2639828
Toluene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2,3-Trichlorobenzene	ND		0.0186	1	11/14/2025 13:48	WG2639828
1,2,4-Trichlorobenzene	ND		0.0186	1	11/14/2025 13:48	WG2639828
1,1,1-Trichloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
1,1,2-Trichloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Trichloroethene	ND		0.00149	1	11/14/2025 13:48	WG2639828
Trichlorofluoromethane	ND		0.00597	1	11/14/2025 13:48	WG2639828
1,2,3-Trichloropropane	ND	C3	0.0186	1	11/14/2025 13:48	WG2639828
1,2,4-Trimethylbenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2,3-Trimethylbenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,3,5-Trimethylbenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
Vinyl chloride	ND		0.00373	1	11/14/2025 13:48	WG2639828
Xylenes, Total	ND		0.00970	1	11/14/2025 13:48	WG2639828
(S) Toluene-d8	*95.2*		*75.0-131*		*11/14/2025 13:48*	WG2639828

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) Toluene-d8	*94.4*		*75.0-131*		*11/16/2025 21:35*	WG2641552
(S) 4-Bromofluorobenzene	*106*		*67.0-138*		*11/14/2025 13:48*	WG2639828
(S) 4-Bromofluorobenzene	*103*		*67.0-138*		*11/16/2025 21:35*	WG2641552
(S) 1,2-Dichloroethane-d4	*88.4*		*70.0-130*		*11/14/2025 13:48*	WG2639828
(S) 1,2-Dichloroethane-d4	*123*		*70.0-130*		*11/16/2025 21:35*	WG2641552

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C12-C16 Aliphatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C16-C21 Aliphatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C21-C34 Aliphatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C10-C12 Aromatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C12-C16 Aromatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C16-C21 Aromatics	9930	J4	6080	1	11/16/2025 06:19	WG2638865
C21-C34 Aromatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
(S) o-Terphenyl	*49.2*	J2	*50.0-150*		*11/16/2025 06:19*	WG2638865
(S) 1-Chloro-octadecane	*47.0*	J2	*50.0-150*		*11/16/2025 06:19*	WG2638865
(S) 2-Fluorobiphenyl	*93.9*		*50.0-150*		*11/16/2025 06:19*	WG2638865
(S) 2-Bromonaphthalene	*95.8*		*50.0-150*		*11/16/2025 06:19*	WG2638865

Sample Narrative:

L1916517-09 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Acenaphthene	0.0208		0.00730	1	11/13/2025 18:10	WG2638729
Acenaphthylene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(a)anthracene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(a)pyrene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(b)fluoranthene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(g,h,i)perylene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(k)fluoranthene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Chrysene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Dibenz(a,h)anthracene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Fluoranthene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Fluorene	0.0266		0.00730	1	11/13/2025 18:10	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Naphthalene	ND		0.0243	1	11/13/2025 18:10	WG2638729
Phenanthrene	0.0858		0.00730	1	11/13/2025 18:10	WG2638729
Pyrene	0.0208		0.00730	1	11/13/2025 18:10	WG2638729
1-Methylnaphthalene	0.207		0.0243	1	11/13/2025 18:10	WG2638729
2-Methylnaphthalene	0.343		0.0243	1	11/13/2025 18:10	WG2638729
2-Chloronaphthalene	ND		0.0243	1	11/13/2025 18:10	WG2638729
(S) p-Terphenyl-d14	*83.3*		*23.0-120*		*11/13/2025 18:10*	WG2638729
(S) 2-Fluorobiphenyl	*75.4*		*34.0-125*		*11/13/2025 18:10*	WG2638729
(S) 2-Methylnaphthalene-d10	*82.9*		*50.0-150*		*11/13/2025 18:10*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	44.1		1.17	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.2		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.35	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0469	1	11/13/2025 16:30	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.86		2.35	1	11/12/2025 15:12	WG2638525
Cadmium	ND		0.587	1	11/12/2025 15:12	WG2638525
Chromium	44.1		1.17	1	11/12/2025 15:12	WG2638525
Lead	4.16		0.587	1	11/12/2025 15:12	WG2638525
Nickel	36.0		2.35	1	11/12/2025 15:12	WG2638525
Zinc	48.9		5.87	1	11/12/2025 15:12	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Unadjusted C8-C10 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
C8-C10 Aromatics	ND		6.97	1	11/14/2025 13:56	WG2639771
(S) 2,5-Dibromotoluene(FID)	*112*		*60.0-140*		*11/14/2025 13:56*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*106*		*60.0-140*		*11/14/2025 13:56*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.140	1	11/12/2025 06:24	WG2638380
Acrylonitrile	ND		0.0175	1	11/12/2025 06:24	WG2638380
Benzene	ND		0.00140	1	11/12/2025 06:24	WG2638380
Bromobenzene	ND		0.0175	1	11/12/2025 06:24	WG2638380
Bromodichloromethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Bromoform	ND		0.0350	1	11/12/2025 06:24	WG2638380
Bromomethane	ND	C3	0.0175	1	11/12/2025 06:24	WG2638380
n-Butylbenzene	ND		0.0175	1	11/12/2025 06:24	WG2638380
sec-Butylbenzene	ND		0.0175	1	11/12/2025 06:24	WG2638380
tert-Butylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00699	1	11/12/2025 06:24	WG2638380
Chlorobenzene	ND		0.00350	1	11/12/2025 06:24	WG2638380
Chlorodibromomethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Chloroethane	ND	C3	0.0140	1	11/12/2025 06:24	WG2638380
Chloroform	ND		0.00350	1	11/12/2025 06:24	WG2638380
Chloromethane	ND		0.0175	1	11/12/2025 06:24	WG2638380
2-Chlorotoluene	ND		0.00350	1	11/12/2025 06:24	WG2638380
4-Chlorotoluene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0350	1	11/12/2025 06:24	WG2638380
1,2-Dibromoethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Dibromomethane	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2-Dichlorobenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,3-Dichlorobenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00699	1	11/12/2025 06:24	WG2638380
Dichlorodifluoromethane	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,1-Dichloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
1,2-Dichloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
1,1-Dichloroethene	ND		0.00350	1	11/12/2025 06:24	WG2638380
cis-1,2-Dichloroethene	ND		0.00350	1	11/12/2025 06:24	WG2638380
trans-1,2-Dichloroethene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2-Dichloropropane	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,1-Dichloropropene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,3-Dichloropropane	ND		0.00699	1	11/12/2025 06:24	WG2638380
cis-1,3-Dichloropropene	ND		0.00350	1	11/12/2025 06:24	WG2638380
trans-1,3-Dichloropropene	ND		0.00699	1	11/12/2025 06:24	WG2638380
2,2-Dichloropropane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Di-isopropyl ether	ND		0.00140	1	11/12/2025 06:24	WG2638380
Ethylbenzene	ND		0.00350	1	11/12/2025 06:24	WG2638380
Hexachloro-1,3-butadiene	ND		0.0350	1	11/12/2025 06:24	WG2638380
Isopropylbenzene	ND		0.00350	1	11/12/2025 06:24	WG2638380
p-Isopropyltoluene	ND		0.00699	1	11/12/2025 06:24	WG2638380
2-Butanone (MEK)	ND		0.140	1	11/12/2025 06:24	WG2638380
Methylene Chloride	ND		0.0350	1	11/12/2025 06:24	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0350	1	11/12/2025 06:24	WG2638380
Methyl tert-butyl ether	ND		0.00140	1	11/12/2025 06:24	WG2638380
Naphthalene	ND		0.0175	1	11/12/2025 06:24	WG2638380
n-Propylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
Styrene	ND		0.0175	1	11/12/2025 06:24	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00350	1	11/12/2025 06:24	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00699	1	11/12/2025 06:24	WG2638380
Tetrachloroethene	ND		0.00350	1	11/12/2025 06:24	WG2638380
Toluene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0175	1	11/12/2025 06:24	WG2638380
1,2,4-Trichlorobenzene	ND		0.0175	1	11/12/2025 06:24	WG2638380
1,1,1-Trichloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
1,1,2-Trichloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Trichloroethene	ND		0.00140	1	11/12/2025 06:24	WG2638380
Trichlorofluoromethane	ND		0.00559	1	11/12/2025 06:24	WG2638380
1,2,3-Trichloropropane	ND		0.0175	1	11/12/2025 06:24	WG2638380
1,2,4-Trimethylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2,3-Trimethylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,3,5-Trimethylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
Vinyl chloride	ND	C3	0.00350	1	11/12/2025 06:24	WG2638380
Xylenes, Total	ND		0.00909	1	11/12/2025 06:24	WG2638380
(S) Toluene-d8	*118*		*75.0-131*		*11/12/2025 06:24*	WG2638380

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*11/12/2025 06:24*	WG2638380
(S) 1,2-Dichloroethane-d4	*116*		*70.0-130*		*11/12/2025 06:24*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C12-C16 Aliphatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C16-C21 Aliphatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C21-C34 Aliphatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C10-C12 Aromatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C12-C16 Aromatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C16-C21 Aromatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C21-C34 Aromatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
(S) o-Terphenyl	*40.4*	J2	*50.0-150*		*11/16/2025 06:42*	WG2638865
(S) 1-Chloro-octadecane	*41.5*	J2	*50.0-150*		*11/16/2025 06:42*	WG2638865
(S) 2-Fluorobiphenyl	*87.2*		*50.0-150*		*11/16/2025 06:42*	WG2638865
(S) 2-Bromonaphthalene	*91.0*		*50.0-150*		*11/16/2025 06:42*	WG2638865

Sample Narrative:

L1916517-11 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Acenaphthene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Acenaphthylene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(a)anthracene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(a)pyrene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(b)fluoranthene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(g,h,i)perylene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(k)fluoranthene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Chrysene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Dibenz(a,h)anthracene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Fluoranthene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Fluorene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Naphthalene	ND		0.0235	1	11/13/2025 18:30	WG2638729
Phenanthrene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Pyrene	ND		0.00704	1	11/13/2025 18:30	WG2638729
1-Methylnaphthalene	ND		0.0235	1	11/13/2025 18:30	WG2638729
2-Methylnaphthalene	ND		0.0235	1	11/13/2025 18:30	WG2638729
2-Chloronaphthalene	ND		0.0235	1	11/13/2025 18:30	WG2638729
(S) p-Terphenyl-d14	*79.8*		*23.0-120*		*11/13/2025 18:30*	WG2638729
(S) 2-Fluorobiphenyl	*66.1*		*34.0-125*		*11/13/2025 18:30*	WG2638729
(S) 2-Methylnaphthalene-d10	*69.6*		*50.0-150*		*11/13/2025 18:30*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	40.5		1.18	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.9		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.35	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.108		0.0471	1	11/13/2025 16:33	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	7.01		2.35	1	11/12/2025 15:17	WG2638525
Cadmium	ND		0.589	1	11/12/2025 15:17	WG2638525
Chromium	40.5		1.18	1	11/12/2025 15:17	WG2638525
Lead	5.22		0.589	1	11/12/2025 15:17	WG2638525
Nickel	41.6		2.35	1	11/12/2025 15:17	WG2638525
Zinc	54.6		5.89	1	11/12/2025 15:17	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Unadjusted C8-C10 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
C8-C10 Aromatics	ND		6.96	1	11/14/2025 14:33	WG2639771
(S) 2,5-Dibromotoluene(FID)	*111*		*60.0-140*		*11/14/2025 14:33*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*105*		*60.0-140*		*11/14/2025 14:33*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.141	1	11/12/2025 06:44	WG2638380
Acrylonitrile	ND		0.0177	1	11/12/2025 06:44	WG2638380
Benzene	ND		0.00141	1	11/12/2025 06:44	WG2638380
Bromobenzene	ND		0.0177	1	11/12/2025 06:44	WG2638380
Bromodichloromethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Bromoform	ND		0.0354	1	11/12/2025 06:44	WG2638380
Bromomethane	ND	C3	0.0177	1	11/12/2025 06:44	WG2638380
n-Butylbenzene	ND		0.0177	1	11/12/2025 06:44	WG2638380
sec-Butylbenzene	ND		0.0177	1	11/12/2025 06:44	WG2638380
tert-Butylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00707	1	11/12/2025 06:44	WG2638380
Chlorobenzene	ND		0.00354	1	11/12/2025 06:44	WG2638380
Chlorodibromomethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Chloroethane	ND	C3	0.0141	1	11/12/2025 06:44	WG2638380
Chloroform	ND		0.00354	1	11/12/2025 06:44	WG2638380
Chloromethane	ND		0.0177	1	11/12/2025 06:44	WG2638380
2-Chlorotoluene	ND		0.00354	1	11/12/2025 06:44	WG2638380
4-Chlorotoluene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0354	1	11/12/2025 06:44	WG2638380
1,2-Dibromoethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Dibromomethane	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2-Dichlorobenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,3-Dichlorobenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00707	1	11/12/2025 06:44	WG2638380
Dichlorodifluoromethane	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,1-Dichloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
1,2-Dichloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
1,1-Dichloroethene	ND		0.00354	1	11/12/2025 06:44	WG2638380
cis-1,2-Dichloroethene	ND		0.00354	1	11/12/2025 06:44	WG2638380
trans-1,2-Dichloroethene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2-Dichloropropane	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,1-Dichloropropene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,3-Dichloropropane	ND		0.00707	1	11/12/2025 06:44	WG2638380
cis-1,3-Dichloropropene	ND		0.00354	1	11/12/2025 06:44	WG2638380
trans-1,3-Dichloropropene	ND		0.00707	1	11/12/2025 06:44	WG2638380
2,2-Dichloropropane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Di-isopropyl ether	ND		0.00141	1	11/12/2025 06:44	WG2638380
Ethylbenzene	ND		0.00354	1	11/12/2025 06:44	WG2638380
Hexachloro-1,3-butadiene	ND		0.0354	1	11/12/2025 06:44	WG2638380
Isopropylbenzene	ND		0.00354	1	11/12/2025 06:44	WG2638380
p-Isopropyltoluene	ND		0.00707	1	11/12/2025 06:44	WG2638380
2-Butanone (MEK)	ND		0.141	1	11/12/2025 06:44	WG2638380
Methylene Chloride	ND		0.0354	1	11/12/2025 06:44	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0354	1	11/12/2025 06:44	WG2638380
Methyl tert-butyl ether	ND		0.00141	1	11/12/2025 06:44	WG2638380
Naphthalene	ND		0.0177	1	11/12/2025 06:44	WG2638380
n-Propylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
Styrene	ND		0.0177	1	11/12/2025 06:44	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00354	1	11/12/2025 06:44	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00707	1	11/12/2025 06:44	WG2638380
Tetrachloroethene	ND		0.00354	1	11/12/2025 06:44	WG2638380
Toluene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0177	1	11/12/2025 06:44	WG2638380
1,2,4-Trichlorobenzene	ND		0.0177	1	11/12/2025 06:44	WG2638380
1,1,1-Trichloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
1,1,2-Trichloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Trichloroethene	ND		0.00141	1	11/12/2025 06:44	WG2638380
Trichlorofluoromethane	ND		0.00566	1	11/12/2025 06:44	WG2638380
1,2,3-Trichloropropane	ND		0.0177	1	11/12/2025 06:44	WG2638380
1,2,4-Trimethylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2,3-Trimethylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,3,5-Trimethylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
Vinyl chloride	ND	C3	0.00354	1	11/12/2025 06:44	WG2638380
Xylenes, Total	ND		0.00919	1	11/12/2025 06:44	WG2638380
(S) Toluene-d8	*55.3*	J7	*75.0-131*		*11/12/2025 06:44*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*58.8*	J2	*67.0-138*		*11/12/2025 06:44*	WG2638380
(S) 1,2-Dichloroethane-d4	*116*		*70.0-130*		*11/12/2025 06:44*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C12-C16 Aliphatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C16-C21 Aliphatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C21-C34 Aliphatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C10-C12 Aromatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C12-C16 Aromatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C16-C21 Aromatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C21-C34 Aromatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
(S) o-Terphenyl	*41.5*	J2	*50.0-150*		*11/16/2025 07:05*	WG2638865
(S) 1-Chloro-octadecane	*45.9*	J2	*50.0-150*		*11/16/2025 07:05*	WG2638865
(S) 2-Fluorobiphenyl	*79.3*		*50.0-150*		*11/16/2025 07:05*	WG2638865
(S) 2-Bromonaphthalene	*82.7*		*50.0-150*		*11/16/2025 07:05*	WG2638865

Sample Narrative:

L1916517-13 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Acenaphthene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Acenaphthylene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(a)anthracene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(a)pyrene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(b)fluoranthene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(g,h,i)perylene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(k)fluoranthene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Chrysene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Dibenz(a,h)anthracene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Fluoranthene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Fluorene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Naphthalene	ND		0.0235	1	11/13/2025 18:50	WG2638729
Phenanthrene	0.00882		0.00706	1	11/13/2025 18:50	WG2638729
Pyrene	ND		0.00706	1	11/13/2025 18:50	WG2638729
1-Methylnaphthalene	ND		0.0235	1	11/13/2025 18:50	WG2638729
2-Methylnaphthalene	ND		0.0235	1	11/13/2025 18:50	WG2638729
2-Chloronaphthalene	ND		0.0235	1	11/13/2025 18:50	WG2638729
(S) p-Terphenyl-d14	*87.8*		*23.0-120*		*11/13/2025 18:50*	WG2638729
(S) 2-Fluorobiphenyl	*81.8*		*34.0-125*		*11/13/2025 18:50*	WG2638729
(S) 2-Methylnaphthalene-d10	*85.3*		*50.0-150*		*11/13/2025 18:50*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	37.6		1.11	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.8		1	11/12/2025 09:45	WG2638490

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.23	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0446	1	11/13/2025 16:36	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.97		2.23	1	11/12/2025 15:19	WG2638525
Cadmium	ND		0.557	1	11/12/2025 15:19	WG2638525
Chromium	37.6		1.11	1	11/12/2025 15:19	WG2638525
Lead	4.41		0.557	1	11/12/2025 15:19	WG2638525
Nickel	32.2		2.23	1	11/12/2025 15:19	WG2638525
Zinc	55.3		5.57	1	11/12/2025 15:19	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Unadjusted C8-C10 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
C8-C10 Aromatics	ND		6.27	1	11/14/2025 15:11	WG2639771
(S) 2,5-Dibromotoluene(FID)	*103*		*60.0-140*		*11/14/2025 15:11*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*97.7*		*60.0-140*		*11/14/2025 15:11*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.128	1	11/12/2025 07:04	WG2638380
Acrylonitrile	ND		0.0159	1	11/12/2025 07:04	WG2638380
Benzene	ND		0.00128	1	11/12/2025 07:04	WG2638380
Bromobenzene	ND		0.0159	1	11/12/2025 07:04	WG2638380
Bromodichloromethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Bromoform	ND		0.0319	1	11/12/2025 07:04	WG2638380
Bromomethane	ND	C3	0.0159	1	11/12/2025 07:04	WG2638380
n-Butylbenzene	ND		0.0159	1	11/12/2025 07:04	WG2638380
sec-Butylbenzene	ND		0.0159	1	11/12/2025 07:04	WG2638380
tert-Butylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00638	1	11/12/2025 07:04	WG2638380
Chlorobenzene	ND		0.00319	1	11/12/2025 07:04	WG2638380
Chlorodibromomethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Chloroethane	ND	C3	0.0128	1	11/12/2025 07:04	WG2638380
Chloroform	ND		0.00319	1	11/12/2025 07:04	WG2638380
Chloromethane	ND		0.0159	1	11/12/2025 07:04	WG2638380
2-Chlorotoluene	ND		0.00319	1	11/12/2025 07:04	WG2638380
4-Chlorotoluene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0319	1	11/12/2025 07:04	WG2638380
1,2-Dibromoethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Dibromomethane	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2-Dichlorobenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,3-Dichlorobenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00638	1	11/12/2025 07:04	WG2638380
Dichlorodifluoromethane	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,1-Dichloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
1,2-Dichloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
1,1-Dichloroethene	ND		0.00319	1	11/12/2025 07:04	WG2638380
cis-1,2-Dichloroethene	ND		0.00319	1	11/12/2025 07:04	WG2638380
trans-1,2-Dichloroethene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2-Dichloropropane	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,1-Dichloropropene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,3-Dichloropropane	ND		0.00638	1	11/12/2025 07:04	WG2638380
cis-1,3-Dichloropropene	ND		0.00319	1	11/12/2025 07:04	WG2638380
trans-1,3-Dichloropropene	ND		0.00638	1	11/12/2025 07:04	WG2638380
2,2-Dichloropropane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Di-isopropyl ether	ND		0.00128	1	11/12/2025 07:04	WG2638380
Ethylbenzene	ND		0.00319	1	11/12/2025 07:04	WG2638380
Hexachloro-1,3-butadiene	ND		0.0319	1	11/12/2025 07:04	WG2638380
Isopropylbenzene	ND		0.00319	1	11/12/2025 07:04	WG2638380
p-Isopropyltoluene	ND		0.00638	1	11/12/2025 07:04	WG2638380
2-Butanone (MEK)	ND		0.128	1	11/12/2025 07:04	WG2638380
Methylene Chloride	ND		0.0319	1	11/12/2025 07:04	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0319	1	11/12/2025 07:04	WG2638380
Methyl tert-butyl ether	ND		0.00128	1	11/12/2025 07:04	WG2638380
Naphthalene	ND		0.0159	1	11/12/2025 07:04	WG2638380
n-Propylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
Styrene	ND		0.0159	1	11/12/2025 07:04	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00319	1	11/12/2025 07:04	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00638	1	11/12/2025 07:04	WG2638380
Tetrachloroethene	ND		0.00319	1	11/12/2025 07:04	WG2638380
Toluene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0159	1	11/12/2025 07:04	WG2638380
1,2,4-Trichlorobenzene	ND		0.0159	1	11/12/2025 07:04	WG2638380
1,1,1-Trichloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
1,1,2-Trichloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Trichloroethene	ND		0.00128	1	11/12/2025 07:04	WG2638380
Trichlorofluoromethane	ND		0.00510	1	11/12/2025 07:04	WG2638380
1,2,3-Trichloropropane	ND		0.0159	1	11/12/2025 07:04	WG2638380
1,2,4-Trimethylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2,3-Trimethylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,3,5-Trimethylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
Vinyl chloride	ND	C3	0.00319	1	11/12/2025 07:04	WG2638380
Xylenes, Total	ND		0.00829	1	11/12/2025 07:04	WG2638380
(S) Toluene-d8	*94.1*		*75.0-131*		*11/12/2025 07:04*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*166*	J1	*67.0-138*		*11/12/2025 07:04*	WG2638380
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*11/12/2025 07:04*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C12-C16 Aliphatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C16-C21 Aliphatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C21-C34 Aliphatics	ND		16200	2.89	11/19/2025 18:33	WG2641917
C10-C12 Aromatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C12-C16 Aromatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C16-C21 Aromatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C21-C34 Aromatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
(S) o-Terphenyl	*64.1*		*50.0-150*		*11/19/2025 18:33*	WG2641917
(S) 1-Chloro-octadecane	*50.6*		*50.0-150*		*11/19/2025 18:33*	WG2641917
(S) 2-Fluorobiphenyl	*98.7*		*50.0-150*		*11/19/2025 18:33*	WG2641917
(S) 2-Bromonaphthalene	*103*		*50.0-150*		*11/19/2025 18:33*	WG2641917

Sample Narrative:

L1916517-15 WG2641917: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Acenaphthene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Acenaphthylene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(a)anthracene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(a)pyrene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(b)fluoranthene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(g,h,i)perylene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(k)fluoranthene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Chrysene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Dibenz(a,h)anthracene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Fluoranthene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Fluorene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Naphthalene	ND		0.0223	1	11/13/2025 19:10	WG2638729
Phenanthrene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Pyrene	ND		0.00669	1	11/13/2025 19:10	WG2638729
1-Methylnaphthalene	ND		0.0223	1	11/13/2025 19:10	WG2638729
2-Methylnaphthalene	ND		0.0223	1	11/13/2025 19:10	WG2638729
2-Chloronaphthalene	ND		0.0223	1	11/13/2025 19:10	WG2638729
(S) p-Terphenyl-d14	*94.0*		*23.0-120*		*11/13/2025 19:10*	WG2638729
(S) 2-Fluorobiphenyl	*91.8*		*34.0-125*		*11/13/2025 19:10*	WG2638729
(S) 2-Methylnaphthalene-d10	*95.0*		*50.0-150*		*11/13/2025 19:10*	WG2638729

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	37.9		1.15	1	11/17/2025 15:24	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.7		1	11/12/2025 09:45	WG2638490

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.31	1	11/17/2025 15:24	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0461	1	11/13/2025 16:38	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.44		2.31	1	11/12/2025 15:20	WG2638525
Cadmium	ND		0.576	1	11/12/2025 15:20	WG2638525
Chromium	37.9		1.15	1	11/12/2025 15:20	WG2638525
Lead	4.57		0.576	1	11/12/2025 15:20	WG2638525
Nickel	36.4		2.31	1	11/12/2025 15:20	WG2638525
Zinc	52.8		5.76	1	11/12/2025 15:20	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Unadjusted C8-C10 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
C8-C10 Aromatics	ND		6.78	1	11/14/2025 15:48	WG2639771
(S) 2,5-Dibromotoluene(FID)	*102*		*60.0-140*		*11/14/2025 15:48*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*96.2*		*60.0-140*		*11/14/2025 15:48*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	0.550		0.137	1	11/12/2025 07:24	WG2638380
Acrylonitrile	ND		0.0171	1	11/12/2025 07:24	WG2638380
Benzene	ND		0.00137	1	11/12/2025 07:24	WG2638380
Bromobenzene	ND		0.0171	1	11/12/2025 07:24	WG2638380
Bromodichloromethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Bromoform	ND		0.0341	1	11/12/2025 07:24	WG2638380
Bromomethane	ND	C3	0.0171	1	11/12/2025 07:24	WG2638380
n-Butylbenzene	ND		0.0171	1	11/12/2025 07:24	WG2638380
sec-Butylbenzene	ND		0.0171	1	11/12/2025 07:24	WG2638380
tert-Butylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00683	1	11/12/2025 07:24	WG2638380
Chlorobenzene	ND		0.00341	1	11/12/2025 07:24	WG2638380
Chlorodibromomethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Chloroethane	ND	C3	0.0137	1	11/12/2025 07:24	WG2638380
Chloroform	ND		0.00341	1	11/12/2025 07:24	WG2638380
Chloromethane	ND		0.0171	1	11/12/2025 07:24	WG2638380
2-Chlorotoluene	ND		0.00341	1	11/12/2025 07:24	WG2638380
4-Chlorotoluene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0341	1	11/12/2025 07:24	WG2638380
1,2-Dibromoethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Dibromomethane	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2-Dichlorobenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,3-Dichlorobenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00683	1	11/12/2025 07:24	WG2638380
Dichlorodifluoromethane	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,1-Dichloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
1,2-Dichloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
1,1-Dichloroethene	ND		0.00341	1	11/12/2025 07:24	WG2638380
cis-1,2-Dichloroethene	ND		0.00341	1	11/12/2025 07:24	WG2638380
trans-1,2-Dichloroethene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2-Dichloropropane	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,1-Dichloropropene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,3-Dichloropropane	ND		0.00683	1	11/12/2025 07:24	WG2638380
cis-1,3-Dichloropropene	ND		0.00341	1	11/12/2025 07:24	WG2638380
trans-1,3-Dichloropropene	ND		0.00683	1	11/12/2025 07:24	WG2638380
2,2-Dichloropropane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Di-isopropyl ether	ND		0.00137	1	11/12/2025 07:24	WG2638380
Ethylbenzene	ND		0.00341	1	11/12/2025 07:24	WG2638380
Hexachloro-1,3-butadiene	ND		0.0341	1	11/12/2025 07:24	WG2638380
Isopropylbenzene	ND		0.00341	1	11/12/2025 07:24	WG2638380
p-Isopropyltoluene	ND		0.00683	1	11/12/2025 07:24	WG2638380
2-Butanone (MEK)	ND		0.137	1	11/12/2025 07:24	WG2638380
Methylene Chloride	ND		0.0341	1	11/12/2025 07:24	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0341	1	11/12/2025 07:24	WG2638380
Methyl tert-butyl ether	ND		0.00137	1	11/12/2025 07:24	WG2638380
Naphthalene	ND		0.0171	1	11/12/2025 07:24	WG2638380
n-Propylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
Styrene	ND		0.0171	1	11/12/2025 07:24	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00341	1	11/12/2025 07:24	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00683	1	11/12/2025 07:24	WG2638380
Tetrachloroethene	ND		0.00341	1	11/12/2025 07:24	WG2638380
Toluene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0171	1	11/12/2025 07:24	WG2638380
1,2,4-Trichlorobenzene	ND		0.0171	1	11/12/2025 07:24	WG2638380
1,1,1-Trichloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
1,1,2-Trichloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Trichloroethene	ND		0.00137	1	11/12/2025 07:24	WG2638380
Trichlorofluoromethane	ND		0.00546	1	11/12/2025 07:24	WG2638380
1,2,3-Trichloropropane	ND		0.0171	1	11/12/2025 07:24	WG2638380
1,2,4-Trimethylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2,3-Trimethylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,3,5-Trimethylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
Vinyl chloride	ND	C3	0.00341	1	11/12/2025 07:24	WG2638380
Xylenes, Total	ND		0.00887	1	11/12/2025 07:24	WG2638380
(S) Toluene-d8	*94.5*		*75.0-131*		*11/12/2025 07:24*	WG2638380

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*166*	J1	*67.0-138*		*11/12/2025 07:24*	WG2638380
(S) 1,2-Dichloroethane-d4	*115*		*70.0-130*		*11/12/2025 07:24*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C12-C16 Aliphatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C16-C21 Aliphatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C21-C34 Aliphatics	ND		17300	2.99	11/19/2025 18:56	WG2641917
C10-C12 Aromatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C12-C16 Aromatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C16-C21 Aromatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C21-C34 Aromatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
(S) o-Terphenyl	*64.4*		*50.0-150*		*11/19/2025 18:56*	WG2641917
(S) 1-Chloro-octadecane	*52.6*		*50.0-150*		*11/19/2025 18:56*	WG2641917
(S) 2-Fluorobiphenyl	*98.1*		*50.0-150*		*11/19/2025 18:56*	WG2641917
(S) 2-Bromonaphthalene	*102*		*50.0-150*		*11/19/2025 18:56*	WG2641917

Sample Narrative:

L1916517-17 WG2641917: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Acenaphthene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Acenaphthylene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(a)anthracene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(a)pyrene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(b)fluoranthene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(g,h,i)perylene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(k)fluoranthene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Chrysene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Dibenz(a,h)anthracene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Fluoranthene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Fluorene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Naphthalene	ND		0.0231	1	11/13/2025 19:30	WG2638729
Phenanthrene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Pyrene	ND		0.00692	1	11/13/2025 19:30	WG2638729
1-Methylnaphthalene	ND		0.0231	1	11/13/2025 19:30	WG2638729
2-Methylnaphthalene	ND		0.0231	1	11/13/2025 19:30	WG2638729
2-Chloronaphthalene	ND		0.0231	1	11/13/2025 19:30	WG2638729
(S) p-Terphenyl-d14	*82.0*		*23.0-120*		*11/13/2025 19:30*	WG2638729
(S) 2-Fluorobiphenyl	*73.4*		*34.0-125*		*11/13/2025 19:30*	WG2638729
(S) 2-Methylnaphthalene-d10	*79.8*		*50.0-150*		*11/13/2025 19:30*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	41.3		1.23	1	11/17/2025 15:24	WG2638534

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.1		1	11/12/2025 09:45	WG2638490

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.47	1	11/17/2025 15:24	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0493	1	11/15/2025 15:44	WG2638573

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.81		2.47	1	11/12/2025 19:49	WG2638534
Cadmium	ND		0.617	1	11/12/2025 19:49	WG2638534
Chromium	41.3		1.23	1	11/12/2025 19:49	WG2638534
Lead	4.69		0.617	1	11/12/2025 19:49	WG2638534
Nickel	38.7		2.47	1	11/12/2025 19:49	WG2638534
Zinc	55.0		6.17	1	11/12/2025 19:49	WG2638534

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
C8-C10 Aromatics	ND		7.67	1	11/14/2025 16:25	WG2639771
(S) 2,5-Dibromotoluene(FID)	*105*		*60.0-140*		*11/14/2025 16:25*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*98.2*		*60.0-140*		*11/14/2025 16:25*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.156	1	11/12/2025 07:44	WG2638380
Acrylonitrile	ND		0.0196	1	11/12/2025 07:44	WG2638380
Benzene	ND		0.00156	1	11/12/2025 07:44	WG2638380
Bromobenzene	ND		0.0196	1	11/12/2025 07:44	WG2638380
Bromodichloromethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Bromoform	ND		0.0391	1	11/12/2025 07:44	WG2638380
Bromomethane	ND	C3	0.0196	1	11/12/2025 07:44	WG2638380
n-Butylbenzene	ND		0.0196	1	11/12/2025 07:44	WG2638380
sec-Butylbenzene	ND		0.0196	1	11/12/2025 07:44	WG2638380
tert-Butylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00782	1	11/12/2025 07:44	WG2638380
Chlorobenzene	ND		0.00391	1	11/12/2025 07:44	WG2638380
Chlorodibromomethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Chloroethane	ND	C3	0.0156	1	11/12/2025 07:44	WG2638380
Chloroform	ND		0.00391	1	11/12/2025 07:44	WG2638380
Chloromethane	ND		0.0196	1	11/12/2025 07:44	WG2638380
2-Chlorotoluene	ND		0.00391	1	11/12/2025 07:44	WG2638380
4-Chlorotoluene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0391	1	11/12/2025 07:44	WG2638380
1,2-Dibromoethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Dibromomethane	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2-Dichlorobenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,3-Dichlorobenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00782	1	11/12/2025 07:44	WG2638380
Dichlorodifluoromethane	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,1-Dichloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
1,2-Dichloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
1,1-Dichloroethene	ND		0.00391	1	11/12/2025 07:44	WG2638380
cis-1,2-Dichloroethene	ND		0.00391	1	11/12/2025 07:44	WG2638380
trans-1,2-Dichloroethene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2-Dichloropropane	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,1-Dichloropropene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,3-Dichloropropane	ND		0.00782	1	11/12/2025 07:44	WG2638380
cis-1,3-Dichloropropene	ND		0.00391	1	11/12/2025 07:44	WG2638380
trans-1,3-Dichloropropene	ND		0.00782	1	11/12/2025 07:44	WG2638380
2,2-Dichloropropane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Di-isopropyl ether	ND		0.00156	1	11/12/2025 07:44	WG2638380
Ethylbenzene	ND		0.00391	1	11/12/2025 07:44	WG2638380
Hexachloro-1,3-butadiene	ND		0.0391	1	11/12/2025 07:44	WG2638380
Isopropylbenzene	ND		0.00391	1	11/12/2025 07:44	WG2638380
p-Isopropyltoluene	ND		0.00782	1	11/12/2025 07:44	WG2638380
2-Butanone (MEK)	ND		0.156	1	11/12/2025 07:44	WG2638380
Methylene Chloride	ND		0.0391	1	11/12/2025 07:44	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0391	1	11/12/2025 07:44	WG2638380
Methyl tert-butyl ether	ND		0.00156	1	11/12/2025 07:44	WG2638380
Naphthalene	ND		0.0196	1	11/12/2025 07:44	WG2638380
n-Propylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
Styrene	ND		0.0196	1	11/12/2025 07:44	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00391	1	11/12/2025 07:44	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00782	1	11/12/2025 07:44	WG2638380
Tetrachloroethene	ND		0.00391	1	11/12/2025 07:44	WG2638380
Toluene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0196	1	11/12/2025 07:44	WG2638380
1,2,4-Trichlorobenzene	ND		0.0196	1	11/12/2025 07:44	WG2638380
1,1,1-Trichloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
1,1,2-Trichloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Trichloroethene	ND		0.00156	1	11/12/2025 07:44	WG2638380
Trichlorofluoromethane	ND		0.00626	1	11/12/2025 07:44	WG2638380
1,2,3-Trichloropropane	ND		0.0196	1	11/12/2025 07:44	WG2638380
1,2,4-Trimethylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2,3-Trimethylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,3,5-Trimethylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
Vinyl chloride	ND	C3	0.00391	1	11/12/2025 07:44	WG2638380
Xylenes, Total	ND		0.0102	1	11/12/2025 07:44	WG2638380
(S) Toluene-d8	*95.8*		*75.0-131*		*11/12/2025 07:44*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*11/12/2025 07:44*	WG2638380
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*11/12/2025 07:44*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C12-C16 Aliphatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C16-C21 Aliphatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C21-C34 Aliphatics	ND		18500	2.99	11/19/2025 19:19	WG2641917
C10-C12 Aromatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C12-C16 Aromatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C16-C21 Aromatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C21-C34 Aromatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
(S) o-Terphenyl	*66.3*		*50.0-150*		*11/19/2025 19:19*	WG2641917
(S) 1-Chloro-octadecane	*54.3*		*50.0-150*		*11/19/2025 19:19*	WG2641917
(S) 2-Fluorobiphenyl	*96.3*		*50.0-150*		*11/19/2025 19:19*	WG2641917
(S) 2-Bromonaphthalene	*100*		*50.0-150*		*11/19/2025 19:19*	WG2641917

Sample Narrative:

L1916517-19 WG2641917: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Acenaphthene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Acenaphthylene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(a)anthracene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(a)pyrene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(b)fluoranthene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(g,h,i)perylene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(k)fluoranthene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Chrysene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Dibenz(a,h)anthracene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Fluoranthene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Fluorene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Naphthalene	ND		0.0247	1	11/13/2025 19:50	WG2638729
Phenanthrene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Pyrene	ND		0.00740	1	11/13/2025 19:50	WG2638729
1-Methylnaphthalene	ND		0.0247	1	11/13/2025 19:50	WG2638729
2-Methylnaphthalene	ND		0.0247	1	11/13/2025 19:50	WG2638729
2-Chloronaphthalene	ND		0.0247	1	11/13/2025 19:50	WG2638729
(S) p-Terphenyl-d14	*77.2*		*23.0-120*		*11/13/2025 19:50*	WG2638729
(S) 2-Fluorobiphenyl	*71.9*		*34.0-125*		*11/13/2025 19:50*	WG2638729
(S) 2-Methylnaphthalene-d10	*73.6*		*50.0-150*		*11/13/2025 19:50*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	72.2		1.21	1	11/17/2025 15:24	WG2638534

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	83.0		1	11/12/2025 09:45	WG2638490

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.41	1	11/17/2025 15:24	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0934		0.0482	1	11/15/2025 15:47	WG2638573

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.60		2.41	1	11/12/2025 18:46	WG2638534
Cadmium	ND		0.603	1	11/12/2025 18:46	WG2638534
Chromium	74.4		1.21	1	11/12/2025 18:46	WG2638534
Lead	3.38		0.603	1	11/12/2025 18:46	WG2638534
Nickel	26.9		2.41	1	11/12/2025 18:46	WG2638534
Zinc	31.2		6.03	1	11/12/2025 18:46	WG2638534

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
C8-C10 Aromatics	ND		7.26	1	11/14/2025 17:02	WG2639771
(S) 2,5-Dibromotoluene(FID)	*99.1*		*60.0-140*		*11/14/2025 17:02*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*93.2*		*60.0-140*		*11/14/2025 17:02*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.145	1	11/14/2025 14:07	WG2639828
Acrylonitrile	ND		0.0182	1	11/14/2025 14:07	WG2639828
Benzene	ND		0.00145	1	11/14/2025 14:07	WG2639828
Bromobenzene	ND	C3	0.0182	1	11/14/2025 14:07	WG2639828
Bromodichloromethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Bromoform	ND		0.0363	1	11/14/2025 14:07	WG2639828
Bromomethane	ND		0.0182	1	11/14/2025 14:07	WG2639828
n-Butylbenzene	ND		0.0182	1	11/14/2025 14:07	WG2639828
sec-Butylbenzene	ND		0.0182	1	11/14/2025 14:07	WG2639828
tert-Butylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00726	1	11/14/2025 14:07	WG2639828
Chlorobenzene	ND		0.00363	1	11/14/2025 14:07	WG2639828
Chlorodibromomethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Chloroethane	ND		0.0145	1	11/14/2025 14:07	WG2639828
Chloroform	ND		0.00363	1	11/14/2025 14:07	WG2639828
Chloromethane	ND		0.0182	1	11/14/2025 14:07	WG2639828
2-Chlorotoluene	ND		0.00363	1	11/14/2025 14:07	WG2639828
4-Chlorotoluene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2-Dibromo-3-Chloropropane	ND		0.0363	1	11/14/2025 14:07	WG2639828
1,2-Dibromoethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Dibromomethane	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2-Dichlorobenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,3-Dichlorobenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,4-Dichlorobenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
Dichlorodifluoromethane	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,1-Dichloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
1,2-Dichloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
1,1-Dichloroethene	ND		0.00363	1	11/14/2025 14:07	WG2639828
cis-1,2-Dichloroethene	ND		0.00363	1	11/14/2025 14:07	WG2639828
trans-1,2-Dichloroethene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2-Dichloropropane	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,1-Dichloropropene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,3-Dichloropropane	ND		0.00726	1	11/14/2025 14:07	WG2639828
cis-1,3-Dichloropropene	ND		0.00363	1	11/14/2025 14:07	WG2639828
trans-1,3-Dichloropropene	ND		0.00726	1	11/14/2025 14:07	WG2639828
2,2-Dichloropropane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Di-isopropyl ether	ND		0.00145	1	11/14/2025 14:07	WG2639828
Ethylbenzene	ND		0.00363	1	11/14/2025 14:07	WG2639828
Hexachloro-1,3-butadiene	ND		0.0363	1	11/14/2025 14:07	WG2639828
Isopropylbenzene	ND		0.00363	1	11/14/2025 14:07	WG2639828
p-Isopropyltoluene	ND		0.00726	1	11/14/2025 14:07	WG2639828
2-Butanone (MEK)	ND		0.145	1	11/14/2025 14:07	WG2639828
Methylene Chloride	ND		0.0363	1	11/14/2025 14:07	WG2639828
4-Methyl-2-pentanone (MIBK)	ND		0.0363	1	11/14/2025 14:07	WG2639828
Methyl tert-butyl ether	ND		0.00145	1	11/14/2025 14:07	WG2639828
Naphthalene	ND		0.0182	1	11/14/2025 14:07	WG2639828
n-Propylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
Styrene	ND		0.0182	1	11/14/2025 14:07	WG2639828
1,1,1,2-Tetrachloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
1,1,2,2-Tetrachloroethane	ND	C3	0.00363	1	11/14/2025 14:07	WG2639828
1,1,2-Trichlorotrifluoroethane	ND		0.00726	1	11/14/2025 14:07	WG2639828
Tetrachloroethene	ND		0.00363	1	11/14/2025 14:07	WG2639828
Toluene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2,3-Trichlorobenzene	ND		0.0182	1	11/14/2025 14:07	WG2639828
1,2,4-Trichlorobenzene	ND		0.0182	1	11/14/2025 14:07	WG2639828
1,1,1-Trichloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
1,1,2-Trichloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Trichloroethene	ND		0.00145	1	11/14/2025 14:07	WG2639828
Trichlorofluoromethane	ND		0.00581	1	11/14/2025 14:07	WG2639828
1,2,3-Trichloropropane	ND	C3	0.0182	1	11/14/2025 14:07	WG2639828
1,2,4-Trimethylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2,3-Trimethylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,3,5-Trimethylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
Vinyl chloride	ND		0.00363	1	11/14/2025 14:07	WG2639828
Xylenes, Total	ND		0.00944	1	11/14/2025 14:07	WG2639828
(S) Toluene-d8	*94.6*		*75.0-131*		*11/14/2025 14:07*	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*11/14/2025 14:07*	WG2639828
(S) 1,2-Dichloroethane-d4	*89.4*		*70.0-130*		*11/14/2025 14:07*	WG2639828

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C12-C16 Aliphatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C16-C21 Aliphatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C21-C34 Aliphatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C10-C12 Aromatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C12-C16 Aromatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C16-C21 Aromatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C21-C34 Aromatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
(S) o-Terphenyl	*59.4*		*50.0-150*		*11/16/2025 08:36*	WG2638865
(S) 1-Chloro-octadecane	*57.9*		*50.0-150*		*11/16/2025 08:36*	WG2638865
(S) 2-Fluorobiphenyl	*89.3*		*50.0-150*		*11/16/2025 08:36*	WG2638865
(S) 2-Bromonaphthalene	*93.0*		*50.0-150*		*11/16/2025 08:36*	WG2638865

Sample Narrative:

L1916517-21 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Acenaphthene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Acenaphthylene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(a)anthracene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(a)pyrene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(b)fluoranthene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(g,h,i)perylene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(k)fluoranthene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Chrysene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Dibenz(a,h)anthracene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Fluoranthene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Fluorene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Naphthalene	ND		0.0241	1	11/13/2025 20:10	WG2638729
Phenanthrene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Pyrene	ND		0.00723	1	11/13/2025 20:10	WG2638729
1-Methylnaphthalene	ND		0.0241	1	11/13/2025 20:10	WG2638729
2-Methylnaphthalene	ND		0.0241	1	11/13/2025 20:10	WG2638729
2-Chloronaphthalene	ND		0.0241	1	11/13/2025 20:10	WG2638729
(S) p-Terphenyl-d14	*87.1*		*23.0-120*		*11/13/2025 20:10*	WG2638729
(S) 2-Fluorobiphenyl	*86.7*		*34.0-125*		*11/13/2025 20:10*	WG2638729
(S) 2-Methylnaphthalene-d10	*87.2*		*50.0-150*		*11/13/2025 20:10*	WG2638729

Method Blank (MB)

(MB) R4300099-1 11/12/25 09:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

L1916517-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1916517-03 11/12/25 09:56 • (DUP) R4300099-3 11/12/25 09:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	84.1	84.5	1	0.396		10

Laboratory Control Sample (LCS)

(LCS) R4300099-2 11/12/25 09:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

Method Blank (MB)

(MB) R4300096-1 11/12/25 09:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

L1916517-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1916517-21 11/12/25 09:45 • (DUP) R4300096-3 11/12/25 09:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	83.0	83.9	1	1.10		10

Laboratory Control Sample (LCS)

(LCS) R4300096-2 11/12/25 09:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

Method Blank (MB)

(MB) R4302086-1 11/17/25 15:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.751	2.00

L1916334-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1916334-02 11/17/25 15:20 • (DUP) R4302086-3 11/17/25 15:20

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	ND	ND	1	0.000		20

L1916517-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1916517-21 11/17/25 15:24 • (DUP) R4302086-7 11/17/25 15:38

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4302086-2 11/17/25 15:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	23.8	99.3	73.0-125	

L1916334-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916334-04 11/17/25 15:20 • (MS) R4302086-5 11/17/25 15:21 • (MSD) R4302086-6 11/17/25 15:21

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	24.2	ND	24.1	23.9	99.8	98.8	1	85.0-115			1.02	20

L1916334-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1916334-04 11/17/25 15:20 • (MS) R4302086-8 11/17/25 15:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	793	ND	848	107	50	85.0-115	

QUALITY CONTROL SUMMARY

L1916517-19,21

Method Blank (MB)

(MB) R4301552-1 11/15/25 14:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0206	0.0400

Laboratory Control Sample (LCS)

(LCS) R4301552-2 11/15/25 15:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.549	110	80.0-120	

L1916524-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916524-03 11/15/25 15:04 • (MS) R4301552-4 11/15/25 15:09 • (MSD) R4301552-5 11/15/25 15:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	ND	0.555	0.595	104	112	1	75.0-125			7.05	20

QUALITY CONTROL SUMMARY

L1916517-01,03,05,06,07,09,11,13,15,17

Method Blank (MB)

(MB) R4300812-1 11/13/25 15:40

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0206	0.0400

Laboratory Control Sample (LCS)

(LCS) R4300812-2 11/13/25 15:42

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.513	103	80.0-120	

L1915977-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1915977-04 11/13/25 15:45 • (MS) R4300812-4 11/13/25 15:50 • (MSD) R4300812-5 11/13/25 15:53

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.501	ND	0.528	0.515	100	97.8	1	75.0-125			2.40	20

Method Blank (MB)

(MB) R4300186-1 11/12/25 14:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.837	2.00
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Zinc	U		0.974	5.00

Laboratory Control Sample (LCS)

(LCS) R4300186-2 11/12/25 14:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	87.6	87.6	80.0-120	
Cadmium	100	87.7	87.7	80.0-120	
Chromium	100	91.6	91.6	80.0-120	
Lead	100	88.8	88.8	80.0-120	
Nickel	100	86.0	86.0	80.0-120	
Zinc	100	89.0	89.0	80.0-120	

L1916166-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916166-02 11/12/25 14:40 • (MS) R4300186-5 11/12/25 14:45 • (MSD) R4300186-6 11/12/25 14:47

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	121	45.4	173	181	105	112	1	75.0-125			4.60	20
Cadmium	121	ND	111	108	91.5	89.0	1	75.0-125			2.71	20
Chromium	121	29.8	138	137	89.6	88.3	1	75.0-125			1.10	20
Lead	121	84.9	213	177	105	76.1	1	75.0-125			18.2	20
Nickel	121	30.4	153	135	101	85.9	1	75.0-125			13.0	20
Zinc	121	260	384	282	102	17.8	1	75.0-125		J3 J6	30.7	20

Method Blank (MB)

(MB) R4300262-1 11/12/25 19:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.837	2.00
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Zinc	U		0.974	5.00

Laboratory Control Sample (LCS)

(LCS) R4300262-2 11/12/25 19:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	98.9	98.9	80.0-120	
Cadmium	100	99.1	99.1	80.0-120	
Chromium	100	103	103	80.0-120	
Lead	100	99.9	99.9	80.0-120	
Nickel	100	96.5	96.5	80.0-120	
Zinc	100	99.4	99.4	80.0-120	

L1916493-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916493-01 11/12/25 19:58 • (MS) R4300262-5 11/12/25 20:03 • (MSD) R4300262-6 11/12/25 20:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	108	3.34	99.1	103	88.5	92.6	1	75.0-125			4.30	20
Cadmium	108	ND	96.4	100	89.2	92.8	1	75.0-125			3.94	20
Chromium	108	28.3	130	132	93.7	95.7	1	75.0-125			1.67	20
Lead	108	3.86	104	108	92.5	96.6	1	75.0-125			4.13	20
Nickel	108	30.3	130	132	91.8	94.0	1	75.0-125			1.82	20
Zinc	108	34.0	133	134	91.7	92.6	1	75.0-125			0.720	20

Method Blank (MB)

(MB) R4303833-3 11/14/25 09:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Unadjusted C5-C6 Aliphatics	U		1.67	5.00
Adjusted C5-C6 Aliphatics	U		1.67	5.00
Unadjusted C6-C8 Aliphatics	U		0.455	5.00
Adjusted C6-C8 Aliphatics	U		0.455	5.00
Unadjusted C8-C10 Aliphatics	U		1.67	5.00
Adjusted C8-C10 Aliphatics	U		1.67	5.00
C8-C10 Aromatics	U		0.555	5.00
(S) 2,5-Dibromotoluene(FID)	*95.3*			*60.0-140*
(S) 2,5-Dibromotoluene(PID)	*92.2*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4303833-1 11/14/25 07:08 • (LCSD) R4303833-2 11/14/25 07:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Unadjusted C5-C6 Aliphatics	30.0	27.8	28.0	92.7	93.3	70.0-130			0.717	25
Adjusted C5-C6 Aliphatics	30.0	27.8	28.0	92.7	93.3	70.0-130			0.717	25
Unadjusted C6-C8 Aliphatics	20.0	19.5	19.6	97.5	98.0	70.0-130			0.512	25
Adjusted C6-C8 Aliphatics	20.0	19.5	19.6	97.5	98.0	70.0-130			0.512	25
Unadjusted C8-C10 Aliphatics	60.0	59.7	59.8	99.5	99.7	70.0-130			0.167	25
Adjusted C8-C10 Aliphatics	60.0	59.7	59.8	99.5	99.7	70.0-130			0.167	25
C8-C10 Aromatics	50.0	45.7	45.8	91.4	91.6	70.0-130			0.219	25
(S) 2,5-Dibromotoluene(FID)				*103*	*103*	*60.0-140*				
(S) 2,5-Dibromotoluene(PID)				*99.0*	*99.3*	*60.0-140*				

Method Blank (MB)

(MB) R4305118-3 11/21/25 12:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Unadjusted C5-C6 Aliphatics	U		1.67	5.00
Adjusted C5-C6 Aliphatics	U		1.67	5.00
Unadjusted C6-C8 Aliphatics	U		0.455	5.00
Adjusted C6-C8 Aliphatics	U		0.455	5.00
Unadjusted C8-C10 Aliphatics	U		1.67	5.00
Adjusted C8-C10 Aliphatics	U		1.67	5.00
C8-C10 Aromatics	U		0.555	5.00
(S) 2,5-Dibromotoluene(FID)	*95.7*			*60.0-140*
(S) 2,5-Dibromotoluene(PID)	*90.6*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4305118-1 11/21/25 09:54 • (LCSD) R4305118-2 11/21/25 10:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Unadjusted C5-C6 Aliphatics	30.0	34.7	36.2	116	121	70.0-130			4.23	25
Adjusted C5-C6 Aliphatics	30.0	34.7	36.2	116	121	70.0-130			4.23	25
Unadjusted C6-C8 Aliphatics	20.0	23.1	23.1	116	116	70.0-130			0.000	25
Adjusted C6-C8 Aliphatics	20.0	23.1	23.1	116	116	70.0-130			0.000	25
Unadjusted C8-C10 Aliphatics	60.0	67.8	66.6	113	111	70.0-130			1.79	25
Adjusted C8-C10 Aliphatics	60.0	67.8	66.6	113	111	70.0-130			1.79	25
C8-C10 Aromatics	50.0	50.6	49.6	101	99.2	70.0-130			2.00	25
(S) 2,5-Dibromotoluene(FID)				*107*	*106*	*60.0-140*				
(S) 2,5-Dibromotoluene(PID)				*101*	*99.7*	*60.0-140*				

L1918248-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1918248-01 11/21/25 16:10 • (MS) R4305118-4 11/21/25 18:01 • (MSD) R4305118-5 11/21/25 18:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Unadjusted C5-C6 Aliphatics	82.9	ND	97.3	92.0	117	111	1	70.0-130			5.55	25
Adjusted C5-C6 Aliphatics	82.9	ND	97.3	92.0	117	111	1	70.0-130			5.55	25
Unadjusted C6-C8 Aliphatics	55.3	ND	60.5	57.5	106	101	1	70.0-130			5.15	25
Adjusted C6-C8 Aliphatics	55.3	ND	60.5	57.5	106	101	1	70.0-130			5.15	25
Unadjusted C8-C10 Aliphatics	166	ND	181	173	109	104	1	70.0-130			4.37	25
Adjusted C8-C10 Aliphatics	166	ND	181	173	109	104	1	70.0-130			4.37	25
C8-C10 Aromatics	138	ND	133	128	95.1	91.3	1	70.0-130			4.03	25
(S) 2,5-Dibromotoluene(FID)					*106*	*107*		*60.0-140*				

L1918248-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1918248-01 11/21/25 16:10 • (MS) R4305118-4 11/21/25 18:01 • (MSD) R4305118-5 11/21/25 18:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 2,5-Dibromotoluene(PID)					*97.0*	*97.6*		*60.0-140*				

Method Blank (MB)

(MB) R4300575-3 11/11/25 23:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0697	0.100
Acrylonitrile	U		0.00803	0.0125
Benzene	U		0.000711	0.00100
Bromobenzene	U		0.00390	0.0125
Bromodichloromethane	U		0.00117	0.00250
Bromoform	U		0.00992	0.0250
Bromomethane	0.0112	J	0.0101	0.0125
n-Butylbenzene	U		0.00625	0.0125
sec-Butylbenzene	U		0.00383	0.0125
tert-Butylbenzene	U		0.00189	0.00500
Carbon tetrachloride	U		0.00301	0.00500
Chlorobenzene	U		0.000858	0.00250
Chlorodibromomethane	U		0.00161	0.00250
Chloroethane	U		0.00569	0.0100
Chloroform	U		0.00162	0.00250
Chloromethane	U		0.00850	0.0125
2-Chlorotoluene	U		0.00129	0.00250
4-Chlorotoluene	U		0.00154	0.00500
1,2-Dibromo-3-Chloropropane	U		0.0107	0.0250
1,2-Dibromoethane	U		0.00126	0.00250
Dibromomethane	U		0.00178	0.00500
1,2-Dichlorobenzene	U		0.00156	0.00500
1,3-Dichlorobenzene	U		0.00165	0.00500
1,4-Dichlorobenzene	U		0.00175	0.00500
Dichlorodifluoromethane	U		0.00435	0.00500
1,1-Dichloroethane	U		0.00101	0.00250
1,2-Dichloroethane	U		0.00146	0.00250
1,1-Dichloroethene	U		0.00153	0.00250
cis-1,2-Dichloroethene	U		0.00129	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00192	0.00500
1,1-Dichloropropene	U		0.00138	0.00500
1,3-Dichloropropane	U		0.00162	0.00500
cis-1,3-Dichloropropene	U		0.00105	0.00250
trans-1,3-Dichloropropene	U		0.00105	0.00500
2,2-Dichloropropane	U		0.00202	0.00250
Di-isopropyl ether	U		0.000769	0.00100
Ethylbenzene	U		0.000987	0.00250
Hexachloro-1,3-butadiene	U		0.0104	0.0250
Isopropylbenzene	U		0.00101	0.00250

Method Blank (MB)

(MB) R4300575-3 11/11/25 23:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00213	0.00500
2-Butanone (MEK)	U		0.0887	0.100
Methylene Chloride	U		0.0110	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00992	0.0250
Methyl tert-butyl ether	U		0.000773	0.00100
Naphthalene	U		0.00763	0.0125
n-Propylbenzene	U		0.00169	0.00500
Styrene	U		0.00445	0.0125
1,1,1,2-Tetrachloroethane	U		0.00130	0.00250
1,1,2,2-Tetrachloroethane	U		0.00116	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.00281	0.00500
Tetrachloroethene	U		0.00152	0.00250
Toluene	U		0.00289	0.00500
1,2,3-Trichlorobenzene	U		0.00699	0.0125
1,2,4-Trichlorobenzene	U		0.00542	0.0125
1,1,1-Trichloroethane	U		0.00145	0.00250
1,1,2-Trichloroethane	U		0.00134	0.00250
Trichloroethene	U		0.000891	0.00100
Trichlorofluoromethane	U		0.00261	0.00400
1,2,3-Trichloropropane	U		0.00612	0.0125
1,2,4-Trimethylbenzene	U		0.00238	0.00500
1,2,3-Trimethylbenzene	U		0.00182	0.00500
1,3,5-Trimethylbenzene	U		0.00228	0.00500
Vinyl chloride	U		0.00201	0.00250
Xylenes, Total	U		0.00280	0.00650
(S) Toluene-d8	*92.8*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*127*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300575-1 11/11/25 20:58 • (LCSD) R4300575-2 11/11/25 21:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	1.25	1.49	1.47	119	118	10.0-160			1.35	31
Acrylonitrile	1.25	1.37	1.34	110	107	45.0-153			2.21	22
Benzene	0.250	0.219	0.211	87.6	84.4	70.0-123			3.72	20
Bromobenzene	0.250	0.232	0.228	92.8	91.2	73.0-121			1.74	20
Bromodichloromethane	0.250	0.261	0.259	104	104	73.0-121			0.769	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300575-1 11/11/25 20:58 • (LCSD) R4300575-2 11/11/25 21:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.250	0.232	0.227	92.8	90.8	64.0-132			2.18	20
Bromomethane	0.250	0.180	0.186	72.0	74.4	56.0-147			3.28	20
n-Butylbenzene	0.250	0.208	0.213	83.2	85.2	68.0-135			2.38	20
sec-Butylbenzene	0.250	0.211	0.206	84.4	82.4	74.0-130			2.40	20
tert-Butylbenzene	0.250	0.226	0.220	90.4	88.0	75.0-127			2.69	20
Carbon tetrachloride	0.250	0.297	0.282	119	113	66.0-128			5.18	20
Chlorobenzene	0.250	0.212	0.210	84.8	84.0	76.0-128			0.948	20
Chlorodibromomethane	0.250	0.234	0.229	93.6	91.6	74.0-127			2.16	20
Chloroethane	0.250	0.185	0.180	74.0	72.0	61.0-134			2.74	20
Chloroform	0.250	0.267	0.263	107	105	72.0-123			1.51	20
Chloromethane	0.250	0.302	0.289	121	116	51.0-138			4.40	20
2-Chlorotoluene	0.250	0.228	0.223	91.2	89.2	75.0-124			2.22	20
4-Chlorotoluene	0.250	0.224	0.221	89.6	88.4	75.0-124			1.35	20
1,2-Dibromo-3-Chloropropane	0.250	0.223	0.214	89.2	85.6	59.0-130			4.12	20
1,2-Dibromoethane	0.250	0.225	0.219	90.0	87.6	74.0-128			2.70	20
Dibromomethane	0.250	0.243	0.242	97.2	96.8	75.0-122			0.412	20
1,2-Dichlorobenzene	0.250	0.218	0.210	87.2	84.0	76.0-124			3.74	20
1,3-Dichlorobenzene	0.250	0.207	0.208	82.8	83.2	76.0-125			0.482	20
1,4-Dichlorobenzene	0.250	0.193	0.206	77.2	82.4	77.0-121			6.52	20
Dichlorodifluoromethane	0.250	0.311	0.307	124	123	43.0-156			1.29	20
1,1-Dichloroethane	0.250	0.253	0.244	101	97.6	70.0-127			3.62	20
1,2-Dichloroethane	0.250	0.284	0.269	114	108	65.0-131			5.42	20
1,1-Dichloroethene	0.250	0.268	0.264	107	106	65.0-131			1.50	20
cis-1,2-Dichloroethene	0.250	0.221	0.222	88.4	88.8	73.0-125			0.451	20
trans-1,2-Dichloroethene	0.250	0.223	0.218	89.2	87.2	71.0-125			2.27	20
1,2-Dichloropropane	0.250	0.236	0.222	94.4	88.8	74.0-125			6.11	20
1,1-Dichloropropene	0.250	0.241	0.238	96.4	95.2	73.0-125			1.25	20
1,3-Dichloropropane	0.250	0.222	0.221	88.8	88.4	80.0-125			0.451	20
cis-1,3-Dichloropropene	0.250	0.250	0.242	100	96.8	76.0-127			3.25	20
trans-1,3-Dichloropropene	0.250	0.250	0.245	100	98.0	73.0-127			2.02	20
2,2-Dichloropropane	0.250	0.266	0.257	106	103	59.0-135			3.44	20
Di-isopropyl ether	0.250	0.264	0.259	106	104	60.0-136			1.91	20
Ethylbenzene	0.250	0.205	0.202	82.0	80.8	74.0-126			1.47	20
Hexachloro-1,3-butadiene	0.250	0.231	0.230	92.4	92.0	57.0-150			0.434	20
Isopropylbenzene	0.250	0.212	0.210	84.8	84.0	72.0-127			0.948	20
p-Isopropyltoluene	0.250	0.218	0.219	87.2	87.6	72.0-133			0.458	20
2-Butanone (MEK)	1.25	1.73	1.71	138	137	30.0-160			1.16	24
Methylene Chloride	0.250	0.232	0.220	92.8	88.0	68.0-123			5.31	20
4-Methyl-2-pentanone (MIBK)	1.25	1.23	1.20	98.4	96.0	56.0-143			2.47	20
Methyl tert-butyl ether	0.250	0.284	0.281	114	112	66.0-132			1.06	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300575-1 11/11/25 20:58 • (LCSD) R4300575-2 11/11/25 21:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.250	0.213	0.215	85.2	86.0	59.0-130			0.935	20
n-Propylbenzene	0.250	0.216	0.211	86.4	84.4	74.0-126			2.34	20
Styrene	0.250	0.218	0.211	87.2	84.4	72.0-127			3.26	20
1,1,1,2-Tetrachloroethane	0.250	0.232	0.229	92.8	91.6	74.0-129			1.30	20
1,1,2,2-Tetrachloroethane	0.250	0.192	0.190	76.8	76.0	68.0-128			1.05	20
1,1,2-Trichlorotrifluoroethane	0.250	0.249	0.242	99.6	96.8	61.0-139			2.85	20
Tetrachloroethene	0.250	0.227	0.216	90.8	86.4	70.0-136			4.97	20
Toluene	0.250	0.210	0.208	84.0	83.2	75.0-121			0.957	20
1,2,3-Trichlorobenzene	0.250	0.192	0.198	76.8	79.2	59.0-139			3.08	20
1,2,4-Trichlorobenzene	0.250	0.212	0.207	84.8	82.8	62.0-137			2.39	20
1,1,1-Trichloroethane	0.250	0.295	0.286	118	114	69.0-126			3.10	20
1,1,2-Trichloroethane	0.250	0.215	0.197	86.0	78.8	78.0-123			8.74	20
Trichloroethene	0.250	0.259	0.247	104	98.8	76.0-126			4.74	20
Trichlorofluoromethane	0.250	0.306	0.302	122	121	61.0-142			1.32	20
1,2,3-Trichloropropane	0.250	0.265	0.260	106	104	67.0-129			1.90	20
1,2,4-Trimethylbenzene	0.250	0.233	0.227	93.2	90.8	70.0-126			2.61	20
1,2,3-Trimethylbenzene	0.250	0.224	0.220	89.6	88.0	74.0-124			1.80	20
1,3,5-Trimethylbenzene	0.250	0.229	0.230	91.6	92.0	73.0-127			0.436	20
Vinyl chloride	0.250	0.187	0.178	74.8	71.2	63.0-134			4.93	20
Xylenes, Total	0.750	0.625	0.625	83.3	83.3	72.0-127			0.000	20
(S) Toluene-d8				*92.5*	*92.4*	*75.0-131*				
(S) 4-Bromofluorobenzene				*98.2*	*98.0*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*130*	*129*	*70.0-130*				

L1916517-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916517-05 11/12/25 08:23 • (MS) R4300575-4 11/12/25 08:43 • (MSD) R4300575-5 11/12/25 09:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	46.7	ND	43.5	66.2	93.1	142	40	10.0-160		J5	41.4	40
Acrylonitrile	46.7	ND	38.4	55.3	82.3	118	40	10.0-160			35.9	40
Benzene	9.34	0.0561	10.3	9.30	110	99.0	40	10.0-149			10.3	37
Bromobenzene	9.34	ND	9.12	13.5	97.6	144	40	10.0-156		J5	38.6	38
Bromodichloromethane	9.34	ND	10.4	10.3	111	110	40	10.0-143			1.29	37
Bromoform	9.34	ND	6.19	13.6	66.3	146	40	10.0-146		J5	74.9	36
Bromomethane	9.34	ND	6.46	14.4	69.1	154	40	10.0-149		J5 J5	76.2	38
n-Butylbenzene	9.34	0.912	9.20	11.5	88.7	113	40	10.0-160			22.1	40
sec-Butylbenzene	9.34	0.798	8.72	12.0	84.7	120	40	10.0-159			31.8	39
tert-Butylbenzene	9.34	ND	10.9	12.7	116	136	40	10.0-156			15.6	39

L1916517-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916517-05 11/12/25 08:23 • (MS) R4300575-4 11/12/25 08:43 • (MSD) R4300575-5 11/12/25 09:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	9.34	ND	6.07	11.9	65.0	127	40	10.0-145		J3	64.8	37
Chlorobenzene	9.34	ND	8.37	9.06	89.6	97.0	40	10.0-152			7.96	39
Chlorodibromomethane	9.34	ND	8.36	9.62	89.4	103	40	10.0-146			14.1	37
Chloroethane	9.34	ND	8.56	17.8	91.6	190	40	10.0-146		J3, J5	69.9	40
Chloroform	9.34	ND	6.03	10.9	64.6	117	40	10.0-146		J6	57.4	37
Chloromethane	9.34	ND	13.7	11.9	147	127	40	10.0-159			14.4	37
2-Chlorotoluene	9.34	ND	8.41	13.5	90.0	144	40	10.0-159		J3	46.3	38
4-Chlorotoluene	9.34	ND	8.70	13.1	93.1	140	40	10.0-155		J3	40.2	39
1,2-Dibromo-3-Chloropropane	9.34	ND	10.8	10.4	116	111	40	10.0-151			4.41	39
1,2-Dibromoethane	9.34	ND	9.49	9.28	102	99.3	40	10.0-148			2.28	34
Dibromomethane	9.34	ND	11.5	9.88	123	106	40	10.0-147			14.9	35
1,2-Dichlorobenzene	9.34	ND	8.60	9.87	92.0	106	40	10.0-155			13.7	37
1,3-Dichlorobenzene	9.34	ND	7.98	8.89	85.4	95.1	40	10.0-153			10.8	38
1,4-Dichlorobenzene	9.34	ND	8.22	8.97	88.0	96.0	40	10.0-151			8.70	38
Dichlorodifluoromethane	9.34	ND	10.9	12.6	117	135	40	10.0-160			14.5	35
1,1-Dichloroethane	9.34	ND	5.78	10.1	61.9	108	40	10.0-147		J6	54.6	37
1,2-Dichloroethane	9.34	ND	8.93	10.5	95.6	112	40	10.0-148			16.0	35
1,1-Dichloroethene	9.34	ND	5.71	10.8	61.1	116	40	10.0-155		J3	61.8	37
cis-1,2-Dichloroethene	9.34	ND	5.47	9.64	58.6	103	40	10.0-149		J3	55.1	37
trans-1,2-Dichloroethene	9.34	ND	5.23	9.38	56.0	100	40	10.0-150		J3	56.8	37
1,2-Dichloropropane	9.34	ND	11.8	9.87	126	106	40	10.0-148			17.8	37
1,1-Dichloropropene	9.34	ND	5.34	10.3	57.1	110	40	10.0-153		J3	63.1	35
1,3-Dichloropropane	9.34	ND	9.20	8.97	98.4	96.0	40	10.0-154			2.50	35
cis-1,3-Dichloropropene	9.34	ND	9.12	10.0	97.6	107	40	10.0-151			9.35	37
trans-1,3-Dichloropropene	9.34	ND	8.52	10.0	91.1	107	40	10.0-148			16.1	37
2,2-Dichloropropane	9.34	ND	5.58	10.3	59.7	110	40	10.0-138		J2	59.1	36
Di-isopropyl ether	9.34	ND	6.29	10.1	67.3	108	40	10.0-147		J3	46.7	36
Ethylbenzene	9.34	1.08	9.01	9.60	84.8	91.1	40	10.0-160			6.31	38
Hexachloro-1,3-butadiene	9.34	ND	11.5	12.0	123	128	40	10.0-160			4.44	40
Isopropylbenzene	9.34	0.661	5.39	14.8	50.6	152	40	10.0-155		J2	93.3	38
p-Isopropyltoluene	9.34	0.296	8.92	11.2	92.3	116	40	10.0-160			22.3	40
2-Butanone (MEK)	46.7	ND	53.8	78.2	115	167	40	10.0-160		J5	37.0	40
Methylene Chloride	9.34	ND	5.65	9.70	60.4	104	40	10.0-141		J3	52.9	37
4-Methyl-2-pentanone (MIBK)	46.7	4.63	60.2	54.6	119	107	40	10.0-160			9.77	35
Methyl tert-butyl ether	9.34	ND	7.30	11.3	78.1	121	40	11.0-147		J3	43.4	35
Naphthalene	9.34	6.29	15.9	18.3	103	128	40	10.0-160			14.1	36
n-Propylbenzene	9.34	1.83	9.29	15.4	79.9	145	40	10.0-158		J3	49.2	38
Styrene	9.34	12.0	17.4	34.4	57.0	240	40	10.0-160		J3, J5	66.0	40
1,1,1,2-Tetrachloroethane	9.34	ND	7.48	9.45	80.0	101	40	10.0-149			23.3	39

L1916517-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916517-05 11/12/25 08:23 • (MS) R4300575-4 11/12/25 08:43 • (MSD) R4300575-5 11/12/25 09:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,2,2-Tetrachloroethane	9.34	ND	8.56	14.6	91.6	156	40	10.0-160		J5	51.9	35
1,1,2-Trichlorotrifluoroethane	9.34	ND	5.34	9.87	57.1	106	40	10.0-160		J5	59.5	36
Tetrachloroethene	9.34	ND	6.78	9.38	72.6	100	40	10.0-156			32.2	39
Toluene	9.34	0.478	7.72	9.28	77.5	94.2	40	10.0-156			18.4	38
1,2,3-Trichlorobenzene	9.34	ND	8.41	9.25	90.0	99.0	40	10.0-160			9.52	40
1,2,4-Trichlorobenzene	9.34	ND	9.04	9.49	96.7	102	40	10.0-160			4.90	40
1,1,1-Trichloroethane	9.34	ND	6.23	11.8	66.7	126	40	10.0-144		J5	61.4	35
1,1,2-Trichloroethane	9.34	ND	9.28	9.10	99.3	97.4	40	10.0-160			1.89	35
Trichloroethene	9.34	ND	8.90	10.7	95.3	115	40	10.0-156			18.6	38
Trichlorofluoromethane	9.34	ND	8.46	16.0	90.6	171	40	10.0-160		J3 J5	61.7	40
1,2,3-Trichloropropane	9.34	ND	11.4	14.4	122	154	40	10.0-156			23.1	35
1,2,4-Trimethylbenzene	9.34	2.96	11.5	14.8	91.6	127	40	10.0-160			25.0	36
1,2,3-Trimethylbenzene	9.34	1.30	9.12	10.1	83.6	94.2	40	10.0-160			10.3	36
1,3,5-Trimethylbenzene	9.34	0.754	9.18	14.3	90.2	145	40	10.0-160		J3	43.5	38
Vinyl chloride	9.34	ND	10.0	18.2	107	194	40	10.0-160		J3 J5	57.6	37
Xylenes, Total	28.0	1.95	28.3	35.4	94.0	119	40	10.0-160			22.2	38
(S) Toluene-d8					*84.9*	*94.2*		*75.0-131*				
(S) 4-Bromofluorobenzene					*63.6*	*151*		*67.0-138*	J2	J1		
(S) 1,2-Dichloroethane-d4					*107*	*117*		*70.0-130*				

Method Blank (MB)

(MB) R4301689-3 11/14/25 11:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0697	0.100
Acrylonitrile	U		0.00803	0.0125
Benzene	U		0.000711	0.00100
Bromobenzene	U		0.00390	0.0125
Bromodichloromethane	U		0.00117	0.00250
Bromoform	U		0.00992	0.0250
Bromomethane	U		0.0101	0.0125
n-Butylbenzene	U		0.00625	0.0125
sec-Butylbenzene	U		0.00383	0.0125
tert-Butylbenzene	U		0.00189	0.00500
Carbon tetrachloride	U		0.00301	0.00500
Chlorobenzene	U		0.000858	0.00250
Chlorodibromomethane	U		0.00161	0.00250
Chloroethane	U		0.00569	0.0100
Chloroform	U		0.00162	0.00250
Chloromethane	U		0.00850	0.0125
2-Chlorotoluene	U		0.00129	0.00250
4-Chlorotoluene	U		0.00154	0.00500
1,2-Dibromo-3-Chloropropane	U		0.0107	0.0250
1,2-Dibromoethane	U		0.00126	0.00250
Dibromomethane	U		0.00178	0.00500
1,2-Dichlorobenzene	U		0.00156	0.00500
1,3-Dichlorobenzene	U		0.00165	0.00500
1,4-Dichlorobenzene	U		0.00175	0.00500
Dichlorodifluoromethane	U		0.00435	0.00500
1,1-Dichloroethane	U		0.00101	0.00250
1,2-Dichloroethane	U		0.00146	0.00250
1,1-Dichloroethene	U		0.00153	0.00250
cis-1,2-Dichloroethene	U		0.00129	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00192	0.00500
1,1-Dichloropropene	U		0.00138	0.00500
1,3-Dichloropropane	U		0.00162	0.00500
cis-1,3-Dichloropropene	U		0.00105	0.00250
trans-1,3-Dichloropropene	U		0.00105	0.00500
2,2-Dichloropropane	U		0.00202	0.00250
Di-isopropyl ether	U		0.000769	0.00100
Ethylbenzene	U		0.000987	0.00250
Hexachloro-1,3-butadiene	U		0.0104	0.0250
Isopropylbenzene	U		0.00101	0.00250

Method Blank (MB)

(MB) R4301689-3 11/14/25 11:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00213	0.00500
2-Butanone (MEK)	U		0.0887	0.100
Methylene Chloride	U		0.0110	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00992	0.0250
Methyl tert-butyl ether	U		0.000773	0.00100
Naphthalene	U		0.00763	0.0125
n-Propylbenzene	U		0.00169	0.00500
Styrene	U		0.00445	0.0125
1,1,1,2-Tetrachloroethane	U		0.00130	0.00250
1,1,2,2-Tetrachloroethane	U		0.00116	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.00281	0.00500
Tetrachloroethene	U		0.00152	0.00250
Toluene	U		0.00289	0.00500
1,2,3-Trichlorobenzene	U		0.00699	0.0125
1,2,4-Trichlorobenzene	U		0.00542	0.0125
1,1,1-Trichloroethane	U		0.00145	0.00250
1,1,2-Trichloroethane	U		0.00134	0.00250
Trichloroethene	U		0.000891	0.00100
Trichlorofluoromethane	U		0.00261	0.00400
1,2,3-Trichloropropane	U		0.00612	0.0125
1,2,4-Trimethylbenzene	U		0.00238	0.00500
1,2,3-Trimethylbenzene	U		0.00182	0.00500
1,3,5-Trimethylbenzene	U		0.00228	0.00500
Vinyl chloride	U		0.00201	0.00250
Xylenes, Total	U		0.00280	0.00650
(S) Toluene-d8	*93.9*			*75.0-131*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*86.8*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301689-1 11/14/25 09:22 • (LCSD) R4301689-2 11/14/25 09:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	1.25	1.44	1.40	115	112	10.0-160			2.82	31
Acrylonitrile	1.25	1.27	1.10	102	88.0	45.0-153			14.3	22
Benzene	0.250	0.238	0.230	95.2	92.0	70.0-123			3.42	20
Bromobenzene	0.250	0.196	0.207	78.4	82.8	73.0-121			5.46	20
Bromodichloromethane	0.250	0.278	0.264	111	106	73.0-121			5.17	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301689-1 11/14/25 09:22 • (LCSD) R4301689-2 11/14/25 09:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.250	0.227	0.214	90.8	85.6	64.0-132			5.90	20
Bromomethane	0.250	0.338	0.342	135	137	56.0-147			1.18	20
n-Butylbenzene	0.250	0.221	0.219	88.4	87.6	68.0-135			0.909	20
sec-Butylbenzene	0.250	0.220	0.216	88.0	86.4	74.0-130			1.83	20
tert-Butylbenzene	0.250	0.223	0.223	89.2	89.2	75.0-127			0.000	20
Carbon tetrachloride	0.250	0.305	0.296	122	118	66.0-128			3.00	20
Chlorobenzene	0.250	0.241	0.235	96.4	94.0	76.0-128			2.52	20
Chlorodibromomethane	0.250	0.239	0.235	95.6	94.0	74.0-127			1.69	20
Chloroethane	0.250	0.234	0.222	93.6	88.8	61.0-134			5.26	20
Chloroform	0.250	0.240	0.235	96.0	94.0	72.0-123			2.11	20
Chloromethane	0.250	0.265	0.259	106	104	51.0-138			2.29	20
2-Chlorotoluene	0.250	0.206	0.219	82.4	87.6	75.0-124			6.12	20
4-Chlorotoluene	0.250	0.202	0.209	80.8	83.6	75.0-124			3.41	20
1,2-Dibromo-3-Chloropropane	0.250	0.207	0.183	82.8	73.2	59.0-130			12.3	20
1,2-Dibromoethane	0.250	0.222	0.226	88.8	90.4	74.0-128			1.79	20
Dibromomethane	0.250	0.270	0.257	108	103	75.0-122			4.93	20
1,2-Dichlorobenzene	0.250	0.230	0.220	92.0	88.0	76.0-124			4.44	20
1,3-Dichlorobenzene	0.250	0.220	0.221	88.0	88.4	76.0-125			0.454	20
1,4-Dichlorobenzene	0.250	0.217	0.221	86.8	88.4	77.0-121			1.83	20
Dichlorodifluoromethane	0.250	0.298	0.299	119	120	43.0-156			0.335	20
1,1-Dichloroethane	0.250	0.229	0.226	91.6	90.4	70.0-127			1.32	20
1,2-Dichloroethane	0.250	0.263	0.248	105	99.2	65.0-131			5.87	20
1,1-Dichloroethene	0.250	0.204	0.206	81.6	82.4	65.0-131			0.976	20
cis-1,2-Dichloroethene	0.250	0.271	0.264	108	106	73.0-125			2.62	20
trans-1,2-Dichloroethene	0.250	0.281	0.273	112	109	71.0-125			2.89	20
1,2-Dichloropropane	0.250	0.230	0.230	92.0	92.0	74.0-125			0.000	20
1,1-Dichloropropene	0.250	0.248	0.248	99.2	99.2	73.0-125			0.000	20
1,3-Dichloropropane	0.250	0.211	0.204	84.4	81.6	80.0-125			3.37	20
cis-1,3-Dichloropropene	0.250	0.251	0.242	100	96.8	76.0-127			3.65	20
trans-1,3-Dichloropropene	0.250	0.209	0.205	83.6	82.0	73.0-127			1.93	20
2,2-Dichloropropane	0.250	0.258	0.257	103	103	59.0-135			0.388	20
Di-isopropyl ether	0.250	0.252	0.244	101	97.6	60.0-136			3.23	20
Ethylbenzene	0.250	0.231	0.235	92.4	94.0	74.0-126			1.72	20
Hexachloro-1,3-butadiene	0.250	0.299	0.272	120	109	57.0-150			9.46	20
Isopropylbenzene	0.250	0.250	0.238	100	95.2	72.0-127			4.92	20
p-Isopropyltoluene	0.250	0.225	0.224	90.0	89.6	72.0-133			0.445	20
2-Butanone (MEK)	1.25	1.15	1.04	92.0	83.2	30.0-160			10.0	24
Methylene Chloride	0.250	0.254	0.249	102	99.6	68.0-123			1.99	20
4-Methyl-2-pentanone (MIBK)	1.25	1.13	1.07	90.4	85.6	56.0-143			5.45	20
Methyl tert-butyl ether	0.250	0.252	0.235	101	94.0	66.0-132			6.98	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301689-1 11/14/25 09:22 • (LCSD) R4301689-2 11/14/25 09:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.250	0.230	0.220	92.0	88.0	59.0-130			4.44	20
n-Propylbenzene	0.250	0.208	0.214	83.2	85.6	74.0-126			2.84	20
Styrene	0.250	0.247	0.235	98.8	94.0	72.0-127			4.98	20
1,1,1,2-Tetrachloroethane	0.250	0.259	0.244	104	97.6	74.0-129			5.96	20
1,1,2,2-Tetrachloroethane	0.250	0.188	0.188	75.2	75.2	68.0-128			0.000	20
1,1,2-Trichlorotrifluoroethane	0.250	0.247	0.242	98.8	96.8	61.0-139			2.04	20
Tetrachloroethene	0.250	0.232	0.238	92.8	95.2	70.0-136			2.55	20
Toluene	0.250	0.213	0.215	85.2	86.0	75.0-121			0.935	20
1,2,3-Trichlorobenzene	0.250	0.218	0.213	87.2	85.2	59.0-139			2.32	20
1,2,4-Trichlorobenzene	0.250	0.239	0.224	95.6	89.6	62.0-137			6.48	20
1,1,1-Trichloroethane	0.250	0.278	0.270	111	108	69.0-126			2.92	20
1,1,2-Trichloroethane	0.250	0.243	0.239	97.2	95.6	78.0-123			1.66	20
Trichloroethene	0.250	0.282	0.284	113	114	76.0-126			0.707	20
Trichlorofluoromethane	0.250	0.320	0.312	128	125	61.0-142			2.53	20
1,2,3-Trichloropropane	0.250	0.199	0.198	79.6	79.2	67.0-129			0.504	20
1,2,4-Trimethylbenzene	0.250	0.202	0.202	80.8	80.8	70.0-126			0.000	20
1,2,3-Trimethylbenzene	0.250	0.203	0.196	81.2	78.4	74.0-124			3.51	20
1,3,5-Trimethylbenzene	0.250	0.204	0.202	81.6	80.8	73.0-127			0.985	20
Vinyl chloride	0.250	0.306	0.283	122	113	63.0-134			7.81	20
Xylenes, Total	0.750	0.748	0.730	99.7	97.3	72.0-127			2.44	20
(S) Toluene-d8				*88.7*	*91.1*	*75.0-131*				
(S) 4-Bromofluorobenzene				*107*	*103*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*96.2*	*89.4*	*70.0-130*				

Method Blank (MB)

(MB) R4301821-2 11/16/25 20:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Naphthalene	U		0.00763	0.0125
(S) Toluene-d8	*91.5*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*126*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4301821-1 11/16/25 19:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.250	0.237	94.8	59.0-130	
(S) Toluene-d8			*93.7*	*75.0-131*	
(S) 4-Bromofluorobenzene			*95.2*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*125*	*70.0-130*	

QUALITY CONTROL SUMMARY

L1916517-05,06,07,09,11,13,21

Method Blank (MB)

(MB) R4301666-1 11/15/25 16:13

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aliphatics	U		3870	5000
C12-C16 Aliphatics	U		3870	5000
C16-C21 Aliphatics	U		3870	5000
C21-C34 Aliphatics	U		4510	5000
(S) 1-Chloro-octadecane	*65.4*			*50.0-150*

Method Blank (MB)

(MB) R4301666-1 11/15/25 16:13

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aromatics	U		3120	5000
C12-C16 Aromatics	U		3120	5000
C16-C21 Aromatics	U		3120	5000
C21-C34 Aromatics	U		3120	5000
(S) o-Terphenyl	*64.7*			*50.0-150*
(S) 2-Fluorobiphenyl	*89.5*			*50.0-150*
(S) 2-Bromonaphthalene	*93.4*			*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301666-2 11/15/25 16:36 • (LCSD) R4301666-3 11/15/25 16:59

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	6650	2710	2880	40.8	43.3	70.0-130	J J4	J J4	6.08	20
C12-C16 Aliphatics	13300	6370	6720	47.9	50.5	70.0-130	J4	J4	5.35	20
C16-C21 Aliphatics	20000	10700	11000	53.5	55.0	70.0-130	J4	J4	2.76	20
C21-C34 Aliphatics	33300	17900	19300	53.8	58.0	70.0-130	J4	J4	7.53	20
(S) 1-Chloro-octadecane				*51.7*	*54.3*	*50.0-150*				

Sample Narrative:

LCS: Recoveries are within method-defined limits.

LCSD: Recoveries are within method-defined limits.

QUALITY CONTROL SUMMARY

L1916517-05,06,07,09,11,13,21

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301666-2 11/15/25 16:36 • (LCSD) R4301666-3 11/15/25 16:59

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	6650	3860	4290	58.0	64.5	70.0-130	J J4	J J4	10.6	20
C12-C16 Aromatics	20000	10500	11700	52.5	58.5	70.0-130	J4	J4	10.8	20
C16-C21 Aromatics	33300	19500	20800	58.6	62.5	70.0-130	J4	J4	6.45	20
C21-C34 Aromatics	53200	33300	35400	62.6	66.5	70.0-130	J4	J4	6.11	20
(S) o-Terphenyl				*60.7*	*62.0*	*50.0-150*				
(S) 2-Fluorobiphenyl				*78.9*	*86.7*	*50.0-150*				
(S) 2-Bromonaphthalene				*82.7*	*90.6*	*50.0-150*				

L1916619-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916619-05 11/16/25 03:16 • (MS) R4301666-4 11/16/25 03:39 • (MSD) R4301666-5 11/16/25 04:02

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	19600	ND	ND	ND	0.000	0.000	2.94	70.0-130	J6	J6	0.000	20
C12-C16 Aliphatics	39100	ND	25500	26400	65.2	67.0	2.94	70.0-130	J6	J6	3.47	20
C16-C21 Aliphatics	58700		41400	43100	70.5	72.9	2.94	70.0-130			4.02	20
C21-C34 Aliphatics	97800		70300	73100	71.9	74.2	2.94	70.0-130			3.91	20
(S) 1-Chloro-octadecane					*54.0*	*70.3*		*50.0-150*				

Sample Narrative:

OS: Dilution due to matrix impact during extraction procedure

L1916619-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916619-05 11/16/25 03:16 • (MS) R4301666-4 11/16/25 03:39 • (MSD) R4301666-5 11/16/25 04:02

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	19600	ND	ND	ND	55.6	64.0	2.94	70.0-130	J6	J6	14.5	20
C12-C16 Aromatics	58700	ND	30600	34800	52.1	58.9	2.94	70.0-130	J6	J6	12.8	20
C16-C21 Aromatics	97800	ND	55000	61600	56.2	62.5	2.94	70.0-130	J6	J6	11.3	20
C21-C34 Aromatics	156000	ND	85100	100000	54.6	63.3	2.94	70.0-130	J6	J6	16.1	20
(S) o-Terphenyl					*55.0*	*62.3*		*50.0-150*				
(S) 2-Fluorobiphenyl					*80.8*	*84.8*		*50.0-150*				
(S) 2-Bromonaphthalene					*84.6*	*88.6*		*50.0-150*				

Sample Narrative:

OS: Dilution due to matrix impact during extraction procedure

QUALITY CONTROL SUMMARY

L1916517-01

Method Blank (MB)

(MB) R4301562-1 11/14/25 10:49

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aliphatics	U		3870	5000
C12-C16 Aliphatics	U		3870	5000
C16-C21 Aliphatics	U		3870	5000
C21-C34 Aliphatics	U		4510	5000
(S) 1-Chloro-octadecane	*61.8*			*50.0-150*

Method Blank (MB)

(MB) R4301562-1 11/14/25 10:49

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aromatics	U		3120	5000
C12-C16 Aromatics	U		3120	5000
C16-C21 Aromatics	U		3120	5000
C21-C34 Aromatics	U		3120	5000
(S) o-Terphenyl	*66.2*			*50.0-150*
(S) 2-Fluorobiphenyl	*90.0*			*50.0-150*
(S) 2-Bromonaphthalene	*94.0*			*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301562-2 11/14/25 11:12 • (LCSD) R4301562-3 11/14/25 11:35

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	6650	3500	3780	52.6	56.8	70.0-130	J J4	J J4	7.69	20
C12-C16 Aliphatics	13300	8240	8690	62.0	65.3	70.0-130	J4	J4	5.32	20
C16-C21 Aliphatics	20000	13300	13800	66.5	69.0	70.0-130	J4	J4	3.69	20
C21-C34 Aliphatics	33300	22100	22800	66.4	68.5	70.0-130	J4	J4	3.12	20
(S) 1-Chloro-octadecane				*63.5*	*65.2*	*50.0-150*				

Sample Narrative:

LCS: Recoveries are within method-defined limits.

LCSD: Recoveries are within method-defined limits.

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301562-2 11/14/25 11:12 • (LCSD) R4301562-3 11/14/25 11:35

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	6650	4790	5220	72.0	78.5	70.0-130	J		8.59	20
C12-C16 Aromatics	20000	12900	13800	64.5	69.0	70.0-130	J4	J4	6.74	20
C16-C21 Aromatics	33300	22900	24000	68.8	72.1	70.0-130	J4		4.69	20
C21-C34 Aromatics	53200	38700	40600	72.7	76.3	70.0-130			4.79	20
(S) o-Terphenyl				*69.4*	*71.2*	*50.0-150*				
(S) 2-Fluorobiphenyl				*91.4*	*94.4*	*50.0-150*				
(S) 2-Bromonaphthalene				*95.7*	*98.9*	*50.0-150*				

Sample Narrative:

LCS: Recoveries are within method-defined limits.

LCSD: Recoveries are within method-defined limits.

L1916021-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916021-09 11/14/25 13:07 • (MS) R4301562-4 11/14/25 13:29 • (MSD) R4301562-5 11/14/25 13:52

Analyte	Spike Amount (dry) ug/kg	Original Result (dry) ug/kg	MS Result (dry) ug/kg	MSD Result (dry) ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	7610	ND	5940	ND	69.5	64.9	1	70.0-130	J6	J6	5.38	20
C12-C16 Aromatics	22800	ND	15900	14700	69.7	63.5	1	70.0-130	J6	J6	8.30	20
C16-C21 Aromatics	38100	ND	28200	25500	73.9	66.4	1	70.0-130		J6	9.89	20
C21-C34 Aromatics	60900	ND	48300	43100	79.4	70.3	1	70.0-130			11.3	20
(S) o-Terphenyl					*65.5*	*60.3*		*50.0-150*				
(S) 2-Fluorobiphenyl					*93.2*	*93.2*		*50.0-150*				
(S) 2-Bromonaphthalene					*97.7*	*97.6*		*50.0-150*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R4303586-1 11/19/25 13:35

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aliphatics	U		3870	5000
C12-C16 Aliphatics	U		3870	5000
C16-C21 Aliphatics	U		3870	5000
C21-C34 Aliphatics	U		4510	5000
(S) 1-Chloro-octadecane	*46.6*	J2		*50.0-150*

Method Blank (MB)

(MB) R4303586-1 11/19/25 13:35

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aromatics	U		3120	5000
C12-C16 Aromatics	U		3120	5000
C16-C21 Aromatics	U		3120	5000
C21-C34 Aromatics	U		3120	5000
(S) o-Terphenyl	*56.6*			*50.0-150*
(S) 2-Fluorobiphenyl	*89.1*			*50.0-150*
(S) 2-Bromonaphthalene	*92.7*			*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4303586-2 11/19/25 13:58 • (LCSD) R4303586-3 11/19/25 14:21

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	6650	3220	3530	48.4	53.1	70.0-130	J J4	J J4	9.19	20
C12-C16 Aliphatics	13300	7830	8670	58.9	65.2	70.0-130	J4	J4	10.2	20
C16-C21 Aliphatics	20000	13700	14200	68.5	71.0	70.0-130	J4		3.58	20
C21-C34 Aliphatics	33300	23400	24300	70.3	73.0	70.0-130			3.77	20
(S) 1-Chloro-octadecane				*65.6*	*62.8*	*50.0-150*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4303586-2 11/19/25 13:58 • (LCSD) R4303586-3 11/19/25 14:21

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	6650	4440	5040	66.8	75.8	70.0-130	J J4		12.7	20
C12-C16 Aromatics	20000	12100	13800	60.5	69.0	70.0-130	J4	J4	13.1	20
C16-C21 Aromatics	33300	22800	25100	68.5	75.4	70.0-130	J4		9.60	20
C21-C34 Aromatics	53200	36900	40200	69.4	75.6	70.0-130	J4		8.56	20

QUALITY CONTROL SUMMARY

L1916517-03,15,17,19

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4303586-2 11/19/25 13:58 • (LCSD) R4303586-3 11/19/25 14:21

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) o-Terphenyl				*72.9*	*75.9*	*50.0-150*				
(S) 2-Fluorobiphenyl				*94.2*	*99.8*	*50.0-150*				
(S) 2-Bromonaphthalene				*98.5*	*104*	*50.0-150*				

L1916418-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916418-15 11/20/25 04:10 • (MS) R4303586-4 11/20/25 04:33 • (MSD) R4303586-5 11/20/25 04:56

Analyte	Spike Amount (dry) ug/kg	Original Result (dry) ug/kg	MS Result (dry) ug/kg	MSD Result (dry) ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	19700	ND	ND	ND	61.4	61.6	2.96	70.0-130	J6	J6	0.823	20
C12-C16 Aromatics	59200	ND	35100	34700	59.2	58.3	2.96	70.0-130	J6	J6	1.15	20
C16-C21 Aromatics	98700	ND	66300	62600	67.2	63.3	2.96	70.0-130	J6	J6	5.75	20
C21-C34 Aromatics	158000	ND	105000	97200	66.5	61.4	2.96	70.0-130	J6	J6	7.92	20
(S) o-Terphenyl					*68.4*	*64.6*		*50.0-150*				
(S) 2-Fluorobiphenyl					*91.1*	*87.3*		*50.0-150*				
(S) 2-Bromonaphthalene					*95.6*	*91.1*		*50.0-150*				

Sample Narrative:

OS: Dilution due to matrix impact during extraction procedure

L1916418-35 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916418-35 11/20/25 05:19 • (MS) R4303586-6 11/20/25 05:42 • (MSD) R4303586-7 11/20/25 06:05

Analyte	Spike Amount (dry) ug/kg	Original Result (dry) ug/kg	MS Result (dry) ug/kg	MSD Result (dry) ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	19700	ND	ND	ND	73.0	66.0	2.93	70.0-130		J6	11.1	20
C12-C16 Aromatics	58900	ND	41500	37000	70.5	63.2	2.93	70.0-130		J6	11.5	20
C16-C21 Aromatics	98100	ND	73400	69400	74.8	71.1	2.93	70.0-130			5.62	20
C21-C34 Aromatics	156000	ND	115000	108000	73.7	69.2	2.93	70.0-130		J6	6.28	20
(S) o-Terphenyl					*76.9*	*73.7*		*50.0-150*				
(S) 2-Fluorobiphenyl					*91.0*	*94.2*		*50.0-150*				
(S) 2-Bromonaphthalene					*94.9*	*98.7*		*50.0-150*				

Sample Narrative:

OS: Dilution due to matrix impact during extraction procedure

Method Blank (MB)

(MB) R4301437-2 11/13/25 14:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00163	0.00600
Acenaphthene	U		0.00162	0.00600
Acenaphthylene	U		0.00159	0.00600
Benzo(a)anthracene	U		0.00200	0.00600
Benzo(a)pyrene	U		0.00163	0.00600
Benzo(b)fluoranthene	U		0.00275	0.00600
Benzo(g,h,i)perylene	U		0.00193	0.00600
Benzo(k)fluoranthene	U		0.00213	0.00600
Chrysene	U		0.00206	0.00600
Dibenz(a,h)anthracene	U		0.00201	0.00600
Fluoranthene	U		0.00239	0.00600
Fluorene	U		0.00180	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00234	0.00600
Naphthalene	U		0.00579	0.0200
Phenanthrene	U		0.00305	0.00600
Pyrene	U		0.00205	0.00600
1-Methylnaphthalene	U		0.00219	0.0200
2-Methylnaphthalene	U		0.00571	0.0200
2-Chloronaphthalene	U		0.00129	0.0200
(S) p-Terphenyl-d14	*121*			*23.0-120*
(S) 2-Fluorobiphenyl	*103*			*34.0-125*
(S) 2-Methylnaphthalene-d10	*103*			*50.0-150*

Laboratory Control Sample (LCS)

(LCS) R4301437-1 11/13/25 13:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0833	104	50.0-126	
Acenaphthene	0.0800	0.0805	101	50.0-120	
Acenaphthylene	0.0800	0.0824	103	50.0-120	
Benzo(a)anthracene	0.0800	0.0815	102	45.0-120	
Benzo(a)pyrene	0.0800	0.0718	89.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0842	105	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0808	101	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0776	97.0	49.0-125	
Chrysene	0.0800	0.0833	104	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0846	106	47.0-125	
Fluoranthene	0.0800	0.0870	109	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4301437-1 11/13/25 13:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0842	105	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0687	85.9	46.0-125	
Naphthalene	0.0800	0.0799	99.9	50.0-120	
Phenanthrene	0.0800	0.0840	105	47.0-120	
Pyrene	0.0800	0.0832	104	43.0-123	
1-Methylnaphthalene	0.0800	0.0883	110	51.0-121	
2-Methylnaphthalene	0.0800	0.0850	106	50.0-120	
2-Chloronaphthalene	0.0800	0.0812	102	50.0-120	
(S) p-Terphenyl-d14			*103*	*23.0-120*	
(S) 2-Fluorobiphenyl			*101*	*34.0-125*	
(S) 2-Methylnaphthalene-d10			*102*	*50.0-150*	

L1916514-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916514-07 11/13/25 15:50 • (MS) R4301437-3 11/13/25 16:10 • (MSD) R4301437-4 11/13/25 16:30

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0834	ND	0.0784	0.0765	94.0	91.8	1	10.0-145			2.40	30
Acenaphthene	0.0834	0.0156	0.0929	0.0944	111	113	1	14.0-127			1.63	27
Acenaphthylene	0.0834	0.00739	0.0894	0.0914	107	110	1	21.0-124			2.17	25
Benzo(a)anthracene	0.0834	ND	0.0949	0.0983	114	118	1	10.0-139			3.50	30
Benzo(a)pyrene	0.0834	ND	0.0796	0.0800	95.4	95.9	1	10.0-141			0.547	31
Benzo(b)fluoranthene	0.0834	0.00753	0.0818	0.0796	98.0	95.4	1	10.0-140			2.71	36
Benzo(g,h,i)perylene	0.0834	0.0139	0.0815	0.0824	97.6	98.8	1	10.0-140			1.20	33
Benzo(k)fluoranthene	0.0834	ND	0.0710	0.0705	85.1	84.6	1	10.0-137			0.617	31
Chrysene	0.0834	0.0136	0.108	0.114	130	136	1	10.0-145			4.83	30
Dibenz(a,h)anthracene	0.0834	ND	0.0776	0.0768	93.1	92.0	1	10.0-132			1.13	31
Fluoranthene	0.0834	0.0112	0.0966	0.0978	116	117	1	10.0-153			1.24	33
Fluorene	0.0834	0.148	0.231	0.240	99.5	110	1	11.0-130			3.70	29
Indeno(1,2,3-cd)pyrene	0.0834	ND	0.0677	0.0684	81.2	81.9	1	10.0-137			0.963	32
Naphthalene	0.0834	0.0432	0.0918	0.107	58.2	75.9	1	10.0-135			14.9	27
Phenanthrene	0.0834	0.237	0.309	0.323	86.4	103	1	10.0-144			4.49	31
Pyrene	0.0834	0.0155	0.0962	0.0997	115	120	1	10.0-148			3.57	35
1-Methylnaphthalene	0.0834	0.412	0.499	0.507	105	114	1	10.0-142			1.52	28
2-Methylnaphthalene	0.0834	0.0290	0.110	0.105	97.4	91.5	1	10.0-137			4.56	28
2-Chloronaphthalene	0.0834	ND	0.0764	0.0774	91.6	92.8	1	29.0-120			1.28	24
(S) p-Terphenyl-d14					*87.9*	*89.9*		*23.0-120*				
(S) 2-Fluorobiphenyl					*92.6*	*91.7*		*34.0-125*				
(S) 2-Methylnaphthalene-d10					*99.1*	*100*		*50.0-150*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low Method sensitivity check is acceptable.
C5	The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.

GLOSSARY OF TERMS

Qualifier	Description
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1,6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1,4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Phillips 66 - TRC

13810 SE Eastgate Way
Suite 440
Bellevue. WA 98005

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Pres Chk

Report to: Eric Larsen
~~Madison Taylor 425-512-7073~~ 425.566.0403

Email To: elarsen cc: Smason
~~MRTaylor@trccompanies.com~~ ~~David.Miller@trc~~

Project Description: Phillips 66

City/State Collected: Ferndale, WA

Please Circle: (PT) MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # 670297

Lab Project # PHILLIPSTRC-FERNDALE

Collected by (print): Madison Taylor, Dan Miller

Site/Facility ID # FERNDALE, WA

P.O. # 4301690948

Collected by (signature): Madison

Immediately Packed on Ice N___ Y X

~~X~~ Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X STD TAT

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Metals 8ozClr-NoPres	CR6, CR3 8ozClr-NoPres	EPHWA 4ozAmb-NoPres	SV8270PAHSIM 8ozClr-NoPres (analysis turnaround time)	V8260 40mlAmb/MeOH10ml/Syr	VPHWA 40mlAmb/MeOH10ml/Syr				Remarks	Sample # (lab only)
B-5-25:6.3	G	SS	6.3	11/5/25	0935	4	X	X	X	X	X	X					-01
B-5-25:11.3		SS	11.3		0940												-02
B-4-25:7 MT		SS	7.0		1030		X	X	X	X	X	X					-03
B-4-25:12 MT		SS	12.0		1040												-04
B-3-25:7.5		SS	7.5		1105		X	X	X	X	X	X					-05
B-3-25:11.5		SS	11.5		1125		X	X	X	X	X	X					-06
B-2-25:7.2		SS	7.2		1200		X	X	X	X	X	X					-07
B-2-25:12.2		SS	12.2		1210												-08
B-1-25:7 MT		SS	7.0		1235		X	X	X	X	X	X					-09
B-1-25:12 MT		SS	12.0		1245												-10

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 191617

I178

Acctnum: PHILLIPSTRC
Template: T283558
Prelogin: P1187933
PM: 3976 - Naomi M Sackett
PB: 10/11/25 MV
Shipped Via: FedEX Priority

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg
8260: hVOCs+BTEX
* - we would like to do 7-day TAT for VPHO EPH to determine if additional samples will be ran

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __UPS __FedEx __Courier _____

Tracking # 9858 5191 1169

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes No HCl MeoH TBR	Hold:	Condition NCF / OK
	11/7/25	0952		3		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 28	If preservation required by Login: Date/Time	
				TLA9 4.0 T0 T4.0		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/8/25	Time: 900	

Company Name/Address:
Phillips 66 - TRC

13810 SE Eastgate Way
Suite 440
Bellevue. WA 98005

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Pres Chk

cc:

Report to:
Madison Taylor 425-512-7073

Email To: elarsen ; cmcon e ll
~~MiPTaylor@trccompanies.com;David.Miller@trc~~

Project Description: Phillips 66

City/State Collected: Ferndale, WA

Please Circle: PT MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # 670297

Lab Project # PHILLIPSTRC-FERNDALE

Collected by (print): Madison Taylor David Miller

Site/Facility ID # FERNDALE, WA

P.O. # 4301690948

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X STD TAT

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Metals 8ozClr-NoPres	CR6, CR3 8ozClr-NoPres	EPHWA 4ozAmb-NoPres	SV8270PAHSIM 8ozClr-NoPres +naphthalene	V8260 40mlAmb/MeOH 10ml/Syr	VPHWA 40mlAmb/MeOH 10ml/Syr	Remarks	Sample # (lab only)
B-6-25:7.5	G	SS	7.5	11/6/25	0800	4	X	X	X	X	X	X		-11
B-6-25:12.5		SS	12.5		0820									-12
B-7-25:7.5		SS	7.5		0900		X	X	X	X	X	X		-13
B-7-25:12.5		SS	12.5		0915									-14
B-8-25:7 MT		SS	7.0		1410		X	X	X	X	X	X		-15
B-8-25:12 MT		SS	12.0		1420									-16
B-9-25:7		SS	7.0		1435		X	X	X	X	X	X		-17
B-9-25:12		SS	12.0		1445									-18
B-10-25:7		SS	7.0		1305		X	X	X	X	X	X		-19
B-10-25:12		SS	12.0		1320									-20

Chain of Custody Page 2 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 191617

Table #

Acctnum: PHILLIPSTRC
Template: T283558
Prelogin: P1187933
PM: 3976 - Naomi M Sackett
PB: 11/03/25 mV
Shipped Via: FedEX Priority

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:*Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg
8260: hVOCs+BTEX

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 8858 5916 1109

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
	11/7/25	0952		3
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 20
				TLA9 4.0 TDT4.0
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				11/8/25 900

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Company Name/Address:
Phillips 66 - TRC

13810 SE Eastgate Way
Suite 440
Bellevue. WA 98005

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Pres Chk

Report to:
Madison Taylor 425-512-7073

Email To: klarsen ; cmcon cc:
~~MPTaylor@trccompanies.com;David.Miller@tre~~

Project Description: Phillips 66

City/State Collected: Ferndale, WA

Please Circle: (PT) MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # 670297

Lab Project # PHILLIPSTRC-FERNDALE

Collected by (print): Madison Taylor David Miller

Site/Facility ID # FERNDALE, WA

P.O. # 4301690948

Collected by (signature):

Immediately Packed on Ice N ___ Y 7

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X STD TAT

Date Results Needed

Quote #

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Metals 8ozClr-NoPres	CR6, CR3 8ozClr-NoPres	EPHWA 4ozAmb-NoPres	SV8270PAHSIM 8ozClr-NoPres & naphthalene	V8260 40mlAmb/MeOH10ml/Syr	VPHWA 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
B-11-25:13	G	SS	13.0	11/6/25	1550	4	X	X	X	X	X	X		-21
B-11-25:15	G	SS	15.0	11/6/25	1600	4								-22
		SS												
		SS												
		SS												

Chain of Custody Page 3 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 191617

Table #

Acctnum: PHILLIPSTRC

Template: T283558

Prelogin: P1187933

PM: 3976 - Naomi M Sackett

PB: 10/11/03/25mV

Shipped Via: FedEX Priority

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg
8260: hVOCs+BTEX

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4085 8192 1109

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) No HCL MeoH TBR
Madison	11/7/25	0952		3
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 8
				TLA94.0T0+4.0
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
			Ann Woods	11/10/25 900

Preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Multiple Parcel Form

L# 191617

Parcel Tracking Number	Infrared Thermometer ID	Temperature Reading (°C)	Correction Factor (°C)	Corrected Temperature (°C)	Custody Seal Intact
8858 5196 1169	TLA9	4.0	0	4.0	Yes / No / Not Present
8858 5196 1170	TLA9	4.0	0	4.0	Yes / No / Not Present
8858 5196 1158	TLA9	0.9	0	0.9	Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present

[illegible]
Name

11/8/25
Date

Appendix A
Boring Logs and Field Notes

BORING ID: B-1-25

SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/5/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**

DECOMMISSIONING MATERIAL: **Bentonite**

BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	MH	ELASTIC SILT WITH SAND; olive gray; damp; stiff; medium plasticity; mostly silt, minor fine sand	100	25.5	B-1-25:7		
8		8': Increase sand					
10		10'–11': moist, soft					
11		11': becomes medium stiff	100	0.4	B-1-25:12		
13		13': becomes grayish brown					
15		END OF BOREHOLE					

NOTES: Ground surface at boring location = 0.8 ft below ground surface at OWS pipe location

BORING ID: B-2-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/5/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other. *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	ML	SILT WITH SAND; olive gray; damp; stiff; nonplastic; mostly silt, minor sand	100	63.6	B-2-25:7.2		Slough on top
10		11': becomes grayish brown	70	15.8	B-2-25:12.2		
15		END OF BOREHOLE					
20							

NOTES: Ground surface at boring location = 0.6 ft below ground surface at OWS pipe location

TRC

BORING ID: B-3-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Hand auger**	DATE: **11/5/2025**
DRILLING METHOD: **Hand auger**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **11.5' bgs**

DECOMMISSIONING MATERIAL: **Bentonite**

BOREHOLE SIZE: **4"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other. *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0–5	--	No recovery (cleared with vacuum truck)	0				
5–7.5	SP-SM	POORLY-GRADED SAND WITH GRAVEL; grayish brown; wet; very loose; mostly fine to medium sand, minor gravel	100	154	B-3-25:7.5		
7.5–11	--	Not logged from auger					
11–11.5	SP	POORLY-GRADED SAND; grayish brown; wet; very loose; mostly fine to medium sand, trace gravel		60	B-3-25:11.5		
11.5		END OF BOREHOLE					

NOTES: Ground surface at boring location = 0.3 ft below ground surface at OWS pipe location

BORING ID: B-4-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/5/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	ML	SILT WITH SAND; grayish brown; damp; medium stiff; mostly silt, few sand	100	4	B-4-25:7		
10		9.5'–10': increase to minor fine sand 10': becomes soft 11': becomes medium stiff 12': becomes olive gray	50	0.8	B-4-25:12		
13		No recovery					
15		END OF BOREHOLE					

*: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%

NOTES: Ground surface at boring location = 0.8 ft below ground surface at OWS pipe location

BORING ID: B-5-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/5/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite**	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	SM	SILTY SAND WITH GRAVEL; grayish brown; wet; loose; mostly fine to medium sand, some silt, few gravel; appears to be slough					
6	ML	SILT WITH SAND; olive gray; damp; stiff; mostly silt, few sand, trace gravel		5.5	B-5-25:6.3		
7			100				
8				0.8			
10		10.5': becomes soft; moist					
11				1.5	B-5-25:11.3		
12		12': becomes damp; stiff					
13		12.5'–13.5': lens of mostly fine sand	100	0.8			
15		END OF BOREHOLE		0.2			

*: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%

NOTES: Ground surface at boring location = 1.5 ft below ground surface at OWS pipe location

BORING ID: B-6-25

SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**

DECOMMISSIONING MATERIAL: **Bentonite**

BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	SM	SANDY SILT; olive gray; wet; very stiff; low plasticity; mostly silt, some fine sand		0.2			5.5'-5.8': lens of poorly-graded sand
6	MH	ELASTIC SILT WITH SAND; olive gray; wet; very stiff; high plasticity; mostly silt, few fine sand, trace gravel 7': becomes damp	100	0.5	B-6-25:7.8		Moisture most likely due to infiltration since hole was left open overnight
10		10.5': becomes grayish brown		0.5			Wet silty sand slough at top of tube
13			80	0.5	B-6-25: 12.8		
14		No recovery		0.5			
15		END OF BOREHOLE					

NOTES:

TRC

BORING ID: B-7-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**
	DECOMMISSIONING MATERIAL: **Bentonite**
	BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other. *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0–5	--	No recovery (cleared with vacuum truck)	0				
5–6	ML	SILT WITH SAND; grayish brown; wet; stiff; low plasticity; mostly silt, few fine sand, trace gravel		0.4			
6–8	SM	SILTY SAND; grayish brown; wet; dense; mostly fine sand, some silt 7': becomes damp	100	0.3	B-7-25:7.8		
8–15	MH	ELASTIC SILT WITH SAND; grayish brown; damp; very stiff; high plasticity; mostly silt, few fine sand, trace gravel		0.6			
			100	0.4	B-7-25:12.8		
15		END OF BOREHOLE		0.4			

NOTES:

TRC	**BORING ID: B-8-25**
SITE ADDRESS **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**

DECOMMISSIONING MATERIAL: **Bentonite**

BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	SM	SILTY SAND WITH GRAVEL; light olive brown; wet; loose; mostly fine to medium sand, some silt, few gravel		0.5			
6	MH	ELASTIC SILT WITH SAND; grayish brown; damp; very stiff; high plasticity; mostly silt, few fine sand	100	4	B-8-25:7		
10				0.3			
12			80	0.9	B-8-25:12		
13		13': becomes stiff; increase fines (feels like more clay than above)					
14	--	No recovery		0.4			
15		END OF BORELOG					

NOTES:

TRC

BORING ID: B-9-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**

DECOMMISSIONING MATERIAL: **Bentonite**

BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	--	No recovery (cleared with vacuum truck)	0				
5	SW	WELL-GRADED SAND WITH GRAVEL; grayish brown; wet; very loose; mostly fine to coarse sand, minor gravel, trace silt	50	2			
6	MH	ELASTIC SILT WITH SAND; grayish brown; moist; stiff; mostly silt, few fine sand		1.1	B-9-25:7		
8	--	No recovery					
10	MH	Same as above	40	2.1			
12	--	No recovery		1.1	B-9-25:12		
15		END OF BOREHOLE					

*: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%

NOTES:

BORING ID: B-10-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs**

DECOMMISSIONING MATERIAL: **Bentonite**

BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other. *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0–4	--	No recovery (cleared with vacuum truck)	0				
5	SW	WELL-GRADED SAND WITH GRAVEL; grayish brown; wet; loose; mostly fine to coarse sand, minor gravel, trace silt		0.4			
6–7	MH	ELASTIC SILT WITH SAND; grayish brown; moist; medium dense; high plasticity; mostly silt, few fine sand		0.9	B-10-25:7		
7–8	--	No recovery	50				
8–9	--						
10	MH	Same as above 10.5': becomes very soft		0.6			
11–12	MH	12': becomes soft		0.6	B-10-25:12		
12–13	MH		100				
13–14	MH	14': becomes medium stiff					
15		END OF BOREHOLE		0.8			
16–20							

NOTES:

TRC

BORING ID: B-11-25

SITE ADDRESS: **3901 Unick Rd, Ferndale, WA**	CLIENT: **Phillips 66**
DRILLING CONTRACTOR: **Cascade**	PROJECT #: **670297**
DRILLING EQUIPMENT: **Geoprobe 7822DT**	DATE: **11/6/2025**
DRILLING METHOD: **DPT**	GROUND SURFACE ELEV. FT AMSL: **NM** / DECOMMISSIONING MATERIAL: **Bentonite**
LOGGED BY: **M. Taylor**	TOTAL DEPTH: **15' bgs** / BOREHOLE SIZE: **2.25"**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; TRC description*; Other. *: mostly→50%+ some→30–49%, minor→15–29%, few→5–14%, trace→<5%)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0–5	--	No recovery (cleared with vacuum truck)	0				
5–7	SM	SILTY SAND WITH GRAVEL; grayish brown; wet; very loose; mostly fine to medium sand, some silt, minor gravel	40	0.8			
7–10	--	No recovery		0.9			
10–14	SM	Same as above	100	1			
13				0.8	B-11-25:13		
14–15	MH	ELASTIC SILT WITH SAND; olive gray; damp; soft; high elasticity; mostly silt, few sand					
15		END OF BOREHOLE		0.7	B-11-25:15		Refusal at 15' bgs

NOTES:

Phillips 66 Ferndale
3901 Unick Rd
Site escort: Xavier Gallegos
Personnel: D. Miller, M. Taylor
Scope: Soil Borings
Subs: Cascade - Tim + Alex
Weather: On and off rain, 40s - 50s

0645	All TRC + Cascade on site, check in at Security
0710	Waiting for Phillips 66 - Josh G + Xavier G.
0725	Phillips 66 crew arrives at main entrance, safety review
0735	Enter through contractor gate
0745	Acquiring work permit
0800	Acquired permit # FRN-PTW-25-133666 Drive to work area.
0805	Locating boring locations, meet with WRS, WRS marks out storm and OWS lines. We need to go downhill 5 feet from OWS line, about 1.5 feet lower elevation
0835	WRS starts clearing B-5-25 Measure out remaining borings in this area
0910	Calibrate PID. Span = 100.0 ppm. WRS starts clearing B-4-25
0923	Start drilling at B-5-25
0930	Done drilling
0935	Collect B-5-25:6.3. PID = 5.5 ppm
0940	Collect B-5-25:11.5. PID = 1.5 ppm
1000	Move to B-4-25, drilling. Only 0.8 ft lower than pipe auger, sheen on water nearby.
1010	WRS clearing B-3-25 to 5 ft. Near pipe so this will need hand auger.
1020	Both 5-10 and 10-15 sections pulled up.
1030	Collect B-4-25:7. PID = 4.0 ppm
1040	Collect B-4-25:12. PID = 0.8 ppm
1050	WRS done clearing B-3-25. Wood and clay pipe

debris in hole. Hand augers will fit. Screen on first hand auger sample. WRS moves to B-2-25

1105 Collect B-3-25: 7.5. PID= 154.0 ppm

1120 Collect B-3-25: 11.5. PID= 60.0 ppm

1130 WRS done clearing B-2-25 and B-1-25 to 5ft.

1137 Cascade start drilling at B-2-25.

1155 Reach 15ft at B-2-25. Collect GPS coordinates of B-1105

1200 Collect B-2-25: 7.2. PID= 63.6 ppm

1210 Collect B-2-25: 12.2. PID= 16.8 ppm

1220 Cascade done drilling at B-1-25.

1235 Collect B-1-25: 7. PID= 25.5 ppm

1245 Collect B-1-25: 12. PID= 0.4 ppm

1300 Packing up rig, equipment to move to next work area

1315 Call Xavier G and Josh G. No answer.

1326 Josh calls back, will contact Xavier

1335 Xavier back. Drive to control room to close out permit, get new one

1349 Acquire new permit # FRN-PTW-25-13418

1355 Reach second work area, sign permit

1400 Mark out boring locations with WRS, Cascade, PG&E.

1425 WRS mobilizes track to B-6-25

1440 WRS still hasn't started clearing hole

1455 Xavier back after getting utility maps

WRS starts clearing

Cascade parks trailer in area approved by Xavier.

1510 Cascade signs out of permit, leaves area to head off site.

1535 WRS done clearing B-6-25. They will try to clear B-7-25 today.

1541 Sign out of permit

1550 All TRC off site

11/5/25

Table 1
OWS Phase III Soil Boring Sample Designation and Depths

Proposed Soil Boring	OWS Line Depth (feet bgs)	Proposed Soil Sampling Depths (feet bgs)	Drilling Method	OWS Line Segment	Closest Manhole	Phase III OWS Repair Area
B-1-25	6.83	7 7.8, 12.8 12	DP	3-1	MH 8H-1	1
B-2-25	6.83	7.2 7.8, 12.8[1] 12.2	DP HA[1]	3-1	MH 8H-1	1
B-3-25	6.8	7.5 7.8, ~~12.8~~ 11.5	~~DP~~ HA	3-2A	MH 12-4	2
B-4-25	6.8	7 7.8, 12.8[1] 12	~~HA~~ DP	3-2A	MH 12-4	2
B-5-25	6.8	6.3 7.8, 12.8 11.3	DP	3-2A	MH 12-4	2
B-6-25	6.8	7.8, 12.8	DP	3-2B	MH 10-4	3
B-7-25	6.8	7.8, 12.8	DP	3-4	MH 1E-FS	5
B-8-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7
B-9-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7
B-10-25	6.0[2]	7.0, 12.0	DP	3-8	MH 7-5	8
B-11-25	12	13.0, 18.0	DP	3-9	MH 4-5	9

Notes:
1 Hand auger sampling might not be feasible at all planned depths.
2 Depth estimated, Line 3-8 slopes more steeply than other segments.
bgs Below ground surface.
DP Direct-push technology drill rig.
HA Hand auger.

Phillips 66 Ferndale
3901 Unick Rd
Site escort: Xavier Gallegos
Personnel: D. Miller, M. Taylor
Scope: Soil Borings, GW sampling
Subs: Cascade - Tim + Alex
Weather: On and off rain, 40s - 50s

0645	All TRC + Cascade on site, check in at security
0705	Drive to control center, call Xavier to meet us there
0724	Acquire permit # FRN-PTW-25-13418, drive to work area
0730	Xavier informs us WRS won't be available to clear holes until lunch time. Cascade sets up at B-6-25. Only B-6 and B-7 are already cleared.
0748	Calibrate PID. Span = 100.0 ppm
0750	B-6-25 hole full of water to ~ 2.5 ft bgs
0752	Start drilling at B-6-25.
0800	Collect B-6-25:7.8. PID = 0.5 ppm
0805	Reach end of boring.
0820	Collect B-6-25:12.8. PID = 0.5 ppm
0835	Move rig to B-7-25. Water in hole at 4ft.
0843	Start drilling at B-7-25.
0850	Reach 15 ft.
0900	Collect B-7-25:7.8 PID = 0.3 ppm
0915	Collect B-7-25:12.8 PID = 0.4 ppm
0939	Call Xavier to inform ready to GW sample
1000	Xavier arrives, escorts us to monitoring well
1015	Issues getting through gate.
1025	Through gate to monitoring well.
1035	Open well
1037	Calibrate YSI 8.
1100	Begin purging well
1150	Collect MW-OWS-4 + DUP-1

Slow recharge at well
1230 WRS arrives at drilling work area.
Wrapping up at monitoring well.
1300 TRC heads to boring locations
1330 Large rocks stuck in vac multiple times. Very difficult to clear.
1345 WRS done clearing B-8-25 to 5ft, move to B-9-25
1350 Cascade drilling at B-8-25.
1355 Cascade reaches 15 ft at B-8-25
1356 WRS done clearing B-9-25 to 5 ft. Next to large pipe, water flowing into hole quickly, sheen on water.
1400 WRS clearing B-10-25.
1410 Collect B-8-25:7. PID=0.4 ppm
Cascade starts drilling B-9-25.
1417 Cascade done drilling at B-9-25. WRS done clearing B-10-25.
1420 Collect B-8-25:12. PID=0.9 ppm
1420 WRS heads over to clear B-11-25
1429 Cascade starts drilling at B-10-25.
1435 Collect B-9-25:7. PID=1.1 ppm
WRS done clearing B-11-25.
1444 Cascade done drilling at B-10-25.
1445 Collect B-9-25:12. PID=1.1 ppm
1505 Collect B-10-25:7. PID=0.9 ppm
1515 Cascade says something very hard at 15 ft at B-11-25, Very close to 3 manholes. After conferring w/PM E. Lawson, decide to stop. will try to collect 13' 15 ft samples
1520 Collect B-10-25:12. PID=0.6 ppm
Cascade wraps up at B-11-25, begins to pack up equipment.
1550 Collect B-11-25:13. PID=0.8 ppm
1600 Collect B-11-25:15. PID=0.7 ppm
1605 Cascade signs out of permit, returns H_2S monitors, heads off site
1610 Take GPS coordinates at B-6-25 to B-11-25.
Xavier arrives at work area. Walk through locations with him, noting that a few are missing cones to mark hole. Point out drum of purge water + decon water. 5 gallon bucket of soil.

Filling out COCs, packing up equipment.

1635 Head to control center, escorted by Xavier

1640 Sign out of and close work permit

1647 Badge out of site, return vehicle pass

1649 All TRC off site.

11/6/25

Table 1
OWS Phase III Soil Boring Sample Designation and Depths

Proposed Soil Boring	OWS Line Depth (feet bgs)	Proposed Soil Sampling Depths (feet bgs)	Drilling Method	OWS Line Segment	Closest Manhole	Phase III OWS Repair Area
B-1-25	6.83	7 7.8, 12.8 12	DP	3-1	MH 8H-1	1
B-2-25	6.83	7.2 7.8, 12.8[1] 12.2	DP HA[1]	3-1	MH 8H-1	1
B-3-25	6.8	7.5 7.8, ~~12.8~~ 11.5	~~DP~~ HA	3-2A	MH 12-4	2
B-4-25	6.8	7 7.8, 12.8[1] 12	~~HA~~ DP	3-2A	MH 12-4	2
B-5-25	6.8	6.3 7.8, 12.8 11.3	DP	3-2A	MH 12-4	2
B-6-25	6.8	7.8, 12.8	DP	3-2B	MH 10-4	3
B-7-25	6.8	7.8, 12.8	DP	3-4	MH 1E-FS	5
B-8-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7
B-9-25	6.0	7.0, 12.0	DP	3-6	MH 1E-1	7
B-10-25	6.0[2]	7.0, 12.0	DP	3-8	MH 7-5	8
B-11-25	12	13.0, ~~18.0~~ 15	DP	3-9	MH 4-5	9

Notes:
1 Hand auger sampling might not be feasible at all planned depths.
2 Depth estimated, Line 3-8 slopes more steeply than other segments.
bgs Below ground surface.
DP Direct-push technology drill rig.
HA Hand auger.

TRC Groundwater Sampling Field Data

Project Name:	Phillips 66 OWS Phase III		
Project Number:	670297		
Well ID:	MW-OWS-4	Date	11/6/25
Sample ID:	MW-OWS-4-	Field Team: (Initials)	DM MT
Field Conditions	Overcast, light rain, 50s		

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	7.88
Initial Depth to Water (ft.)	4.44
Depth of Water Column	
1 Casing Volumes	
3 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
(Peristaltic Pump)
Other: : _____

Start Time	1100
End Time	1142
Total Gallons Purged	1.3
Final Depth to Water (ft.)	6.34

Time	Volume Gallons	pH	Conductivity mS/cm	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Depth to Water ft.	Appearance/Notes
1103	0.1	6.26	0.4586	3.89	14.1	131.2	6.02	4.57	clear no odor
1106	0.2	6.24	0.4770	2.88	14.0	124.6	5.21	4.61	
1109	0.3	6.24	0.545	1.81	14.0	117.0	4.53	4.66	
1112	0.4	6.24	0.577	1.34	14.1	110.6	4.59	4.69	
1115	0.5	6.24	0.734	0.91	14.0	108.0	4.55	4.73	
1118	0.6	6.25	0.749	0.84	14.0	104.9	4.10	4.77	
1121	0.7	6.26	0.817	0.73	14.0	103.2	3.69	4.86	
1124	0.8	6.27	0.872	0.68	14.0	99.5	3.64	5.00	
1127	0.9	6.28	0.895	0.64	14.1	96.7	3.63	5.30	
1130	1.0	6.29	0.913	0.61	14.0	93.5	3.48	5.54	
1133	1.1	6.30	0.924	0.74	14.1	90.5	4.01	5.71	
1136	1.2	6.30	0.910	0.69	14.1	89.6	4.22	5.90	
1139	1.3	6.34	0.902	0.68	14.1	83.6	4.14	6.18	
1142	1.4	6.36	0.915	0.70	14.2	80.4	4.26	6.34	
Stabilization Criteria		± 0.1	± 3%	± 10% if > 0.5	± 3%	± 20 mV	± 10% if > 5 NTU	--	--

Sample Information

Sample Method(s) : ~~Peristaltic pump~~ / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1150	2x 40mL V	HCl	
NWTPH-Gx		3x 40mL V	HCl	
BTEX + hVOCs 8260		3x 40mL V	HCl	
Naphthalene + cPAHs 8270		2x 40mL V	None	
Hexavalent Chromium		50mL P	Plunger/Filter, $(NH_4)_2(SO_4)_2/NH_4OH$	
Trivalent Chromium		250mL P	None	
Metals		250mL P	HNO_3	
End Time				

Comments / Exceptions:

Presence of floating product? YES / (NO) Presence of sinking product? YES / (NO)

Collected DUP-1

Ecology tag BQK 212

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

Appendix B
Laboratory Analytical Reports

ANALYTICAL REPORT

November 19, 2025

Phillips 66 - TRC

Sample Delivery Group:	L1916315
Samples Received:	11/08/2025
Project Number:	670297
Description:	Phillips 66
Site:	FERNDALE, WA
Report To:	Madison Taylor 13810 SE Eastgate Way Suite 440 Bellevue, WA 98005

Entire Report Reviewed By:

Naomi M Sackett
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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MW-OWS-4 L1916315-01

Collected by: MT/DM | Collected date/time: 11/06/25 11:50 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2637201	1	11/13/25 21:02	11/13/25 21:02	EKB	Mt. Juliet, TN
Wet Chemistry by Method 3500Cr C-2011	WG2636109	1	11/13/25 21:02	11/13/25 21:02	EKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2637056	1	11/12/25 14:24	11/14/25 12:00	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2637201	1	11/12/25 13:17	11/12/25 17:47	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2637753	1	11/12/25 04:15	11/12/25 04:15	GMV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638062	1	11/11/25 17:26	11/11/25 17:26	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2637873	2	11/11/25 16:44	11/14/25 08:52	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2637665	1	11/11/25 12:51	11/12/25 11:52	KGB	Mt. Juliet, TN

DUP-1 L1916315-02

Collected by: MT/DM | Collected date/time: 11/06/25 00:00 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2637201	1	11/13/25 21:15	11/13/25 21:15	EKB	Mt. Juliet, TN
Wet Chemistry by Method 3500Cr C-2011	WG2636109	1	11/13/25 21:15	11/13/25 21:15	EKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2637056	1	11/12/25 14:24	11/14/25 12:09	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2637201	1	11/12/25 13:17	11/12/25 17:50	JTM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2637753	1	11/12/25 04:35	11/12/25 04:35	GMV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638062	1	11/11/25 17:47	11/11/25 17:47	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2642203	1	11/13/25 06:23	11/17/25 22:53	JAJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2637665	1	11/11/25 12:51	11/12/25 12:10	KGB	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Naomi M Sackett
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1916315-02	DUP-1	3500Cr C-2011

Calculated Results

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	ND		0.500	1	11/13/2025 21:02	WG2637201

Wet Chemistry by Method 3500Cr C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.500	1	11/13/2025 21:02	WG2636109

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	11/14/2025 12:00	WG2637056

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	ND		10.0	1	11/12/2025 17:47	WG2637201
Cadmium	ND		2.00	1	11/12/2025 17:47	WG2637201
Chromium	ND		10.0	1	11/12/2025 17:47	WG2637201
Lead	ND		6.00	1	11/12/2025 17:47	WG2637201
Nickel	ND		10.0	1	11/12/2025 17:47	WG2637201
Zinc	ND		50.0	1	11/12/2025 17:47	WG2637201

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	480		100	1	11/12/2025 04:15	WG2637753
(S) a,a,a-Trifluorotoluene(FID)	*112*		*78.0-120*		*11/12/2025 04:15*	WG2637753

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2025 17:26	WG2638062
Acrolein	ND		50.0	1	11/11/2025 17:26	WG2638062
Acrylonitrile	ND		10.0	1	11/11/2025 17:26	WG2638062
Benzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Bromobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Bromodichloromethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Bromoform	ND		1.00	1	11/11/2025 17:26	WG2638062
Bromomethane	ND		5.00	1	11/11/2025 17:26	WG2638062
n-Butylbenzene	2.72		1.00	1	11/11/2025 17:26	WG2638062
sec-Butylbenzene	6.13		1.00	1	11/11/2025 17:26	WG2638062
tert-Butylbenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Carbon tetrachloride	ND		1.00	1	11/11/2025 17:26	WG2638062
Chlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Chlorodibromomethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Chloroethane	ND		5.00	1	11/11/2025 17:26	WG2638062
Chloroform	ND		5.00	1	11/11/2025 17:26	WG2638062
Chloromethane	ND		5.00	1	11/11/2025 17:26	WG2638062
2-Chlorotoluene	ND		1.00	1	11/11/2025 17:26	WG2638062
4-Chlorotoluene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2025 17:26	WG2638062
1,2-Dibromoethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Dibromomethane	ND		1.00	1	11/11/2025 17:26	WG2638062

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,3-Dichlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,4-Dichlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Dichlorodifluoromethane	ND	J4	5.00	1	11/11/2025 17:26	WG2638062
1,1-Dichloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2-Dichloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1-Dichloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2-Dichloropropane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1-Dichloropropene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,3-Dichloropropane	ND		1.00	1	11/11/2025 17:26	WG2638062
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2025 17:26	WG2638062
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2025 17:26	WG2638062
2,2-Dichloropropane	ND		1.00	1	11/11/2025 17:26	WG2638062
Di-isopropyl ether	ND		1.00	1	11/11/2025 17:26	WG2638062
Ethylbenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Hexachloro-1,3-butadiene	ND		2.00	1	11/11/2025 17:26	WG2638062
Isopropylbenzene	6.22		1.00	1	11/11/2025 17:26	WG2638062
p-Isopropyltoluene	ND		1.00	1	11/11/2025 17:26	WG2638062
2-Butanone (MEK)	ND		20.0	1	11/11/2025 17:26	WG2638062
Methylene Chloride	ND		5.00	1	11/11/2025 17:26	WG2638062
4-Methyl-2-pentanone (MIBK)	ND		20.0	1	11/11/2025 17:26	WG2638062
Methyl tert-butyl ether	ND		1.00	1	11/11/2025 17:26	WG2638062
Naphthalene	ND		5.00	1	11/11/2025 17:26	WG2638062
n-Propylbenzene	15.8		1.00	1	11/11/2025 17:26	WG2638062
Styrene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Tetrachloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
Toluene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,2,4-Trichlorobenzene	ND		2.00	1	11/11/2025 17:26	WG2638062
1,1,1-Trichloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
1,1,2-Trichloroethane	ND		1.00	1	11/11/2025 17:26	WG2638062
Trichloroethene	ND		1.00	1	11/11/2025 17:26	WG2638062
Trichlorofluoromethane	ND		5.00	1	11/11/2025 17:26	WG2638062
1,2,3-Trichloropropane	ND		2.50	1	11/11/2025 17:26	WG2638062
1,2,4-Trimethylbenzene	ND		2.00	1	11/11/2025 17:26	WG2638062
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2025 17:26	WG2638062
Vinyl chloride	ND		1.00	1	11/11/2025 17:26	WG2638062
Xylenes, Total	ND		3.00	1	11/11/2025 17:26	WG2638062
(S) Toluene-d8	*99.1*		*80.0-120*		*11/11/2025 17:26*	WG2638062
(S) 4-Bromofluorobenzene	*95.2*		*77.0-126*		*11/11/2025 17:26*	WG2638062
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*11/11/2025 17:26*	WG2638062

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2330		400	2	11/14/2025 08:52	WG2637873
Residual Range Organics (RRO)	ND		500	2	11/14/2025 08:52	WG2637873
(S) o-Terphenyl	*100*		*52.0-156*		*11/14/2025 08:52*	WG2637873

Sample Narrative:

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch

L1916315-01 WG2637873: Sample resembles laboratory standard for Diesel.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Acenaphthene	9.00		0.0500	1	11/12/2025 11:52	WG2637665
Acenaphthylene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(a)anthracene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(a)pyrene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(b)fluoranthene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(g,h,i)perylene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Benzo(k)fluoranthene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Chrysene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Dibenz(a,h)anthracene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Fluoranthene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Fluorene	7.81		0.0500	1	11/12/2025 11:52	WG2637665
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/12/2025 11:52	WG2637665
Naphthalene	2.10		0.250	1	11/12/2025 11:52	WG2637665
Phenanthrene	6.60		0.0500	1	11/12/2025 11:52	WG2637665
Pyrene	0.0895		0.0500	1	11/12/2025 11:52	WG2637665
1-Methylnaphthalene	56.6		0.250	1	11/12/2025 11:52	WG2637665
2-Methylnaphthalene	ND		0.250	1	11/12/2025 11:52	WG2637665
2-Chloronaphthalene	ND		0.250	1	11/12/2025 11:52	WG2637665
(S) 2-Fluorobiphenyl	*122*		*48.0-148*		*11/12/2025 11:52*	WG2637665
(S) p-Terphenyl-d14	*115*		*37.0-146*		*11/12/2025 11:52*	WG2637665
(S) 2-Methylnaphthalene-d10	*140*		*50.0-150*		*11/12/2025 11:52*	WG2637665

Calculated Results

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	ND		0.500	1	11/13/2025 21:15	WG2637201

Wet Chemistry by Method 3500Cr C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.500	1	11/13/2025 21:15	WG2636109

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	11/14/2025 12:09	WG2637056

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	ND		10.0	1	11/12/2025 17:50	WG2637201
Cadmium	ND		2.00	1	11/12/2025 17:50	WG2637201
Chromium	ND		10.0	1	11/12/2025 17:50	WG2637201
Lead	ND		6.00	1	11/12/2025 17:50	WG2637201
Nickel	ND		10.0	1	11/12/2025 17:50	WG2637201
Zinc	ND		50.0	1	11/12/2025 17:50	WG2637201

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	380		100	1	11/12/2025 04:35	WG2637753
(S) a,a,a-Trifluorotoluene(FID)	*116*		*78.0-120*		*11/12/2025 04:35*	WG2637753

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2025 17:47	WG2638062
Acrolein	ND		50.0	1	11/11/2025 17:47	WG2638062
Acrylonitrile	ND		10.0	1	11/11/2025 17:47	WG2638062
Benzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Bromobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Bromodichloromethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Bromoform	ND		1.00	1	11/11/2025 17:47	WG2638062
Bromomethane	ND		5.00	1	11/11/2025 17:47	WG2638062
n-Butylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
sec-Butylbenzene	2.93		1.00	1	11/11/2025 17:47	WG2638062
tert-Butylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Carbon tetrachloride	ND		1.00	1	11/11/2025 17:47	WG2638062
Chlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Chlorodibromomethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Chloroethane	ND		5.00	1	11/11/2025 17:47	WG2638062
Chloroform	ND		5.00	1	11/11/2025 17:47	WG2638062
Chloromethane	ND		5.00	1	11/11/2025 17:47	WG2638062
2-Chlorotoluene	ND		1.00	1	11/11/2025 17:47	WG2638062
4-Chlorotoluene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2025 17:47	WG2638062
1,2-Dibromoethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Dibromomethane	ND		1.00	1	11/11/2025 17:47	WG2638062

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,3-Dichlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,4-Dichlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Dichlorodifluoromethane	ND	J4	5.00	1	11/11/2025 17:47	WG2638062
1,1-Dichloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2-Dichloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1-Dichloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2-Dichloropropane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1-Dichloropropene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,3-Dichloropropane	ND		1.00	1	11/11/2025 17:47	WG2638062
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2025 17:47	WG2638062
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2025 17:47	WG2638062
2,2-Dichloropropane	ND		1.00	1	11/11/2025 17:47	WG2638062
Di-isopropyl ether	ND		1.00	1	11/11/2025 17:47	WG2638062
Ethylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Hexachloro-1,3-butadiene	ND		2.00	1	11/11/2025 17:47	WG2638062
Isopropylbenzene	3.26		1.00	1	11/11/2025 17:47	WG2638062
p-Isopropyltoluene	ND		1.00	1	11/11/2025 17:47	WG2638062
2-Butanone (MEK)	ND		20.0	1	11/11/2025 17:47	WG2638062
Methylene Chloride	ND		5.00	1	11/11/2025 17:47	WG2638062
4-Methyl-2-pentanone (MIBK)	ND		20.0	1	11/11/2025 17:47	WG2638062
Methyl tert-butyl ether	ND		1.00	1	11/11/2025 17:47	WG2638062
Naphthalene	ND		5.00	1	11/11/2025 17:47	WG2638062
n-Propylbenzene	7.36		1.00	1	11/11/2025 17:47	WG2638062
Styrene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Tetrachloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
Toluene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,2,4-Trichlorobenzene	ND		2.00	1	11/11/2025 17:47	WG2638062
1,1,1-Trichloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
1,1,2-Trichloroethane	ND		1.00	1	11/11/2025 17:47	WG2638062
Trichloroethene	ND		1.00	1	11/11/2025 17:47	WG2638062
Trichlorofluoromethane	ND		5.00	1	11/11/2025 17:47	WG2638062
1,2,3-Trichloropropane	ND		2.50	1	11/11/2025 17:47	WG2638062
1,2,4-Trimethylbenzene	ND		2.00	1	11/11/2025 17:47	WG2638062
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2025 17:47	WG2638062
Vinyl chloride	ND		1.00	1	11/11/2025 17:47	WG2638062
Xylenes, Total	ND		3.00	1	11/11/2025 17:47	WG2638062
(S) Toluene-d8	*101*		*80.0-120*		*11/11/2025 17:47*	WG2638062
(S) 4-Bromofluorobenzene	*97.3*		*77.0-126*		*11/11/2025 17:47*	WG2638062
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*11/11/2025 17:47*	WG2638062

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2670		200	1	11/17/2025 22:53	WG2642203
Residual Range Organics (RRO)	327		250	1	11/17/2025 22:53	WG2642203
(S) o-Terphenyl	*111*		*52.0-156*		*11/17/2025 22:53*	WG2642203

Sample Narrative:

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	

L1916315-02 WG2642203: Sample resembles laboratory standard for Diesel.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Acenaphthene	6.56		0.0500	1	11/12/2025 12:10	WG2637665
Acenaphthylene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(a)anthracene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(a)pyrene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(b)fluoranthene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(g,h,i)perylene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Benzo(k)fluoranthene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Chrysene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Dibenz(a,h)anthracene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Fluoranthene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Fluorene	4.63		0.0500	1	11/12/2025 12:10	WG2637665
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/12/2025 12:10	WG2637665
Naphthalene	1.45		0.250	1	11/12/2025 12:10	WG2637665
Phenanthrene	4.10		0.0500	1	11/12/2025 12:10	WG2637665
Pyrene	0.0641		0.0500	1	11/12/2025 12:10	WG2637665
1-Methylnaphthalene	45.6		0.250	1	11/12/2025 12:10	WG2637665
2-Methylnaphthalene	ND		0.250	1	11/12/2025 12:10	WG2637665
2-Chloronaphthalene	ND		0.250	1	11/12/2025 12:10	WG2637665
(S) 2-Fluorobiphenyl	*113*		*48.0-148*		*11/12/2025 12:10*	WG2637665
(S) p-Terphenyl-d14	*114*		*37.0-146*		*11/12/2025 12:10*	WG2637665
(S) 2-Methylnaphthalene-d10	*140*		*50.0-150*		*11/12/2025 12:10*	WG2637665

QUALITY CONTROL SUMMARY

L1916315-01,02

Method Blank (MB)

(MB) R4301109-1 11/13/25 16:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexavalent Chromium	U		0.100	0.500

L1916063-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1916063-02 11/13/25 17:37 • (DUP) R4301109-3 11/13/25 17:50

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	0.000		20

L1917145-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1917145-01 11/13/25 19:45 • (DUP) R4301111-1 11/13/25 19:58

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	3.23		20

Laboratory Control Sample (LCS)

(LCS) R4301109-2 11/13/25 17:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	2.00	1.99	99.3	90.0-110	

L1916673-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1916673-01 11/14/25 12:30 • (MS) R4301114-1 11/14/25 12:42

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	50.0	ND	49.1	98.2	1	90.0-110	

L1916437-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916437-29 11/13/25 21:28 • (MS) R4301111-2 11/13/25 21:41 • (MSD) R4301111-3 11/13/25 21:54

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	50.0	ND	49.2	49.2	98.4	98.4	1	90.0-110			0.0364	20

QUALITY CONTROL SUMMARY

L1916315-01,02

Method Blank (MB)

(MB) R4301089-1 11/14/25 11:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0700	0.200

Laboratory Control Sample (LCS)

(LCS) R4301089-2 11/14/25 11:11

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Mercury	3.00	3.13	104	80.0-120	

L1916380-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916380-08 11/14/25 11:14 • (MS) R4301089-4 11/14/25 11:20 • (MSD) R4301089-5 11/14/25 11:22

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	ND	2.94	2.95	94.4	94.8	1	75.0-125			0.395	20

Method Blank (MB)

(MB) R4300480-1 11/12/25 16:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		7.83	10.0
Cadmium	U		0.538	2.00
Chromium	U		1.51	10.0
Lead	U		2.43	6.00
Nickel	U		1.96	10.0
Zinc	U		4.67	50.0

Laboratory Control Sample (LCS)

(LCS) R4300480-2 11/12/25 16:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	1000	962	96.2	80.0-120	
Cadmium	1000	970	97.0	80.0-120	
Chromium	1000	1010	101	80.0-120	
Lead	1000	969	96.9	80.0-120	
Nickel	1000	954	95.4	80.0-120	
Zinc	1000	998	99.8	80.0-120	

L1916211-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916211-01 11/12/25 16:50 • (MS) R4300480-4 11/12/25 16:54 • (MSD) R4300480-5 11/12/25 16:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	1000	ND	962	966	96.2	96.6	1	75.0-125			0.387	20
Cadmium	1000	ND	971	978	97.1	97.8	1	75.0-125			0.644	20
Chromium	1000	ND	1010	1020	101	102	1	75.0-125			1.53	20
Lead	1000	ND	969	981	96.9	98.1	1	75.0-125			1.24	20
Nickel	1000	ND	954	960	95.4	96.0	1	75.0-125			0.676	20
Zinc	1000	ND	996	1000	99.6	100	1	75.0-125			0.721	20

Method Blank (MB)

(MB) R4300541-2 11/11/25 21:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		78.6	100
(S) a,a,a-Trifluorotoluene(FID)	*107*			*78.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300541-1 11/11/25 20:54 • (LCSD) R4300541-3 11/12/25 01:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5000	4910	4980	98.2	99.6	70.0-124			1.42	20
(S) a,a,a-Trifluorotoluene(FID)				*116*	*112*	*78.0-120*				

Method Blank (MB)

(MB) R4301207-2 11/11/25 12:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		46.9	50.0
Acrolein	U		25.0	50.0
Acrylonitrile	U		8.09	10.0
Benzene	U		0.320	1.00
Bromobenzene	U		0.277	1.00
Bromodichloromethane	U		0.371	1.00
Bromoform	U		0.548	1.00
Bromomethane	U		4.85	5.00
n-Butylbenzene	U		0.516	1.00
sec-Butylbenzene	U		0.355	1.00
tert-Butylbenzene	U		0.314	1.00
Carbon tetrachloride	U		0.360	1.00
Chlorobenzene	U		0.266	1.00
Chlorodibromomethane	U		0.398	1.00
Chloroethane	U		2.79	5.00
Chloroform	U		1.28	5.00
Chloromethane	U		1.70	5.00
2-Chlorotoluene	U		0.273	1.00
4-Chlorotoluene	U		0.256	1.00
1,2-Dibromo-3-Chloropropane	U		1.25	5.00
1,2-Dibromoethane	U		0.341	1.00
Dibromomethane	U		0.422	1.00
1,2-Dichlorobenzene	U		0.304	1.00
1,3-Dichlorobenzene	U		0.282	1.00
1,4-Dichlorobenzene	U		0.277	1.00
Dichlorodifluoromethane	U		2.41	5.00
1,1-Dichloroethane	U		0.389	1.00
1,2-Dichloroethane	U		0.395	1.00
1,1-Dichloroethene	U		0.422	1.00
cis-1,2-Dichloroethene	U		0.323	1.00
trans-1,2-Dichloroethene	U		0.348	1.00
1,2-Dichloropropane	U		0.427	1.00
1,1-Dichloropropene	U		0.359	1.00
1,3-Dichloropropane	U		0.283	1.00
cis-1,3-Dichloropropene	U		0.348	1.00
trans-1,3-Dichloropropene	U		0.313	1.00
2,2-Dichloropropane	U		0.463	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.234	1.00
Hexachloro-1,3-butadiene	U		0.650	2.00

Method Blank (MB)

(MB) R4301207-2 11/11/25 12:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.345	1.00
2-Butanone (MEK)	U		9.00	20.0
Methylene Chloride	U		1.48	5.00
4-Methyl-2-pentanone (MIBK)	U		7.52	20.0
Methyl tert-butyl ether	U		0.357	1.00
Naphthalene	U		2.64	5.00
n-Propylbenzene	U		0.239	1.00
Styrene	U		0.342	1.00
1,1,1,2-Tetrachloroethane	U		0.381	1.00
1,1,2,2-Tetrachloroethane	U		0.354	1.00
1,1,2-Trichlorotrifluoroethane	U		0.643	1.00
Tetrachloroethene	U		0.358	1.00
Toluene	U		0.274	1.00
1,2,3-Trichlorobenzene	U		0.935	1.00
1,2,4-Trichlorobenzene	U		0.691	2.00
1,1,1-Trichloroethane	U		0.336	1.00
1,1,2-Trichloroethane	U		0.375	1.00
Trichloroethene	U		0.383	1.00
Trichlorofluoromethane	U		3.04	5.00
1,2,3-Trichloropropane	U		0.602	2.50
1,2,4-Trimethylbenzene	U		0.274	2.00
1,2,3-Trimethylbenzene	U		0.339	1.00
1,3,5-Trimethylbenzene	U		0.266	1.00
Vinyl chloride	U		0.458	1.00
Xylenes, Total	U		0.319	3.00
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.8*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4301207-1 11/11/25 11:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	50.0	48.3	96.6	19.0-160	J
Acrolein	50.0	65.1	130	10.0-160	
Acrylonitrile	50.0	50.4	101	55.0-149	
Benzene	10.0	10.1	101	70.0-123	

Laboratory Control Sample (LCS)

(LCS) R4301207-1 11/11/25 11:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromobenzene	10.0	10.2	102	73.0-121	
Bromodichloromethane	10.0	10.0	100	75.0-120	
Bromoform	10.0	8.71	87.1	68.0-132	
Bromomethane	10.0	15.2	152	10.0-160	
n-Butylbenzene	10.0	10.6	106	73.0-125	
sec-Butylbenzene	10.0	10.4	104	75.0-125	
tert-Butylbenzene	10.0	10.4	104	76.0-124	
Carbon tetrachloride	10.0	10.4	104	68.0-126	
Chlorobenzene	10.0	10.3	103	80.0-121	
Chlorodibromomethane	10.0	9.27	92.7	77.0-125	
Chloroethane	10.0	13.5	135	47.0-150	
Chloroform	10.0	10.5	105	73.0-120	
Chloromethane	10.0	12.3	123	41.0-142	
2-Chlorotoluene	10.0	10.9	109	76.0-123	
4-Chlorotoluene	10.0	10.5	105	75.0-122	
1,2-Dibromo-3-Chloropropane	10.0	8.23	82.3	58.0-134	
1,2-Dibromoethane	10.0	10.0	100	80.0-122	
Dibromomethane	10.0	10.5	105	80.0-120	
1,2-Dichlorobenzene	10.0	10.4	104	79.0-121	
1,3-Dichlorobenzene	10.0	10.6	106	79.0-120	
1,4-Dichlorobenzene	10.0	10.6	106	79.0-120	
Dichlorodifluoromethane	10.0	16.2	162	51.0-149	J4
1,1-Dichloroethane	10.0	10.3	103	70.0-126	
1,2-Dichloroethane	10.0	10.9	109	70.0-128	
1,1-Dichloroethene	10.0	10.3	103	71.0-124	
cis-1,2-Dichloroethene	10.0	10.1	101	73.0-120	
trans-1,2-Dichloroethene	10.0	10.4	104	73.0-120	
1,2-Dichloropropane	10.0	10.0	100	77.0-125	
1,1-Dichloropropene	10.0	10.4	104	74.0-126	
1,3-Dichloropropane	10.0	10.3	103	80.0-120	
cis-1,3-Dichloropropene	10.0	9.96	99.6	80.0-123	
trans-1,3-Dichloropropene	10.0	10.4	104	78.0-124	
2,2-Dichloropropane	10.0	10.4	104	58.0-130	
Di-isopropyl ether	10.0	9.76	97.6	58.0-138	
Ethylbenzene	10.0	10.1	101	79.0-123	
Hexachloro-1,3-butadiene	10.0	9.34	93.4	54.0-138	
Isopropylbenzene	10.0	10.1	101	76.0-127	
p-Isopropyltoluene	10.0	10.5	105	76.0-125	
2-Butanone (MEK)	50.0	49.3	98.6	44.0-160	
Methylene Chloride	10.0	10.4	104	67.0-120	

Laboratory Control Sample (LCS)

(LCS) R4301207-1 11/11/25 11:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	50.0	49.7	99.4	68.0-142	
Methyl tert-butyl ether	10.0	10.3	103	68.0-125	
Naphthalene	10.0	8.06	80.6	54.0-135	
n-Propylbenzene	10.0	10.7	107	77.0-124	
Styrene	10.0	9.76	97.6	73.0-130	
1,1,1,2-Tetrachloroethane	10.0	10.0	100	75.0-125	
1,1,2,2-Tetrachloroethane	10.0	10.3	103	65.0-130	
1,1,2-Trichlorotrifluoroethane	10.0	10.7	107	69.0-132	
Tetrachloroethene	10.0	9.94	99.4	72.0-132	
Toluene	10.0	10.4	104	79.0-120	
1,2,3-Trichlorobenzene	10.0	10.5	105	50.0-138	
1,2,4-Trichlorobenzene	10.0	9.29	92.9	57.0-137	
1,1,1-Trichloroethane	10.0	10.8	108	73.0-124	
1,1,2-Trichloroethane	10.0	10.2	102	80.0-120	
Trichloroethene	10.0	10.3	103	78.0-124	
Trichlorofluoromethane	10.0	12.1	121	59.0-147	
1,2,3-Trichloropropane	10.0	10.0	100	73.0-130	
1,2,4-Trimethylbenzene	10.0	10.5	105	76.0-121	
1,2,3-Trimethylbenzene	10.0	10.5	105	77.0-120	
1,3,5-Trimethylbenzene	10.0	10.6	106	76.0-122	
Vinyl chloride	10.0	12.7	127	67.0-131	
Xylenes, Total	30.0	30.0	100	79.0-123	
(S) Toluene-d8			*100*	*80.0-120*	
(S) 4-Bromofluorobenzene			*97.9*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*104*	*70.0-130*	

Method Blank (MB)

(MB) R4300761-1 11/13/25 15:49

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		60.5	200
Residual Range Organics (RRO)	U		77.2	250
(S) o-Terphenyl	*107*			*52.0-156*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300761-2 11/13/25 16:12 • (LCSD) R4300761-3 11/13/25 16:34

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Diesel Range Organics (DRO)	1500	1410	1430	94.0	95.3	50.0-150			1.41	20
(S) o-Terphenyl				*96.0*	*88.0*	*52.0-156*				

Method Blank (MB)

(MB) R4302580-2 11/17/25 21:26

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		60.5	200
Residual Range Organics (RRO)	U		77.2	250
(S) o-Terphenyl	*112*			*52.0-156*

Laboratory Control Sample (LCS)

(LCS) R4302580-1 11/17/25 21:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	1500	1890	126	50.0-150	
(S) o-Terphenyl			*139*	*52.0-156*	

Method Blank (MB)

(MB) R4300172-3 11/11/25 19:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0210	0.0500
Acenaphthene	U		0.0202	0.0500
Acenaphthylene	U		0.0221	0.0500
Benzo(a)anthracene	U		0.0242	0.0500
Benzo(a)pyrene	U		0.0272	0.0500
Benzo(b)fluoranthene	U		0.0253	0.0500
Benzo(g,h,i)perylene	U		0.0335	0.0500
Benzo(k)fluoranthene	U		0.0254	0.0500
Chrysene	U		0.0257	0.0500
Dibenz(a,h)anthracene	U		0.0251	0.0500
Fluoranthene	U		0.0375	0.0500
Fluorene	U		0.0212	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0270	0.0500
Naphthalene	U		0.118	0.250
Phenanthrene	U		0.0279	0.0500
Pyrene	U		0.0416	0.0500
1-Methylnaphthalene	U		0.112	0.250
2-Methylnaphthalene	U		0.117	0.250
2-Chloronaphthalene	U		0.111	0.250
(S) 2-Fluorobiphenyl	*121*			*48.0-148*
(S) p-Terphenyl-d14	*122*			*37.0-146*
(S) 2-Methylnaphthalene-d10	*131*			*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300172-1 11/11/25 18:49 • (LCSD) R4300172-2 11/11/25 19:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	2.37	2.37	118	118	67.0-150			0.000	20
Acenaphthene	2.00	2.22	2.23	111	111	65.0-138			0.449	20
Acenaphthylene	2.00	2.34	2.34	117	117	66.0-140			0.000	20
Benzo(a)anthracene	2.00	2.40	2.40	120	120	61.0-140			0.000	20
Benzo(a)pyrene	2.00	2.25	2.29	112	115	60.0-143			1.76	20
Benzo(b)fluoranthene	2.00	2.06	2.10	103	105	58.0-141			1.92	20
Benzo(g,h,i)perylene	2.00	2.01	2.03	100	102	52.0-153			0.990	20
Benzo(k)fluoranthene	2.00	2.15	2.19	107	109	58.0-148			1.84	20
Chrysene	2.00	2.37	2.42	118	121	64.0-144			2.09	20
Dibenz(a,h)anthracene	2.00	2.16	2.19	108	109	52.0-155			1.38	20
Fluoranthene	2.00	2.58	2.62	129	131	69.0-153			1.54	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300172-1 11/11/25 18:49 • (LCSD) R4300172-2 11/11/25 19:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	2.00	2.45	2.46	122	123	64.0-136			0.407	20
Indeno(1,2,3-cd)pyrene	2.00	2.04	2.07	102	104	54.0-153			1.46	20
Naphthalene	2.00	2.42	2.44	121	122	61.0-137			0.823	20
Phenanthrene	2.00	2.32	2.35	116	117	62.0-137			1.28	20
Pyrene	2.00	2.26	2.31	113	115	60.0-142			2.19	20
1-Methylnaphthalene	2.00	2.66	2.68	133	134	66.0-142			0.749	20
2-Methylnaphthalene	2.00	2.48	2.50	124	125	62.0-136			0.803	20
2-Chloronaphthalene	2.00	2.18	2.17	109	108	64.0-140			0.460	20
(S) 2-Fluorobiphenyl				*119*	*118*	*48.0-148*				
(S) p-Terphenyl-d14				*116*	*117*	*37.0-146*				
(S) 2-Methylnaphthalene-d10				*130*	*130*	*50.0-150*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Phillips 66 - TRC

13810 SE Eastgate Way
Suite 440
Bellevue, WA 98005

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
cmcorp "

Report to: Eric Larsen
~~Madison Taylor 425-512-7073~~ 425.566.0407

Email To: elarsen@trccompanies.com
~~MPTaylor@trccompanies.com~~;David.Miller@trc

Project Description: Phillips 66

City/State Collected: Ferndale, WA

Please Circle: (PT) MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # 670297

Lab Project # PHILLIPSTRC-FERNDALE

Collected by (print): Madison Taylor

Site/Facility ID # FERNDALE, WA

P.O. # 4301690948

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X STD TAT

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	*Metals 250mlHDPE-HNO3	CR3 250mlHDPE-NoPres	CR6ICFFP 50mlTube/plungerPres	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVI 40mlAmb-NoPres-WT	V8260 40mlAmb-HCl			Remarks	Sample # (lab only)
							N											
MW-OWS-4	G	GW	—	11/6/25	1150	13		X	X	X	X	X	X	X				-01
DUP-1	G	GW	—	↓	—	13		X	X	X	X	X	X	X				-02
		GW																
		GW																

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1916315

A008

Acctnum: PHILL1PSTRC
Template: T283559
Prelogin: P1187936
PM: 3976 - Naomi M Sackett
PB: 11/03/25 mv
Shipped Via: FedEX Priority

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:*Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg
8260: hVOOCs+BTEX

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 885851961147

Sample Receipt Checklist
COC Seal Present/Intact: NP / Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) / No HCL / MeoH TBR	
Madison	11/7/25	0953		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.1 °C	Bottles Received: 26
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11.8.25	Time: 0900

If p... e/Time

PH – 10BDH07251
TRC – 5090A93

Hold:

Condition: NCF / (OK)

ANALYTICAL REPORT

November 25, 2025

Phillips 66 - TRC

Sample Delivery Group:	L1916517
Samples Received:	11/08/2025
Project Number:	670297
Description:	Phillips 66
Site:	FERNDALE, WA
Report To:	Madison Taylor 13810 SE Eastgate Way Suite 440 Bellevue, WA 98005

Entire Report Reviewed By:

Shane Gambill
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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B-5-25:6.3 L1916517-01

Collected by: MT/DM | Collected date/time: 11/05/25 09:35 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:22	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:22	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:14	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:02	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 09:35	11/14/25 10:14	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/05/25 09:35	11/12/25 04:45	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638956	1	11/11/25 11:30	11/14/25 22:17	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 16:50	CMF	Mt. Juliet, TN

B-4-25:7 L1916517-03

Collected by: MT/DM | Collected date/time: 11/05/25 10:30 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:22	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:22	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:17	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:03	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 10:30	11/14/25 10:51	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/05/25 10:30	11/12/25 05:05	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2641917	2.99	11/17/25 07:00	11/19/25 18:10	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 17:10	CMF	Mt. Juliet, TN

B-3-25:7.5 L1916517-05

Collected by: MT/DM | Collected date/time: 11/05/25 11:05 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:22	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:22	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:20	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:05	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2645014	10	11/05/25 11:05	11/21/25 13:02	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	40	11/05/25 11:05	11/12/25 08:23	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638865	15	11/12/25 09:55	11/16/25 15:42	RF	Mt. Juliet, TN
TPH by Method EPH	WG2638865	3	11/12/25 09:55	11/16/25 10:53	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	10	11/13/25 05:14	11/16/25 17:31	NJK	Mt. Juliet, TN

B-3-25:11.5 L1916517-06

Collected by: MT/DM | Collected date/time: 11/05/25 11:25 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:22	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:22	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:22	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:07	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 11:25	11/14/25 12:05	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2639828	1	11/05/25 11:25	11/14/25 13:29	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2641552	2	11/05/25 11:25	11/16/25 21:16	ADM	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 14:10	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 17:30	CMF	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

B-2-25:7.2 L1916517-07

Collected by: MT/DM | Collected date/time: 11/05/25 12:00 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:25	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:09	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 12:00	11/14/25 12:42	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/05/25 12:00	11/12/25 05:44	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 05:56	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 17:50	CMF	Mt. Juliet, TN

B-1-25:7 L1916517-09

Collected by: MT/DM | Collected date/time: 11/05/25 12:35 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:28	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:10	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/05/25 12:35	11/14/25 13:19	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2639828	1	11/05/25 12:35	11/14/25 13:48	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2641552	1	11/05/25 12:35	11/16/25 21:35	ADM	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 06:19	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 18:10	CMF	Mt. Juliet, TN

B-6-25:7.8 L1916517-11

Collected by: MT/DM | Collected date/time: 11/06/25 08:00 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:30	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:12	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 08:00	11/14/25 13:56	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 08:00	11/12/25 06:24	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 06:42	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 18:30	CMF	Mt. Juliet, TN

B-7-25:7.8 L1916517-13

Collected by: MT/DM | Collected date/time: 11/06/25 09:00 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638489	1	11/12/25 09:48	11/12/25 09:56	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:33	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:17	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 09:00	11/14/25 14:33	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 09:00	11/12/25 06:44	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 07:05	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 18:50	CMF	Mt. Juliet, TN

B-8-25:7 L1916517-15

Collected by: MT/DM | Collected date/time: 11/06/25 14:10 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:23	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638490	1	11/12/25 09:36	11/12/25 09:45	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:23	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:36	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:19	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 14:10	11/14/25 15:11	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 14:10	11/12/25 07:04	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2641917	2.89	11/17/25 07:00	11/19/25 18:33	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 19:10	CMF	Mt. Juliet, TN

B-9-25:7 L1916517-17

Collected by: MT/DM | Collected date/time: 11/06/25 14:35 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638525	1	11/12/25 08:09	11/17/25 15:24	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638490	1	11/12/25 09:36	11/12/25 09:45	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:24	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638574	1	11/12/25 13:38	11/13/25 16:38	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638525	1	11/12/25 08:09	11/12/25 15:20	BAG	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 14:35	11/14/25 15:48	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 14:35	11/12/25 07:24	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2641917	2.99	11/17/25 07:00	11/19/25 18:56	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 19:30	CMF	Mt. Juliet, TN

B-10-25:7 L1916517-19

Collected by: MT/DM | Collected date/time: 11/06/25 15:05 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638534	1	11/12/25 08:38	11/17/25 15:24	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638490	1	11/12/25 09:36	11/12/25 09:45	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:24	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638573	1	11/13/25 14:15	11/15/25 15:44	SDG	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638534	1	11/12/25 08:38	11/12/25 19:49	MAP	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 15:05	11/14/25 16:25	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2638380	1	11/06/25 15:05	11/12/25 07:44	DWR	Mt. Juliet, TN
TPH by Method EPH	WG2641917	2.99	11/17/25 07:00	11/19/25 19:19	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 19:50	CMF	Mt. Juliet, TN

B-11-25:13 L1916517-21

Collected by: MT/DM | Collected date/time: 11/06/25 15:50 | Received date/time: 11/08/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2638534	1	11/12/25 08:38	11/17/25 15:24	PAN	Mt. Juliet, TN
Total Solids by Method 2540 G-2011	WG2638490	1	11/12/25 09:36	11/12/25 09:45	MT	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG2638979	1	11/15/25 10:00	11/17/25 15:24	PAN	Mt. Juliet, TN
Mercury by Method 7471B	WG2638573	1	11/13/25 14:15	11/15/25 15:47	SDG	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2638534	1	11/12/25 08:38	11/12/25 18:46	MAP	Mt. Juliet, TN
Volatile Petroleum Hydrocarbons by Method VPHWA	WG2639771	1	11/06/25 15:50	11/14/25 17:02	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2639828	1	11/06/25 15:50	11/14/25 14:07	JAH	Mt. Juliet, TN
TPH by Method EPH	WG2638865	1	11/12/25 09:55	11/16/25 08:36	RF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2638729	1	11/13/25 05:14	11/13/25 20:10	CMF	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Shane Gambill
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was performed from an improper container for the following samples.

Lab Sample ID	Project Sample ID	Method
L1916517-01	B-5-25:6.3	EPH

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	31.8		1.18	1	11/17/2025 15:22	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.7		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.36	1	11/17/2025 15:22	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0472	1	11/13/2025 16:14	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.59		2.36	1	11/12/2025 15:02	WG2638525
Cadmium	ND		0.590	1	11/12/2025 15:02	WG2638525
Chromium	31.8		1.18	1	11/12/2025 15:02	WG2638525
Lead	3.70		0.590	1	11/12/2025 15:02	WG2638525
Nickel	31.6		2.36	1	11/12/2025 15:02	WG2638525
Zinc	41.6		5.90	1	11/12/2025 15:02	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.06	1	11/14/2025 10:14	WG2639771
C8-C10 Aromatics	ND		7.06	1	11/14/2025 10:14	WG2639771
(S) 2,5-Dibromotoluene(FID)	*102*		*60.0-140*		*11/14/2025 10:14*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*100*		*60.0-140*		*11/14/2025 10:14*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.143	1	11/12/2025 04:45	WG2638380
Acrylonitrile	ND		0.0178	1	11/12/2025 04:45	WG2638380
Benzene	ND		0.00143	1	11/12/2025 04:45	WG2638380
Bromobenzene	ND		0.0178	1	11/12/2025 04:45	WG2638380
Bromodichloromethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Bromoform	ND		0.0356	1	11/12/2025 04:45	WG2638380
Bromomethane	ND	C3	0.0178	1	11/12/2025 04:45	WG2638380
n-Butylbenzene	0.0388		0.0178	1	11/12/2025 04:45	WG2638380
sec-Butylbenzene	ND		0.0178	1	11/12/2025 04:45	WG2638380
tert-Butylbenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00713	1	11/12/2025 04:45	WG2638380
Chlorobenzene	ND		0.00356	1	11/12/2025 04:45	WG2638380
Chlorodibromomethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Chloroethane	ND	C3	0.0143	1	11/12/2025 04:45	WG2638380
Chloroform	ND		0.00356	1	11/12/2025 04:45	WG2638380
Chloromethane	ND		0.0178	1	11/12/2025 04:45	WG2638380
2-Chlorotoluene	ND		0.00356	1	11/12/2025 04:45	WG2638380
4-Chlorotoluene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0356	1	11/12/2025 04:45	WG2638380
1,2-Dibromoethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Dibromomethane	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,2-Dichlorobenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,3-Dichlorobenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00713	1	11/12/2025 04:45	WG2638380
Dichlorodifluoromethane	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,1-Dichloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
1,2-Dichloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
1,1-Dichloroethene	ND		0.00356	1	11/12/2025 04:45	WG2638380
cis-1,2-Dichloroethene	ND		0.00356	1	11/12/2025 04:45	WG2638380
trans-1,2-Dichloroethene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,2-Dichloropropane	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,1-Dichloropropene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,3-Dichloropropane	ND		0.00713	1	11/12/2025 04:45	WG2638380
cis-1,3-Dichloropropene	ND		0.00356	1	11/12/2025 04:45	WG2638380
trans-1,3-Dichloropropene	ND		0.00713	1	11/12/2025 04:45	WG2638380
2,2-Dichloropropane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Di-isopropyl ether	ND		0.00143	1	11/12/2025 04:45	WG2638380
Ethylbenzene	ND		0.00356	1	11/12/2025 04:45	WG2638380
Hexachloro-1,3-butadiene	ND		0.0356	1	11/12/2025 04:45	WG2638380
Isopropylbenzene	ND		0.00356	1	11/12/2025 04:45	WG2638380
p-Isopropyltoluene	ND		0.00713	1	11/12/2025 04:45	WG2638380
2-Butanone (MEK)	ND		0.143	1	11/12/2025 04:45	WG2638380
Methylene Chloride	ND		0.0356	1	11/12/2025 04:45	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0356	1	11/12/2025 04:45	WG2638380
Methyl tert-butyl ether	ND		0.00143	1	11/12/2025 04:45	WG2638380
Naphthalene	ND		0.0178	1	11/12/2025 04:45	WG2638380
n-Propylbenzene	0.00714		0.00713	1	11/12/2025 04:45	WG2638380
Styrene	ND		0.0178	1	11/12/2025 04:45	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00356	1	11/12/2025 04:45	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00713	1	11/12/2025 04:45	WG2638380
Tetrachloroethene	ND		0.00356	1	11/12/2025 04:45	WG2638380
Toluene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0178	1	11/12/2025 04:45	WG2638380
1,2,4-Trichlorobenzene	ND		0.0178	1	11/12/2025 04:45	WG2638380
1,1,1-Trichloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
1,1,2-Trichloroethane	ND		0.00356	1	11/12/2025 04:45	WG2638380
Trichloroethene	ND		0.00143	1	11/12/2025 04:45	WG2638380
Trichlorofluoromethane	ND		0.00570	1	11/12/2025 04:45	WG2638380
1,2,3-Trichloropropane	ND		0.0178	1	11/12/2025 04:45	WG2638380
1,2,4-Trimethylbenzene	0.0654		0.00713	1	11/12/2025 04:45	WG2638380
1,2,3-Trimethylbenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380
1,3,5-Trimethylbenzene	ND		0.00713	1	11/12/2025 04:45	WG2638380
Vinyl chloride	ND	C3	0.00356	1	11/12/2025 04:45	WG2638380
Xylenes, Total	ND		0.00927	1	11/12/2025 04:45	WG2638380
(S) Toluene-d8	*96.4*		*75.0-131*		*11/12/2025 04:45*	WG2638380

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*11/12/2025 04:45*	WG2638380
(S) 1,2-Dichloroethane-d4	*114*		*70.0-130*		*11/12/2025 04:45*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	5900	1	11/14/2025 22:17	WG2638956
C12-C16 Aliphatics	7300	J4	5900	1	11/14/2025 22:17	WG2638956
C16-C21 Aliphatics	7370	J4	5900	1	11/14/2025 22:17	WG2638956
C21-C34 Aliphatics	ND	J4	5900	1	11/14/2025 22:17	WG2638956
C10-C12 Aromatics	ND		5900	1	11/14/2025 22:17	WG2638956
C12-C16 Aromatics	22800	J4	5900	1	11/14/2025 22:17	WG2638956
C16-C21 Aromatics	53600	J4	5900	1	11/14/2025 22:17	WG2638956
C21-C34 Aromatics	ND		5900	1	11/14/2025 22:17	WG2638956
(S) o-Terphenyl	*51.7*		*50.0-150*		*11/14/2025 22:17*	WG2638956
(S) 1-Chloro-octadecane	*54.7*		*50.0-150*		*11/14/2025 22:17*	WG2638956
(S) 2-Fluorobiphenyl	*93.0*		*50.0-150*		*11/14/2025 22:17*	WG2638956
(S) 2-Bromonaphthalene	*93.4*		*50.0-150*		*11/14/2025 22:17*	WG2638956

Sample Narrative:

L1916517-01 WG2638956: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Acenaphthene	0.0391		0.00708	1	11/13/2025 16:50	WG2638729
Acenaphthylene	0.00990		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(a)anthracene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(a)pyrene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(b)fluoranthene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(g,h,i)perylene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Benzo(k)fluoranthene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Chrysene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Dibenz(a,h)anthracene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Fluoranthene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Fluorene	0.0264		0.00708	1	11/13/2025 16:50	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00708	1	11/13/2025 16:50	WG2638729
Naphthalene	ND		0.0236	1	11/13/2025 16:50	WG2638729
Phenanthrene	0.0878		0.00708	1	11/13/2025 16:50	WG2638729
Pyrene	ND		0.00708	1	11/13/2025 16:50	WG2638729
1-Methylnaphthalene	0.0658		0.0236	1	11/13/2025 16:50	WG2638729
2-Methylnaphthalene	0.0243		0.0236	1	11/13/2025 16:50	WG2638729
2-Chloronaphthalene	ND		0.0236	1	11/13/2025 16:50	WG2638729
(S) p-Terphenyl-d14	*81.8*		*23.0-120*		*11/13/2025 16:50*	WG2638729
(S) 2-Fluorobiphenyl	*71.1*		*34.0-125*		*11/13/2025 16:50*	WG2638729
(S) 2-Methylnaphthalene-d10	*77.7*		*50.0-150*		*11/13/2025 16:50*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	38.8		1.19	1	11/17/2025 15:22	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.1		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.38	1	11/17/2025 15:22	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0475	1	11/13/2025 16:17	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.25		2.38	1	11/12/2025 15:03	WG2638525
Cadmium	ND		0.594	1	11/12/2025 15:03	WG2638525
Chromium	38.8		1.19	1	11/12/2025 15:03	WG2638525
Lead	5.17		0.594	1	11/12/2025 15:03	WG2638525
Nickel	32.9		2.38	1	11/12/2025 15:03	WG2638525
Zinc	48.7		5.94	1	11/12/2025 15:03	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.19	1	11/14/2025 10:51	WG2639771
C8-C10 Aromatics	ND		7.19	1	11/14/2025 10:51	WG2639771
(S) 2,5-Dibromotoluene(FID)	*103*		*60.0-140*		*11/14/2025 10:51*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*101*		*60.0-140*		*11/14/2025 10:51*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.144	1	11/12/2025 05:05	WG2638380
Acrylonitrile	ND		0.0180	1	11/12/2025 05:05	WG2638380
Benzene	ND		0.00144	1	11/12/2025 05:05	WG2638380
Bromobenzene	ND		0.0180	1	11/12/2025 05:05	WG2638380
Bromodichloromethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Bromoform	ND		0.0359	1	11/12/2025 05:05	WG2638380
Bromomethane	ND	C3	0.0180	1	11/12/2025 05:05	WG2638380
n-Butylbenzene	0.0972		0.0180	1	11/12/2025 05:05	WG2638380
sec-Butylbenzene	0.0518		0.0180	1	11/12/2025 05:05	WG2638380
tert-Butylbenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00719	1	11/12/2025 05:05	WG2638380
Chlorobenzene	ND		0.00359	1	11/12/2025 05:05	WG2638380
Chlorodibromomethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Chloroethane	ND	C3	0.0144	1	11/12/2025 05:05	WG2638380
Chloroform	ND		0.00359	1	11/12/2025 05:05	WG2638380
Chloromethane	ND		0.0180	1	11/12/2025 05:05	WG2638380
2-Chlorotoluene	ND		0.00359	1	11/12/2025 05:05	WG2638380
4-Chlorotoluene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0359	1	11/12/2025 05:05	WG2638380
1,2-Dibromoethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Dibromomethane	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2-Dichlorobenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,3-Dichlorobenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00719	1	11/12/2025 05:05	WG2638380
Dichlorodifluoromethane	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,1-Dichloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
1,2-Dichloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
1,1-Dichloroethene	ND		0.00359	1	11/12/2025 05:05	WG2638380
cis-1,2-Dichloroethene	ND		0.00359	1	11/12/2025 05:05	WG2638380
trans-1,2-Dichloroethene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2-Dichloropropane	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,1-Dichloropropene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,3-Dichloropropane	ND		0.00719	1	11/12/2025 05:05	WG2638380
cis-1,3-Dichloropropene	ND		0.00359	1	11/12/2025 05:05	WG2638380
trans-1,3-Dichloropropene	ND		0.00719	1	11/12/2025 05:05	WG2638380
2,2-Dichloropropane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Di-isopropyl ether	ND		0.00144	1	11/12/2025 05:05	WG2638380
Ethylbenzene	ND		0.00359	1	11/12/2025 05:05	WG2638380
Hexachloro-1,3-butadiene	ND		0.0359	1	11/12/2025 05:05	WG2638380
Isopropylbenzene	0.0932		0.00359	1	11/12/2025 05:05	WG2638380
p-Isopropyltoluene	ND		0.00719	1	11/12/2025 05:05	WG2638380
2-Butanone (MEK)	0.181	C5	0.144	1	11/12/2025 05:05	WG2638380
Methylene Chloride	ND		0.0359	1	11/12/2025 05:05	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0359	1	11/12/2025 05:05	WG2638380
Methyl tert-butyl ether	ND		0.00144	1	11/12/2025 05:05	WG2638380
Naphthalene	ND		0.0180	1	11/12/2025 05:05	WG2638380
n-Propylbenzene	0.155		0.00719	1	11/12/2025 05:05	WG2638380
Styrene	ND		0.0180	1	11/12/2025 05:05	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00359	1	11/12/2025 05:05	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00719	1	11/12/2025 05:05	WG2638380
Tetrachloroethene	ND		0.00359	1	11/12/2025 05:05	WG2638380
Toluene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0180	1	11/12/2025 05:05	WG2638380
1,2,4-Trichlorobenzene	ND		0.0180	1	11/12/2025 05:05	WG2638380
1,1,1-Trichloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
1,1,2-Trichloroethane	ND		0.00359	1	11/12/2025 05:05	WG2638380
Trichloroethene	ND		0.00144	1	11/12/2025 05:05	WG2638380
Trichlorofluoromethane	ND		0.00575	1	11/12/2025 05:05	WG2638380
1,2,3-Trichloropropane	ND		0.0180	1	11/12/2025 05:05	WG2638380
1,2,4-Trimethylbenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,2,3-Trimethylbenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
1,3,5-Trimethylbenzene	ND		0.00719	1	11/12/2025 05:05	WG2638380
Vinyl chloride	ND	C3	0.00359	1	11/12/2025 05:05	WG2638380
Xylenes, Total	ND		0.00935	1	11/12/2025 05:05	WG2638380
(S) Toluene-d8	*95.3*		*75.0-131*		*11/12/2025 05:05*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*11/12/2025 05:05*	WG2638380
(S) 1,2-Dichloroethane-d4	*116*		*70.0-130*		*11/12/2025 05:05*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C12-C16 Aliphatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C16-C21 Aliphatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C21-C34 Aliphatics	ND		17800	2.99	11/19/2025 18:10	WG2641917
C10-C12 Aromatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C12-C16 Aromatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C16-C21 Aromatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
C21-C34 Aromatics	ND	J4	17800	2.99	11/19/2025 18:10	WG2641917
(S) o-Terphenyl	*64.8*		*50.0-150*		*11/19/2025 18:10*	WG2641917
(S) 1-Chloro-octadecane	*53.3*		*50.0-150*		*11/19/2025 18:10*	WG2641917
(S) 2-Fluorobiphenyl	*95.0*		*50.0-150*		*11/19/2025 18:10*	WG2641917
(S) 2-Bromonaphthalene	*98.7*		*50.0-150*		*11/19/2025 18:10*	WG2641917

Sample Narrative:

L1916517-03 WG2641917: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Acenaphthene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Acenaphthylene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(a)anthracene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(a)pyrene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(b)fluoranthene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(g,h,i)perylene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Benzo(k)fluoranthene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Chrysene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Dibenz(a,h)anthracene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Fluoranthene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Fluorene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00713	1	11/13/2025 17:10	WG2638729
Naphthalene	ND		0.0238	1	11/13/2025 17:10	WG2638729
Phenanthrene	0.0120		0.00713	1	11/13/2025 17:10	WG2638729
Pyrene	ND		0.00713	1	11/13/2025 17:10	WG2638729
1-Methylnaphthalene	ND		0.0238	1	11/13/2025 17:10	WG2638729
2-Methylnaphthalene	ND		0.0238	1	11/13/2025 17:10	WG2638729
2-Chloronaphthalene	ND		0.0238	1	11/13/2025 17:10	WG2638729
(S) p-Terphenyl-d14	*90.1*		*23.0-120*		*11/13/2025 17:10*	WG2638729
(S) 2-Fluorobiphenyl	*77.7*		*34.0-125*		*11/13/2025 17:10*	WG2638729
(S) 2-Methylnaphthalene-d10	*78.2*		*50.0-150*		*11/13/2025 17:10*	WG2638729

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	12.2		1.14	1	11/17/2025 15:22	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.9		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.28	1	11/17/2025 15:22	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0455	1	11/13/2025 16:20	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.28	1	11/12/2025 15:05	WG2638525
Cadmium	ND		0.569	1	11/12/2025 15:05	WG2638525
Chromium	12.2		1.14	1	11/12/2025 15:05	WG2638525
Lead	3.07		0.569	1	11/12/2025 15:05	WG2638525
Nickel	9.89		2.28	1	11/12/2025 15:05	WG2638525
Zinc	20.7		5.69	1	11/12/2025 15:05	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		66.4	10	11/21/2025 13:02	WG2645014
Adjusted C5-C6 Aliphatics	ND		66.4	10	11/21/2025 13:02	WG2645014
Unadjusted C6-C8 Aliphatics	ND		66.4	10	11/21/2025 13:02	WG2645014
Adjusted C6-C8 Aliphatics	ND		66.4	10	11/21/2025 13:02	WG2645014
Unadjusted C8-C10 Aliphatics	92.9		66.4	10	11/21/2025 13:02	WG2645014
Adjusted C8-C10 Aliphatics	89.4		66.4	10	11/21/2025 13:02	WG2645014
C8-C10 Aromatics	73.2		66.4	10	11/21/2025 13:02	WG2645014
(S) 2,5-Dibromotoluene(FID)	*142*	J1	*60.0-140*		*11/21/2025 13:02*	WG2645014
(S) 2,5-Dibromotoluene(PID)	*106*		*60.0-140*		*11/21/2025 13:02*	WG2645014

Sample Narrative:

L1916517-05 WG2645014: Surrogate failure due to matrix interference

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND	J3	5.34	40	11/12/2025 08:23	WG2638380
Acrylonitrile	ND		0.667	40	11/12/2025 08:23	WG2638380
Benzene	0.0561		0.0534	40	11/12/2025 08:23	WG2638380
Bromobenzene	ND	J3	0.667	40	11/12/2025 08:23	WG2638380
Bromodichloromethane	ND		0.133	40	11/12/2025 08:23	WG2638380
Bromoform	ND	J3	1.33	40	11/12/2025 08:23	WG2638380
Bromomethane	ND	C3 J3 J5	0.667	40	11/12/2025 08:23	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
n-Butylbenzene	0.912		0.667	40	11/12/2025 08:23	WG2638380
sec-Butylbenzene	0.798		0.667	40	11/12/2025 08:23	WG2638380
tert-Butylbenzene	ND		0.267	40	11/12/2025 08:23	WG2638380
Carbon tetrachloride	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
Chlorobenzene	ND		0.133	40	11/12/2025 08:23	WG2638380
Chlorodibromomethane	ND		0.133	40	11/12/2025 08:23	WG2638380
Chloroethane	ND	C3 J3 J5	0.534	40	11/12/2025 08:23	WG2638380
Chloroform	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
Chloromethane	ND		0.667	40	11/12/2025 08:23	WG2638380
2-Chlorotoluene	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
4-Chlorotoluene	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
1,2-Dibromo-3-Chloropropane	ND		1.33	40	11/12/2025 08:23	WG2638380
1,2-Dibromoethane	ND		0.133	40	11/12/2025 08:23	WG2638380
Dibromomethane	ND		0.267	40	11/12/2025 08:23	WG2638380
1,2-Dichlorobenzene	ND		0.267	40	11/12/2025 08:23	WG2638380
1,3-Dichlorobenzene	ND		0.267	40	11/12/2025 08:23	WG2638380
1,4-Dichlorobenzene	ND	C3	0.267	40	11/12/2025 08:23	WG2638380
Dichlorodifluoromethane	ND		0.267	40	11/12/2025 08:23	WG2638380
1,1-Dichloroethane	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
1,2-Dichloroethane	ND		0.133	40	11/12/2025 08:23	WG2638380
1,1-Dichloroethene	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
cis-1,2-Dichloroethene	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
trans-1,2-Dichloroethene	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
1,2-Dichloropropane	ND		0.267	40	11/12/2025 08:23	WG2638380
1,1-Dichloropropene	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
1,3-Dichloropropane	ND		0.267	40	11/12/2025 08:23	WG2638380
cis-1,3-Dichloropropene	ND		0.133	40	11/12/2025 08:23	WG2638380
trans-1,3-Dichloropropene	ND		0.267	40	11/12/2025 08:23	WG2638380
2,2-Dichloropropane	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
Di-isopropyl ether	ND	J3	0.0534	40	11/12/2025 08:23	WG2638380
Ethylbenzene	1.08		0.133	40	11/12/2025 08:23	WG2638380
Hexachloro-1,3-butadiene	ND		1.33	40	11/12/2025 08:23	WG2638380
Isopropylbenzene	0.661	J3	0.133	40	11/12/2025 08:23	WG2638380
p-Isopropyltoluene	0.296		0.267	40	11/12/2025 08:23	WG2638380
2-Butanone (MEK)	ND	J5	5.34	40	11/12/2025 08:23	WG2638380
Methylene Chloride	ND	J3	1.33	40	11/12/2025 08:23	WG2638380
4-Methyl-2-pentanone (MIBK)	4.63		1.33	40	11/12/2025 08:23	WG2638380
Methyl tert-butyl ether	ND	J3	0.0534	40	11/12/2025 08:23	WG2638380
Naphthalene	6.29		0.667	40	11/12/2025 08:23	WG2638380
n-Propylbenzene	1.83	J3	0.267	40	11/12/2025 08:23	WG2638380
Styrene	12.0	J3 J5	0.667	40	11/12/2025 08:23	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.133	40	11/12/2025 08:23	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3 J3	0.133	40	11/12/2025 08:23	WG2638380
1,1,2-Trichlorotrifluoroethane	ND	J3	0.267	40	11/12/2025 08:23	WG2638380
Tetrachloroethene	ND		0.133	40	11/12/2025 08:23	WG2638380
Toluene	0.478		0.267	40	11/12/2025 08:23	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.667	40	11/12/2025 08:23	WG2638380
1,2,4-Trichlorobenzene	ND		0.667	40	11/12/2025 08:23	WG2638380
1,1,1-Trichloroethane	ND	J3	0.133	40	11/12/2025 08:23	WG2638380
1,1,2-Trichloroethane	ND		0.133	40	11/12/2025 08:23	WG2638380
Trichloroethene	ND		0.0534	40	11/12/2025 08:23	WG2638380
Trichlorofluoromethane	ND	J3 J5	0.214	40	11/12/2025 08:23	WG2638380
1,2,3-Trichloropropane	ND		0.667	40	11/12/2025 08:23	WG2638380
1,2,4-Trimethylbenzene	2.96		0.267	40	11/12/2025 08:23	WG2638380
1,2,3-Trimethylbenzene	1.30		0.267	40	11/12/2025 08:23	WG2638380
1,3,5-Trimethylbenzene	0.754	J3	0.267	40	11/12/2025 08:23	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Vinyl chloride	ND	C3 J3 J5	0.133	40	11/12/2025 08:23	WG2638380
Xylenes, Total	1.95		0.347	40	11/12/2025 08:23	WG2638380
(S) Toluene-d8	*94.9*		*75.0-131*		*11/12/2025 08:23*	WG2638380
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*11/12/2025 08:23*	WG2638380
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*11/12/2025 08:23*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	97300	J4	17100	3	11/16/2025 10:53	WG2638865
C12-C16 Aliphatics	618000	J4	85300	15	11/16/2025 15:42	WG2638865
C16-C21 Aliphatics	ND	J4	85300	15	11/16/2025 15:42	WG2638865
C21-C34 Aliphatics	369000	J4	17100	3	11/16/2025 10:53	WG2638865
C10-C12 Aromatics	37000	J4	17100	3	11/16/2025 10:53	WG2638865
C12-C16 Aromatics	303000	J4	85300	15	11/16/2025 15:42	WG2638865
C16-C21 Aromatics	731000	J4	85300	15	11/16/2025 15:42	WG2638865
C21-C34 Aromatics	282000	J4	17100	3	11/16/2025 10:53	WG2638865
(S) o-Terphenyl	*51.6*		*50.0-150*		*11/16/2025 15:42*	WG2638865
(S) o-Terphenyl	*45.0*	J2	*50.0-150*		*11/16/2025 10:53*	WG2638865
(S) 1-Chloro-octadecane	*43.9*	J2	*50.0-150*		*11/16/2025 10:53*	WG2638865
(S) 1-Chloro-octadecane	*45.4*	J2	*50.0-150*		*11/16/2025 15:42*	WG2638865
(S) 2-Fluorobiphenyl	*90.8*		*50.0-150*		*11/16/2025 10:53*	WG2638865
(S) 2-Fluorobiphenyl	*90.1*		*50.0-150*		*11/16/2025 15:42*	WG2638865
(S) 2-Bromonaphthalene	*61.9*		*50.0-150*		*11/16/2025 15:42*	WG2638865
(S) 2-Bromonaphthalene	*64.2*		*50.0-150*		*11/16/2025 10:53*	WG2638865

Sample Narrative:

L1916517-05 WG2638865: Dilution and surrogate failure due to matrix interference.

L1916517-05 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	1.17		0.0683	10	11/16/2025 17:31	WG2638729
Acenaphthene	3.31		0.0683	10	11/16/2025 17:31	WG2638729
Acenaphthylene	0.836		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(a)anthracene	0.983		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(a)pyrene	0.749		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(b)fluoranthene	0.311		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(g,h,i)perylene	0.263		0.0683	10	11/16/2025 17:31	WG2638729
Benzo(k)fluoranthene	ND		0.0683	10	11/16/2025 17:31	WG2638729
Chrysene	1.56		0.0683	10	11/16/2025 17:31	WG2638729
Dibenz(a,h)anthracene	0.133		0.0683	10	11/16/2025 17:31	WG2638729
Fluoranthene	0.867		0.0683	10	11/16/2025 17:31	WG2638729
Fluorene	4.23		0.0683	10	11/16/2025 17:31	WG2638729
Indeno(1,2,3-cd)pyrene	0.0973		0.0683	10	11/16/2025 17:31	WG2638729
Naphthalene	5.59		0.228	10	11/16/2025 17:31	WG2638729
Phenanthrene	17.9		0.0683	10	11/16/2025 17:31	WG2638729
Pyrene	5.26		0.0683	10	11/16/2025 17:31	WG2638729
1-Methylnaphthalene	33.8		0.228	10	11/16/2025 17:31	WG2638729
2-Methylnaphthalene	27.8		0.228	10	11/16/2025 17:31	WG2638729
2-Chloronaphthalene	ND		0.228	10	11/16/2025 17:31	WG2638729
(S) p-Terphenyl-d14	*116*		*23.0-120*		*11/16/2025 17:31*	WG2638729
(S) 2-Fluorobiphenyl	*102*		*34.0-125*		*11/16/2025 17:31*	WG2638729
(S) 2-Methylnaphthalene-d10	*260*	J1	*50.0-150*		*11/16/2025 17:31*	WG2638729

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch

Sample Narrative:

L1916517-05 WG2638729: Surrogate failure due to matrix interference.

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	27.7		1.17	1	11/17/2025 15:22	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.8		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.33	1	11/17/2025 15:22	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0466	1	11/13/2025 16:22	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.66		2.33	1	11/12/2025 15:07	WG2638525
Cadmium	ND		0.583	1	11/12/2025 15:07	WG2638525
Chromium	27.7		1.17	1	11/12/2025 15:07	WG2638525
Lead	2.64		0.583	1	11/12/2025 15:07	WG2638525
Nickel	21.1		2.33	1	11/12/2025 15:07	WG2638525
Zinc	32.8		5.83	1	11/12/2025 15:07	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
Unadjusted C8-C10 Aliphatics	7.02		6.96	1	11/14/2025 12:05	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.96	1	11/14/2025 12:05	WG2639771
C8-C10 Aromatics	ND		6.96	1	11/14/2025 12:05	WG2639771
(S) 2,5-Dibromotoluene(FID)	*78.1*		*60.0-140*		*11/14/2025 12:05*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*89.8*		*60.0-140*		*11/14/2025 12:05*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.139	1	11/14/2025 13:29	WG2639828
Acrylonitrile	ND		0.0173	1	11/14/2025 13:29	WG2639828
Benzene	0.00157		0.00139	1	11/14/2025 13:29	WG2639828
Bromobenzene	ND	C3	0.0173	1	11/14/2025 13:29	WG2639828
Bromodichloromethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Bromoform	ND		0.0347	1	11/14/2025 13:29	WG2639828
Bromomethane	ND		0.0173	1	11/14/2025 13:29	WG2639828
n-Butylbenzene	0.155		0.0173	1	11/14/2025 13:29	WG2639828
sec-Butylbenzene	0.121		0.0173	1	11/14/2025 13:29	WG2639828
tert-Butylbenzene	0.00951		0.00693	1	11/14/2025 13:29	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00693	1	11/14/2025 13:29	WG2639828
Chlorobenzene	ND		0.00347	1	11/14/2025 13:29	WG2639828
Chlorodibromomethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Chloroethane	ND		0.0139	1	11/14/2025 13:29	WG2639828
Chloroform	ND		0.00347	1	11/14/2025 13:29	WG2639828
Chloromethane	ND		0.0173	1	11/14/2025 13:29	WG2639828
2-Chlorotoluene	ND		0.00347	1	11/14/2025 13:29	WG2639828
4-Chlorotoluene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,2-Dibromo-3-Chloropropane	ND		0.0347	1	11/14/2025 13:29	WG2639828
1,2-Dibromoethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Dibromomethane	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,2-Dichlorobenzene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,3-Dichlorobenzene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,4-Dichlorobenzene	ND		0.00693	1	11/14/2025 13:29	WG2639828
Dichlorodifluoromethane	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,1-Dichloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
1,2-Dichloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
1,1-Dichloroethene	ND		0.00347	1	11/14/2025 13:29	WG2639828
cis-1,2-Dichloroethene	ND		0.00347	1	11/14/2025 13:29	WG2639828
trans-1,2-Dichloroethene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,2-Dichloropropane	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,1-Dichloropropene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,3-Dichloropropane	ND		0.00693	1	11/14/2025 13:29	WG2639828
cis-1,3-Dichloropropene	ND		0.00347	1	11/14/2025 13:29	WG2639828
trans-1,3-Dichloropropene	ND		0.00693	1	11/14/2025 13:29	WG2639828
2,2-Dichloropropane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Di-isopropyl ether	ND		0.00139	1	11/14/2025 13:29	WG2639828
Ethylbenzene	0.0380		0.00347	1	11/14/2025 13:29	WG2639828
Hexachloro-1,3-butadiene	ND		0.0347	1	11/14/2025 13:29	WG2639828
Isopropylbenzene	0.135		0.00347	1	11/14/2025 13:29	WG2639828
p-Isopropyltoluene	0.00865		0.00693	1	11/14/2025 13:29	WG2639828
2-Butanone (MEK)	ND		0.139	1	11/14/2025 13:29	WG2639828
Methylene Chloride	ND		0.0347	1	11/14/2025 13:29	WG2639828
4-Methyl-2-pentanone (MIBK)	ND		0.0347	1	11/14/2025 13:29	WG2639828
Methyl tert-butyl ether	ND		0.00139	1	11/14/2025 13:29	WG2639828
Naphthalene	0.737		0.0347	2	11/16/2025 21:16	WG2641552
n-Propylbenzene	0.304		0.00693	1	11/14/2025 13:29	WG2639828
Styrene	0.0750		0.0173	1	11/14/2025 13:29	WG2639828
1,1,1,2-Tetrachloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
1,1,2,2-Tetrachloroethane	ND	C3	0.00347	1	11/14/2025 13:29	WG2639828
1,1,2-Trichlorotrifluoroethane	ND		0.00693	1	11/14/2025 13:29	WG2639828
Tetrachloroethene	ND		0.00347	1	11/14/2025 13:29	WG2639828
Toluene	ND		0.00693	1	11/14/2025 13:29	WG2639828
1,2,3-Trichlorobenzene	ND		0.0173	1	11/14/2025 13:29	WG2639828
1,2,4-Trichlorobenzene	ND		0.0173	1	11/14/2025 13:29	WG2639828
1,1,1-Trichloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
1,1,2-Trichloroethane	ND		0.00347	1	11/14/2025 13:29	WG2639828
Trichloroethene	ND		0.00139	1	11/14/2025 13:29	WG2639828
Trichlorofluoromethane	ND		0.00555	1	11/14/2025 13:29	WG2639828
1,2,3-Trichloropropane	ND	C3	0.0173	1	11/14/2025 13:29	WG2639828
1,2,4-Trimethylbenzene	0.0219		0.00693	1	11/14/2025 13:29	WG2639828
1,2,3-Trimethylbenzene	0.0177		0.00693	1	11/14/2025 13:29	WG2639828
1,3,5-Trimethylbenzene	ND		0.00693	1	11/14/2025 13:29	WG2639828
Vinyl chloride	ND		0.00347	1	11/14/2025 13:29	WG2639828
Xylenes, Total	0.0211		0.00901	1	11/14/2025 13:29	WG2639828
(S) Toluene-d8	*92.4*		*75.0-131*		*11/14/2025 13:29*	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) Toluene-d8	*96.1*		*75.0-131*		*11/16/2025 21:16*	WG2641552
(S) 4-Bromofluorobenzene	*108*		*67.0-138*		*11/14/2025 13:29*	WG2639828
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*11/16/2025 21:16*	WG2641552
(S) 1,2-Dichloroethane-d4	*89.3*		*70.0-130*		*11/14/2025 13:29*	WG2639828
(S) 1,2-Dichloroethane-d4	*119*		*70.0-130*		*11/16/2025 21:16*	WG2641552

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	5830	1	11/16/2025 14:10	WG2638865
C12-C16 Aliphatics	28800	J4	5830	1	11/16/2025 14:10	WG2638865
C16-C21 Aliphatics	34700	J4	5830	1	11/16/2025 14:10	WG2638865
C21-C34 Aliphatics	39900	J4	5830	1	11/16/2025 14:10	WG2638865
C10-C12 Aromatics	ND	J4	5830	1	11/16/2025 14:10	WG2638865
C12-C16 Aromatics	19000	J4	5830	1	11/16/2025 14:10	WG2638865
C16-C21 Aromatics	50100	J4	5830	1	11/16/2025 14:10	WG2638865
C21-C34 Aromatics	50400	J4	5830	1	11/16/2025 14:10	WG2638865
(S) o-Terphenyl	*46.8*	J2	*50.0-150*		*11/16/2025 14:10*	WG2638865
(S) 1-Chloro-octadecane	*54.7*		*50.0-150*		*11/16/2025 14:10*	WG2638865
(S) 2-Fluorobiphenyl	*81.8*		*50.0-150*		*11/16/2025 14:10*	WG2638865
(S) 2-Bromonaphthalene	*82.3*		*50.0-150*		*11/16/2025 14:10*	WG2638865

Sample Narrative:

L1916517-06 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00700	1	11/13/2025 17:30	WG2638729
Acenaphthene	0.0803		0.00700	1	11/13/2025 17:30	WG2638729
Acenaphthylene	0.0160		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(a)anthracene	0.0554		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(a)pyrene	0.0342		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(b)fluoranthene	0.0160		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(g,h,i)perylene	0.0139		0.00700	1	11/13/2025 17:30	WG2638729
Benzo(k)fluoranthene	ND		0.00700	1	11/13/2025 17:30	WG2638729
Chrysene	0.0602		0.00700	1	11/13/2025 17:30	WG2638729
Dibenz(a,h)anthracene	ND		0.00700	1	11/13/2025 17:30	WG2638729
Fluoranthene	0.0284		0.00700	1	11/13/2025 17:30	WG2638729
Fluorene	0.110		0.00700	1	11/13/2025 17:30	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00700	1	11/13/2025 17:30	WG2638729
Naphthalene	0.166		0.0233	1	11/13/2025 17:30	WG2638729
Phenanthrene	0.450		0.00700	1	11/13/2025 17:30	WG2638729
Pyrene	0.136		0.00700	1	11/13/2025 17:30	WG2638729
1-Methylnaphthalene	0.801		0.0233	1	11/13/2025 17:30	WG2638729
2-Methylnaphthalene	0.907		0.0233	1	11/13/2025 17:30	WG2638729
2-Chloronaphthalene	ND		0.0233	1	11/13/2025 17:30	WG2638729
(S) p-Terphenyl-d14	*82.8*		*23.0-120*		*11/13/2025 17:30*	WG2638729
(S) 2-Fluorobiphenyl	*75.2*		*34.0-125*		*11/13/2025 17:30*	WG2638729
(S) 2-Methylnaphthalene-d10	*85.4*		*50.0-150*		*11/13/2025 17:30*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	51.3		1.23	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.1		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.47	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0493	1	11/13/2025 16:25	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.89		2.47	1	11/12/2025 15:09	WG2638525
Cadmium	ND		0.616	1	11/12/2025 15:09	WG2638525
Chromium	51.3		1.23	1	11/12/2025 15:09	WG2638525
Lead	5.28		0.616	1	11/12/2025 15:09	WG2638525
Nickel	43.2		2.47	1	11/12/2025 15:09	WG2638525
Zinc	61.3		6.16	1	11/12/2025 15:09	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.81	1	11/14/2025 12:42	WG2639771
C8-C10 Aromatics	ND		7.81	1	11/14/2025 12:42	WG2639771
(S) 2,5-Dibromotoluene(FID)	*107*		*60.0-140*		*11/14/2025 12:42*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*102*		*60.0-140*		*11/14/2025 12:42*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.147	1	11/12/2025 05:44	WG2638380
Acrylonitrile	ND		0.0183	1	11/12/2025 05:44	WG2638380
Benzene	ND		0.00147	1	11/12/2025 05:44	WG2638380
Bromobenzene	ND		0.0183	1	11/12/2025 05:44	WG2638380
Bromodichloromethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Bromoform	ND		0.0366	1	11/12/2025 05:44	WG2638380
Bromomethane	ND	C3	0.0183	1	11/12/2025 05:44	WG2638380
n-Butylbenzene	ND		0.0183	1	11/12/2025 05:44	WG2638380
sec-Butylbenzene	0.0259		0.0183	1	11/12/2025 05:44	WG2638380
tert-Butylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00733	1	11/12/2025 05:44	WG2638380
Chlorobenzene	ND		0.00366	1	11/12/2025 05:44	WG2638380
Chlorodibromomethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Chloroethane	ND	C3	0.0147	1	11/12/2025 05:44	WG2638380
Chloroform	ND		0.00366	1	11/12/2025 05:44	WG2638380
Chloromethane	ND		0.0183	1	11/12/2025 05:44	WG2638380
2-Chlorotoluene	ND		0.00366	1	11/12/2025 05:44	WG2638380
4-Chlorotoluene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0366	1	11/12/2025 05:44	WG2638380
1,2-Dibromoethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Dibromomethane	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2-Dichlorobenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,3-Dichlorobenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00733	1	11/12/2025 05:44	WG2638380
Dichlorodifluoromethane	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,1-Dichloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
1,2-Dichloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
1,1-Dichloroethene	ND		0.00366	1	11/12/2025 05:44	WG2638380
cis-1,2-Dichloroethene	ND		0.00366	1	11/12/2025 05:44	WG2638380
trans-1,2-Dichloroethene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2-Dichloropropane	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,1-Dichloropropene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,3-Dichloropropane	ND		0.00733	1	11/12/2025 05:44	WG2638380
cis-1,3-Dichloropropene	ND		0.00366	1	11/12/2025 05:44	WG2638380
trans-1,3-Dichloropropene	ND		0.00733	1	11/12/2025 05:44	WG2638380
2,2-Dichloropropane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Di-isopropyl ether	ND		0.00147	1	11/12/2025 05:44	WG2638380
Ethylbenzene	ND		0.00366	1	11/12/2025 05:44	WG2638380
Hexachloro-1,3-butadiene	ND		0.0366	1	11/12/2025 05:44	WG2638380
Isopropylbenzene	ND		0.00366	1	11/12/2025 05:44	WG2638380
p-Isopropyltoluene	ND		0.00733	1	11/12/2025 05:44	WG2638380
2-Butanone (MEK)	ND		0.147	1	11/12/2025 05:44	WG2638380
Methylene Chloride	ND		0.0366	1	11/12/2025 05:44	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0366	1	11/12/2025 05:44	WG2638380
Methyl tert-butyl ether	ND		0.00147	1	11/12/2025 05:44	WG2638380
Naphthalene	0.0331		0.0183	1	11/12/2025 05:44	WG2638380
n-Propylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
Styrene	ND		0.0183	1	11/12/2025 05:44	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00366	1	11/12/2025 05:44	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00733	1	11/12/2025 05:44	WG2638380
Tetrachloroethene	ND		0.00366	1	11/12/2025 05:44	WG2638380
Toluene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0183	1	11/12/2025 05:44	WG2638380
1,2,4-Trichlorobenzene	ND		0.0183	1	11/12/2025 05:44	WG2638380
1,1,1-Trichloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
1,1,2-Trichloroethane	ND		0.00366	1	11/12/2025 05:44	WG2638380
Trichloroethene	ND		0.00147	1	11/12/2025 05:44	WG2638380
Trichlorofluoromethane	ND		0.00586	1	11/12/2025 05:44	WG2638380
1,2,3-Trichloropropane	ND		0.0183	1	11/12/2025 05:44	WG2638380
1,2,4-Trimethylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,2,3-Trimethylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
1,3,5-Trimethylbenzene	ND		0.00733	1	11/12/2025 05:44	WG2638380
Vinyl chloride	ND	C3	0.00366	1	11/12/2025 05:44	WG2638380
Xylenes, Total	ND		0.00953	1	11/12/2025 05:44	WG2638380
(S) Toluene-d8	*55.9*	J2	*75.0-131*		*11/12/2025 05:44*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*108*		*67.0-138*		*11/12/2025 05:44*	WG2638380
(S) 1,2-Dichloroethane-d4	*115*		*70.0-130*		*11/12/2025 05:44*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C12-C16 Aliphatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C16-C21 Aliphatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C21-C34 Aliphatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C10-C12 Aromatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C12-C16 Aromatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C16-C21 Aromatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
C21-C34 Aromatics	ND	J4	6160	1	11/16/2025 05:56	WG2638865
(S) o-Terphenyl	*60.8*		*50.0-150*		*11/16/2025 05:56*	WG2638865
(S) 1-Chloro-octadecane	*59.3*		*50.0-150*		*11/16/2025 05:56*	WG2638865
(S) 2-Fluorobiphenyl	*83.7*		*50.0-150*		*11/16/2025 05:56*	WG2638865
(S) 2-Bromonaphthalene	*87.5*		*50.0-150*		*11/16/2025 05:56*	WG2638865

Sample Narrative:

L1916517-07 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Acenaphthene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Acenaphthylene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(a)anthracene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(a)pyrene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(b)fluoranthene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(g,h,i)perylene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Benzo(k)fluoranthene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Chrysene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Dibenz(a,h)anthracene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Fluoranthene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Fluorene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00740	1	11/13/2025 17:50	WG2638729
Naphthalene	ND		0.0247	1	11/13/2025 17:50	WG2638729
Phenanthrene	0.0134		0.00740	1	11/13/2025 17:50	WG2638729
Pyrene	ND		0.00740	1	11/13/2025 17:50	WG2638729
1-Methylnaphthalene	0.0256		0.0247	1	11/13/2025 17:50	WG2638729
2-Methylnaphthalene	0.0398		0.0247	1	11/13/2025 17:50	WG2638729
2-Chloronaphthalene	ND		0.0247	1	11/13/2025 17:50	WG2638729
(S) p-Terphenyl-d14	*92.3*		*23.0-120*		*11/13/2025 17:50*	WG2638729
(S) 2-Fluorobiphenyl	*82.9*		*34.0-125*		*11/13/2025 17:50*	WG2638729
(S) 2-Methylnaphthalene-d10	*86.5*		*50.0-150*		*11/13/2025 17:50*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	38.5		1.22	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.2		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.43	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0487	1	11/13/2025 16:28	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.56		2.43	1	11/12/2025 15:10	WG2638525
Cadmium	ND		0.608	1	11/12/2025 15:10	WG2638525
Chromium	38.5		1.22	1	11/12/2025 15:10	WG2638525
Lead	4.58		0.608	1	11/12/2025 15:10	WG2638525
Nickel	32.8		2.43	1	11/12/2025 15:10	WG2638525
Zinc	48.8		6.08	1	11/12/2025 15:10	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.45	1	11/14/2025 13:19	WG2639771
C8-C10 Aromatics	ND		7.45	1	11/14/2025 13:19	WG2639771
(S) 2,5-Dibromotoluene(FID)	*100*		*60.0-140*		*11/14/2025 13:19*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*99.3*		*60.0-140*		*11/14/2025 13:19*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.149	1	11/14/2025 13:48	WG2639828
Acrylonitrile	ND		0.0186	1	11/14/2025 13:48	WG2639828
Benzene	ND		0.00149	1	11/14/2025 13:48	WG2639828
Bromobenzene	ND	C3	0.0186	1	11/14/2025 13:48	WG2639828
Bromodichloromethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Bromoform	ND		0.0373	1	11/14/2025 13:48	WG2639828
Bromomethane	ND		0.0186	1	11/14/2025 13:48	WG2639828
n-Butylbenzene	0.0236		0.0186	1	11/14/2025 13:48	WG2639828
sec-Butylbenzene	0.0195		0.0186	1	11/14/2025 13:48	WG2639828
tert-Butylbenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00746	1	11/14/2025 13:48	WG2639828
Chlorobenzene	ND		0.00373	1	11/14/2025 13:48	WG2639828
Chlorodibromomethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Chloroethane	ND		0.0149	1	11/14/2025 13:48	WG2639828
Chloroform	ND		0.00373	1	11/14/2025 13:48	WG2639828
Chloromethane	ND		0.0186	1	11/14/2025 13:48	WG2639828
2-Chlorotoluene	ND		0.00373	1	11/14/2025 13:48	WG2639828
4-Chlorotoluene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2-Dibromo-3-Chloropropane	ND		0.0373	1	11/14/2025 13:48	WG2639828
1,2-Dibromoethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Dibromomethane	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2-Dichlorobenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,3-Dichlorobenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,4-Dichlorobenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
Dichlorodifluoromethane	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,1-Dichloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
1,2-Dichloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
1,1-Dichloroethene	ND		0.00373	1	11/14/2025 13:48	WG2639828
cis-1,2-Dichloroethene	ND		0.00373	1	11/14/2025 13:48	WG2639828
trans-1,2-Dichloroethene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2-Dichloropropane	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,1-Dichloropropene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,3-Dichloropropane	ND		0.00746	1	11/14/2025 13:48	WG2639828
cis-1,3-Dichloropropene	ND		0.00373	1	11/14/2025 13:48	WG2639828
trans-1,3-Dichloropropene	ND		0.00746	1	11/14/2025 13:48	WG2639828
2,2-Dichloropropane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Di-isopropyl ether	ND		0.00149	1	11/14/2025 13:48	WG2639828
Ethylbenzene	ND		0.00373	1	11/14/2025 13:48	WG2639828
Hexachloro-1,3-butadiene	ND		0.0373	1	11/14/2025 13:48	WG2639828
Isopropylbenzene	0.0177		0.00373	1	11/14/2025 13:48	WG2639828
p-Isopropyltoluene	ND		0.00746	1	11/14/2025 13:48	WG2639828
2-Butanone (MEK)	ND		0.149	1	11/14/2025 13:48	WG2639828
Methylene Chloride	ND		0.0373	1	11/14/2025 13:48	WG2639828
4-Methyl-2-pentanone (MIBK)	ND		0.0373	1	11/14/2025 13:48	WG2639828
Methyl tert-butyl ether	ND		0.00149	1	11/14/2025 13:48	WG2639828
Naphthalene	0.0260		0.0186	1	11/16/2025 21:35	WG2641552
n-Propylbenzene	0.0395		0.00746	1	11/14/2025 13:48	WG2639828
Styrene	ND		0.0186	1	11/14/2025 13:48	WG2639828
1,1,1,2-Tetrachloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
1,1,2,2-Tetrachloroethane	ND	C3	0.00373	1	11/14/2025 13:48	WG2639828
1,1,2-Trichlorotrifluoroethane	ND		0.00746	1	11/14/2025 13:48	WG2639828
Tetrachloroethene	ND		0.00373	1	11/14/2025 13:48	WG2639828
Toluene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2,3-Trichlorobenzene	ND		0.0186	1	11/14/2025 13:48	WG2639828
1,2,4-Trichlorobenzene	ND		0.0186	1	11/14/2025 13:48	WG2639828
1,1,1-Trichloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
1,1,2-Trichloroethane	ND		0.00373	1	11/14/2025 13:48	WG2639828
Trichloroethene	ND		0.00149	1	11/14/2025 13:48	WG2639828
Trichlorofluoromethane	ND		0.00597	1	11/14/2025 13:48	WG2639828
1,2,3-Trichloropropane	ND	C3	0.0186	1	11/14/2025 13:48	WG2639828
1,2,4-Trimethylbenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,2,3-Trimethylbenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
1,3,5-Trimethylbenzene	ND		0.00746	1	11/14/2025 13:48	WG2639828
Vinyl chloride	ND		0.00373	1	11/14/2025 13:48	WG2639828
Xylenes, Total	ND		0.00970	1	11/14/2025 13:48	WG2639828
(S) Toluene-d8	*95.2*		*75.0-131*		*11/14/2025 13:48*	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) Toluene-d8	*94.4*		*75.0-131*		*11/16/2025 21:35*	WG2641552
(S) 4-Bromofluorobenzene	*106*		*67.0-138*		*11/14/2025 13:48*	WG2639828
(S) 4-Bromofluorobenzene	*103*		*67.0-138*		*11/16/2025 21:35*	WG2641552
(S) 1,2-Dichloroethane-d4	*88.4*		*70.0-130*		*11/14/2025 13:48*	WG2639828
(S) 1,2-Dichloroethane-d4	*123*		*70.0-130*		*11/16/2025 21:35*	WG2641552

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C12-C16 Aliphatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C16-C21 Aliphatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C21-C34 Aliphatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C10-C12 Aromatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C12-C16 Aromatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
C16-C21 Aromatics	9930	J4	6080	1	11/16/2025 06:19	WG2638865
C21-C34 Aromatics	ND	J4	6080	1	11/16/2025 06:19	WG2638865
(S) o-Terphenyl	*49.2*	J2	*50.0-150*		*11/16/2025 06:19*	WG2638865
(S) 1-Chloro-octadecane	*47.0*	J2	*50.0-150*		*11/16/2025 06:19*	WG2638865
(S) 2-Fluorobiphenyl	*93.9*		*50.0-150*		*11/16/2025 06:19*	WG2638865
(S) 2-Bromonaphthalene	*95.8*		*50.0-150*		*11/16/2025 06:19*	WG2638865

Sample Narrative:

L1916517-09 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Acenaphthene	0.0208		0.00730	1	11/13/2025 18:10	WG2638729
Acenaphthylene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(a)anthracene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(a)pyrene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(b)fluoranthene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(g,h,i)perylene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Benzo(k)fluoranthene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Chrysene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Dibenz(a,h)anthracene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Fluoranthene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Fluorene	0.0266		0.00730	1	11/13/2025 18:10	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00730	1	11/13/2025 18:10	WG2638729
Naphthalene	ND		0.0243	1	11/13/2025 18:10	WG2638729
Phenanthrene	0.0858		0.00730	1	11/13/2025 18:10	WG2638729
Pyrene	0.0208		0.00730	1	11/13/2025 18:10	WG2638729
1-Methylnaphthalene	0.207		0.0243	1	11/13/2025 18:10	WG2638729
2-Methylnaphthalene	0.343		0.0243	1	11/13/2025 18:10	WG2638729
2-Chloronaphthalene	ND		0.0243	1	11/13/2025 18:10	WG2638729
(S) p-Terphenyl-d14	*83.3*		*23.0-120*		*11/13/2025 18:10*	WG2638729
(S) 2-Fluorobiphenyl	*75.4*		*34.0-125*		*11/13/2025 18:10*	WG2638729
(S) 2-Methylnaphthalene-d10	*82.9*		*50.0-150*		*11/13/2025 18:10*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	44.1		1.17	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.2		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.35	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0469	1	11/13/2025 16:30	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.86		2.35	1	11/12/2025 15:12	WG2638525
Cadmium	ND		0.587	1	11/12/2025 15:12	WG2638525
Chromium	44.1		1.17	1	11/12/2025 15:12	WG2638525
Lead	4.16		0.587	1	11/12/2025 15:12	WG2638525
Nickel	36.0		2.35	1	11/12/2025 15:12	WG2638525
Zinc	48.9		5.87	1	11/12/2025 15:12	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Unadjusted C8-C10 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.97	1	11/14/2025 13:56	WG2639771
C8-C10 Aromatics	ND		6.97	1	11/14/2025 13:56	WG2639771
(S) 2,5-Dibromotoluene(FID)	*112*		*60.0-140*		*11/14/2025 13:56*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*106*		*60.0-140*		*11/14/2025 13:56*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.140	1	11/12/2025 06:24	WG2638380
Acrylonitrile	ND		0.0175	1	11/12/2025 06:24	WG2638380
Benzene	ND		0.00140	1	11/12/2025 06:24	WG2638380
Bromobenzene	ND		0.0175	1	11/12/2025 06:24	WG2638380
Bromodichloromethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Bromoform	ND		0.0350	1	11/12/2025 06:24	WG2638380
Bromomethane	ND	C3	0.0175	1	11/12/2025 06:24	WG2638380
n-Butylbenzene	ND		0.0175	1	11/12/2025 06:24	WG2638380
sec-Butylbenzene	ND		0.0175	1	11/12/2025 06:24	WG2638380
tert-Butylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00699	1	11/12/2025 06:24	WG2638380
Chlorobenzene	ND		0.00350	1	11/12/2025 06:24	WG2638380
Chlorodibromomethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Chloroethane	ND	C3	0.0140	1	11/12/2025 06:24	WG2638380
Chloroform	ND		0.00350	1	11/12/2025 06:24	WG2638380
Chloromethane	ND		0.0175	1	11/12/2025 06:24	WG2638380
2-Chlorotoluene	ND		0.00350	1	11/12/2025 06:24	WG2638380
4-Chlorotoluene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0350	1	11/12/2025 06:24	WG2638380
1,2-Dibromoethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Dibromomethane	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2-Dichlorobenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,3-Dichlorobenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00699	1	11/12/2025 06:24	WG2638380
Dichlorodifluoromethane	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,1-Dichloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
1,2-Dichloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
1,1-Dichloroethene	ND		0.00350	1	11/12/2025 06:24	WG2638380
cis-1,2-Dichloroethene	ND		0.00350	1	11/12/2025 06:24	WG2638380
trans-1,2-Dichloroethene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2-Dichloropropane	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,1-Dichloropropene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,3-Dichloropropane	ND		0.00699	1	11/12/2025 06:24	WG2638380
cis-1,3-Dichloropropene	ND		0.00350	1	11/12/2025 06:24	WG2638380
trans-1,3-Dichloropropene	ND		0.00699	1	11/12/2025 06:24	WG2638380
2,2-Dichloropropane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Di-isopropyl ether	ND		0.00140	1	11/12/2025 06:24	WG2638380
Ethylbenzene	ND		0.00350	1	11/12/2025 06:24	WG2638380
Hexachloro-1,3-butadiene	ND		0.0350	1	11/12/2025 06:24	WG2638380
Isopropylbenzene	ND		0.00350	1	11/12/2025 06:24	WG2638380
p-Isopropyltoluene	ND		0.00699	1	11/12/2025 06:24	WG2638380
2-Butanone (MEK)	ND		0.140	1	11/12/2025 06:24	WG2638380
Methylene Chloride	ND		0.0350	1	11/12/2025 06:24	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0350	1	11/12/2025 06:24	WG2638380
Methyl tert-butyl ether	ND		0.00140	1	11/12/2025 06:24	WG2638380
Naphthalene	ND		0.0175	1	11/12/2025 06:24	WG2638380
n-Propylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
Styrene	ND		0.0175	1	11/12/2025 06:24	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00350	1	11/12/2025 06:24	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00699	1	11/12/2025 06:24	WG2638380
Tetrachloroethene	ND		0.00350	1	11/12/2025 06:24	WG2638380
Toluene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0175	1	11/12/2025 06:24	WG2638380
1,2,4-Trichlorobenzene	ND		0.0175	1	11/12/2025 06:24	WG2638380
1,1,1-Trichloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
1,1,2-Trichloroethane	ND		0.00350	1	11/12/2025 06:24	WG2638380
Trichloroethene	ND		0.00140	1	11/12/2025 06:24	WG2638380
Trichlorofluoromethane	ND		0.00559	1	11/12/2025 06:24	WG2638380
1,2,3-Trichloropropane	ND		0.0175	1	11/12/2025 06:24	WG2638380
1,2,4-Trimethylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,2,3-Trimethylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
1,3,5-Trimethylbenzene	ND		0.00699	1	11/12/2025 06:24	WG2638380
Vinyl chloride	ND	C3	0.00350	1	11/12/2025 06:24	WG2638380
Xylenes, Total	ND		0.00909	1	11/12/2025 06:24	WG2638380
(S) Toluene-d8	*118*		*75.0-131*		*11/12/2025 06:24*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*11/12/2025 06:24*	WG2638380
(S) 1,2-Dichloroethane-d4	*116*		*70.0-130*		*11/12/2025 06:24*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C12-C16 Aliphatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C16-C21 Aliphatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C21-C34 Aliphatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C10-C12 Aromatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C12-C16 Aromatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C16-C21 Aromatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
C21-C34 Aromatics	ND	J4	5870	1	11/16/2025 06:42	WG2638865
(S) o-Terphenyl	*40.4*	J2	*50.0-150*		*11/16/2025 06:42*	WG2638865
(S) 1-Chloro-octadecane	*41.5*	J2	*50.0-150*		*11/16/2025 06:42*	WG2638865
(S) 2-Fluorobiphenyl	*87.2*		*50.0-150*		*11/16/2025 06:42*	WG2638865
(S) 2-Bromonaphthalene	*91.0*		*50.0-150*		*11/16/2025 06:42*	WG2638865

Sample Narrative:

L1916517-11 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Acenaphthene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Acenaphthylene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(a)anthracene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(a)pyrene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(b)fluoranthene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(g,h,i)perylene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Benzo(k)fluoranthene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Chrysene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Dibenz(a,h)anthracene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Fluoranthene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Fluorene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Naphthalene	ND		0.0235	1	11/13/2025 18:30	WG2638729
Phenanthrene	ND		0.00704	1	11/13/2025 18:30	WG2638729
Pyrene	ND		0.00704	1	11/13/2025 18:30	WG2638729
1-Methylnaphthalene	ND		0.0235	1	11/13/2025 18:30	WG2638729
2-Methylnaphthalene	ND		0.0235	1	11/13/2025 18:30	WG2638729
2-Chloronaphthalene	ND		0.0235	1	11/13/2025 18:30	WG2638729
(S) p-Terphenyl-d14	*79.8*		*23.0-120*		*11/13/2025 18:30*	WG2638729
(S) 2-Fluorobiphenyl	*66.1*		*34.0-125*		*11/13/2025 18:30*	WG2638729
(S) 2-Methylnaphthalene-d10	*69.6*		*50.0-150*		*11/13/2025 18:30*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	40.5		1.18	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.9		1	11/12/2025 09:56	WG2638489

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.35	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.108		0.0471	1	11/13/2025 16:33	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	7.01		2.35	1	11/12/2025 15:17	WG2638525
Cadmium	ND		0.589	1	11/12/2025 15:17	WG2638525
Chromium	40.5		1.18	1	11/12/2025 15:17	WG2638525
Lead	5.22		0.589	1	11/12/2025 15:17	WG2638525
Nickel	41.6		2.35	1	11/12/2025 15:17	WG2638525
Zinc	54.6		5.89	1	11/12/2025 15:17	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Unadjusted C8-C10 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.96	1	11/14/2025 14:33	WG2639771
C8-C10 Aromatics	ND		6.96	1	11/14/2025 14:33	WG2639771
(S) 2,5-Dibromotoluene(FID)	*111*		*60.0-140*		*11/14/2025 14:33*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*105*		*60.0-140*		*11/14/2025 14:33*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.141	1	11/12/2025 06:44	WG2638380
Acrylonitrile	ND		0.0177	1	11/12/2025 06:44	WG2638380
Benzene	ND		0.00141	1	11/12/2025 06:44	WG2638380
Bromobenzene	ND		0.0177	1	11/12/2025 06:44	WG2638380
Bromodichloromethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Bromoform	ND		0.0354	1	11/12/2025 06:44	WG2638380
Bromomethane	ND	C3	0.0177	1	11/12/2025 06:44	WG2638380
n-Butylbenzene	ND		0.0177	1	11/12/2025 06:44	WG2638380
sec-Butylbenzene	ND		0.0177	1	11/12/2025 06:44	WG2638380
tert-Butylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00707	1	11/12/2025 06:44	WG2638380
Chlorobenzene	ND		0.00354	1	11/12/2025 06:44	WG2638380
Chlorodibromomethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Chloroethane	ND	C3	0.0141	1	11/12/2025 06:44	WG2638380
Chloroform	ND		0.00354	1	11/12/2025 06:44	WG2638380
Chloromethane	ND		0.0177	1	11/12/2025 06:44	WG2638380
2-Chlorotoluene	ND		0.00354	1	11/12/2025 06:44	WG2638380
4-Chlorotoluene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0354	1	11/12/2025 06:44	WG2638380
1,2-Dibromoethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Dibromomethane	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2-Dichlorobenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,3-Dichlorobenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00707	1	11/12/2025 06:44	WG2638380
Dichlorodifluoromethane	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,1-Dichloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
1,2-Dichloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
1,1-Dichloroethene	ND		0.00354	1	11/12/2025 06:44	WG2638380
cis-1,2-Dichloroethene	ND		0.00354	1	11/12/2025 06:44	WG2638380
trans-1,2-Dichloroethene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2-Dichloropropane	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,1-Dichloropropene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,3-Dichloropropane	ND		0.00707	1	11/12/2025 06:44	WG2638380
cis-1,3-Dichloropropene	ND		0.00354	1	11/12/2025 06:44	WG2638380
trans-1,3-Dichloropropene	ND		0.00707	1	11/12/2025 06:44	WG2638380
2,2-Dichloropropane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Di-isopropyl ether	ND		0.00141	1	11/12/2025 06:44	WG2638380
Ethylbenzene	ND		0.00354	1	11/12/2025 06:44	WG2638380
Hexachloro-1,3-butadiene	ND		0.0354	1	11/12/2025 06:44	WG2638380
Isopropylbenzene	ND		0.00354	1	11/12/2025 06:44	WG2638380
p-Isopropyltoluene	ND		0.00707	1	11/12/2025 06:44	WG2638380
2-Butanone (MEK)	ND		0.141	1	11/12/2025 06:44	WG2638380
Methylene Chloride	ND		0.0354	1	11/12/2025 06:44	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0354	1	11/12/2025 06:44	WG2638380
Methyl tert-butyl ether	ND		0.00141	1	11/12/2025 06:44	WG2638380
Naphthalene	ND		0.0177	1	11/12/2025 06:44	WG2638380
n-Propylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
Styrene	ND		0.0177	1	11/12/2025 06:44	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00354	1	11/12/2025 06:44	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00707	1	11/12/2025 06:44	WG2638380
Tetrachloroethene	ND		0.00354	1	11/12/2025 06:44	WG2638380
Toluene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0177	1	11/12/2025 06:44	WG2638380
1,2,4-Trichlorobenzene	ND		0.0177	1	11/12/2025 06:44	WG2638380
1,1,1-Trichloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
1,1,2-Trichloroethane	ND		0.00354	1	11/12/2025 06:44	WG2638380
Trichloroethene	ND		0.00141	1	11/12/2025 06:44	WG2638380
Trichlorofluoromethane	ND		0.00566	1	11/12/2025 06:44	WG2638380
1,2,3-Trichloropropane	ND		0.0177	1	11/12/2025 06:44	WG2638380
1,2,4-Trimethylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,2,3-Trimethylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
1,3,5-Trimethylbenzene	ND		0.00707	1	11/12/2025 06:44	WG2638380
Vinyl chloride	ND	C3	0.00354	1	11/12/2025 06:44	WG2638380
Xylenes, Total	ND		0.00919	1	11/12/2025 06:44	WG2638380
(S) Toluene-d8	*55.3*	J2	*75.0-131*		*11/12/2025 06:44*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*58.8*	J2	*67.0-138*		*11/12/2025 06:44*	WG2638380
(S) 1,2-Dichloroethane-d4	*116*		*70.0-130*		*11/12/2025 06:44*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C12-C16 Aliphatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C16-C21 Aliphatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C21-C34 Aliphatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C10-C12 Aromatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C12-C16 Aromatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C16-C21 Aromatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
C21-C34 Aromatics	ND	J4	5890	1	11/16/2025 07:05	WG2638865
(S) o-Terphenyl	*41.5*	J2	*50.0-150*		*11/16/2025 07:05*	WG2638865
(S) 1-Chloro-octadecane	*45.9*	J2	*50.0-150*		*11/16/2025 07:05*	WG2638865
(S) 2-Fluorobiphenyl	*79.3*		*50.0-150*		*11/16/2025 07:05*	WG2638865
(S) 2-Bromonaphthalene	*82.7*		*50.0-150*		*11/16/2025 07:05*	WG2638865

Sample Narrative:

L1916517-13 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Acenaphthene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Acenaphthylene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(a)anthracene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(a)pyrene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(b)fluoranthene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(g,h,i)perylene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Benzo(k)fluoranthene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Chrysene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Dibenz(a,h)anthracene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Fluoranthene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Fluorene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00706	1	11/13/2025 18:50	WG2638729
Naphthalene	ND		0.0235	1	11/13/2025 18:50	WG2638729
Phenanthrene	0.00882		0.00706	1	11/13/2025 18:50	WG2638729
Pyrene	ND		0.00706	1	11/13/2025 18:50	WG2638729
1-Methylnaphthalene	ND		0.0235	1	11/13/2025 18:50	WG2638729
2-Methylnaphthalene	ND		0.0235	1	11/13/2025 18:50	WG2638729
2-Chloronaphthalene	ND		0.0235	1	11/13/2025 18:50	WG2638729
(S) p-Terphenyl-d14	*87.8*		*23.0-120*		*11/13/2025 18:50*	WG2638729
(S) 2-Fluorobiphenyl	*81.8*		*34.0-125*		*11/13/2025 18:50*	WG2638729
(S) 2-Methylnaphthalene-d10	*85.3*		*50.0-150*		*11/13/2025 18:50*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	37.6		1.11	1	11/17/2025 15:23	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.8		1	11/12/2025 09:45	WG2638490

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.23	1	11/17/2025 15:23	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0446	1	11/13/2025 16:36	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.97		2.23	1	11/12/2025 15:19	WG2638525
Cadmium	ND		0.557	1	11/12/2025 15:19	WG2638525
Chromium	37.6		1.11	1	11/12/2025 15:19	WG2638525
Lead	4.41		0.557	1	11/12/2025 15:19	WG2638525
Nickel	32.2		2.23	1	11/12/2025 15:19	WG2638525
Zinc	55.3		5.57	1	11/12/2025 15:19	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Unadjusted C8-C10 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.27	1	11/14/2025 15:11	WG2639771
C8-C10 Aromatics	ND		6.27	1	11/14/2025 15:11	WG2639771
(S) 2,5-Dibromotoluene(FID)	*103*		*60.0-140*		*11/14/2025 15:11*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*97.7*		*60.0-140*		*11/14/2025 15:11*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.128	1	11/12/2025 07:04	WG2638380
Acrylonitrile	ND		0.0159	1	11/12/2025 07:04	WG2638380
Benzene	ND		0.00128	1	11/12/2025 07:04	WG2638380
Bromobenzene	ND		0.0159	1	11/12/2025 07:04	WG2638380
Bromodichloromethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Bromoform	ND		0.0319	1	11/12/2025 07:04	WG2638380
Bromomethane	ND	C3	0.0159	1	11/12/2025 07:04	WG2638380
n-Butylbenzene	ND		0.0159	1	11/12/2025 07:04	WG2638380
sec-Butylbenzene	ND		0.0159	1	11/12/2025 07:04	WG2638380
tert-Butylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00638	1	11/12/2025 07:04	WG2638380
Chlorobenzene	ND		0.00319	1	11/12/2025 07:04	WG2638380
Chlorodibromomethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Chloroethane	ND	C3	0.0128	1	11/12/2025 07:04	WG2638380
Chloroform	ND		0.00319	1	11/12/2025 07:04	WG2638380
Chloromethane	ND		0.0159	1	11/12/2025 07:04	WG2638380
2-Chlorotoluene	ND		0.00319	1	11/12/2025 07:04	WG2638380
4-Chlorotoluene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0319	1	11/12/2025 07:04	WG2638380
1,2-Dibromoethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Dibromomethane	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2-Dichlorobenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,3-Dichlorobenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00638	1	11/12/2025 07:04	WG2638380
Dichlorodifluoromethane	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,1-Dichloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
1,2-Dichloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
1,1-Dichloroethene	ND		0.00319	1	11/12/2025 07:04	WG2638380
cis-1,2-Dichloroethene	ND		0.00319	1	11/12/2025 07:04	WG2638380
trans-1,2-Dichloroethene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2-Dichloropropane	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,1-Dichloropropene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,3-Dichloropropane	ND		0.00638	1	11/12/2025 07:04	WG2638380
cis-1,3-Dichloropropene	ND		0.00319	1	11/12/2025 07:04	WG2638380
trans-1,3-Dichloropropene	ND		0.00638	1	11/12/2025 07:04	WG2638380
2,2-Dichloropropane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Di-isopropyl ether	ND		0.00128	1	11/12/2025 07:04	WG2638380
Ethylbenzene	ND		0.00319	1	11/12/2025 07:04	WG2638380
Hexachloro-1,3-butadiene	ND		0.0319	1	11/12/2025 07:04	WG2638380
Isopropylbenzene	ND		0.00319	1	11/12/2025 07:04	WG2638380
p-Isopropyltoluene	ND		0.00638	1	11/12/2025 07:04	WG2638380
2-Butanone (MEK)	ND		0.128	1	11/12/2025 07:04	WG2638380
Methylene Chloride	ND		0.0319	1	11/12/2025 07:04	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0319	1	11/12/2025 07:04	WG2638380
Methyl tert-butyl ether	ND		0.00128	1	11/12/2025 07:04	WG2638380
Naphthalene	ND		0.0159	1	11/12/2025 07:04	WG2638380
n-Propylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
Styrene	ND		0.0159	1	11/12/2025 07:04	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00319	1	11/12/2025 07:04	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00638	1	11/12/2025 07:04	WG2638380
Tetrachloroethene	ND		0.00319	1	11/12/2025 07:04	WG2638380
Toluene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0159	1	11/12/2025 07:04	WG2638380
1,2,4-Trichlorobenzene	ND		0.0159	1	11/12/2025 07:04	WG2638380
1,1,1-Trichloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
1,1,2-Trichloroethane	ND		0.00319	1	11/12/2025 07:04	WG2638380
Trichloroethene	ND		0.00128	1	11/12/2025 07:04	WG2638380
Trichlorofluoromethane	ND		0.00510	1	11/12/2025 07:04	WG2638380
1,2,3-Trichloropropane	ND		0.0159	1	11/12/2025 07:04	WG2638380
1,2,4-Trimethylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,2,3-Trimethylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
1,3,5-Trimethylbenzene	ND		0.00638	1	11/12/2025 07:04	WG2638380
Vinyl chloride	ND	C3	0.00319	1	11/12/2025 07:04	WG2638380
Xylenes, Total	ND		0.00829	1	11/12/2025 07:04	WG2638380
(S) Toluene-d8	*94.1*		*75.0-131*		*11/12/2025 07:04*	WG2638380

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*166*	J1	*67.0-138*		*11/12/2025 07:04*	WG2638380
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*11/12/2025 07:04*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C12-C16 Aliphatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C16-C21 Aliphatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C21-C34 Aliphatics	ND		16200	2.89	11/19/2025 18:33	WG2641917
C10-C12 Aromatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C12-C16 Aromatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C16-C21 Aromatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
C21-C34 Aromatics	ND	J4	16200	2.89	11/19/2025 18:33	WG2641917
(S) o-Terphenyl	*64.1*		*50.0-150*		*11/19/2025 18:33*	WG2641917
(S) 1-Chloro-octadecane	*50.6*		*50.0-150*		*11/19/2025 18:33*	WG2641917
(S) 2-Fluorobiphenyl	*98.7*		*50.0-150*		*11/19/2025 18:33*	WG2641917
(S) 2-Bromonaphthalene	*103*		*50.0-150*		*11/19/2025 18:33*	WG2641917

Sample Narrative:

L1916517-15 WG2641917: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Acenaphthene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Acenaphthylene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(a)anthracene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(a)pyrene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(b)fluoranthene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(g,h,i)perylene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Benzo(k)fluoranthene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Chrysene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Dibenz(a,h)anthracene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Fluoranthene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Fluorene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Naphthalene	ND		0.0223	1	11/13/2025 19:10	WG2638729
Phenanthrene	ND		0.00669	1	11/13/2025 19:10	WG2638729
Pyrene	ND		0.00669	1	11/13/2025 19:10	WG2638729
1-Methylnaphthalene	ND		0.0223	1	11/13/2025 19:10	WG2638729
2-Methylnaphthalene	ND		0.0223	1	11/13/2025 19:10	WG2638729
2-Chloronaphthalene	ND		0.0223	1	11/13/2025 19:10	WG2638729
(S) p-Terphenyl-d14	*94.0*		*23.0-120*		*11/13/2025 19:10*	WG2638729
(S) 2-Fluorobiphenyl	*91.8*		*34.0-125*		*11/13/2025 19:10*	WG2638729
(S) 2-Methylnaphthalene-d10	*95.0*		*50.0-150*		*11/13/2025 19:10*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	37.9		1.15	1	11/17/2025 15:24	WG2638525

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.7		1	11/12/2025 09:45	WG2638490

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.31	1	11/17/2025 15:24	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0461	1	11/13/2025 16:38	WG2638574

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.44		2.31	1	11/12/2025 15:20	WG2638525
Cadmium	ND		0.576	1	11/12/2025 15:20	WG2638525
Chromium	37.9		1.15	1	11/12/2025 15:20	WG2638525
Lead	4.57		0.576	1	11/12/2025 15:20	WG2638525
Nickel	36.4		2.31	1	11/12/2025 15:20	WG2638525
Zinc	52.8		5.76	1	11/12/2025 15:20	WG2638525

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Adjusted C5-C6 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Unadjusted C6-C8 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Adjusted C6-C8 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Unadjusted C8-C10 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
Adjusted C8-C10 Aliphatics	ND		6.78	1	11/14/2025 15:48	WG2639771
C8-C10 Aromatics	ND		6.78	1	11/14/2025 15:48	WG2639771
(S) 2,5-Dibromotoluene(FID)	*102*		*60.0-140*		*11/14/2025 15:48*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*96.2*		*60.0-140*		*11/14/2025 15:48*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	0.550		0.137	1	11/12/2025 07:24	WG2638380
Acrylonitrile	ND		0.0171	1	11/12/2025 07:24	WG2638380
Benzene	ND		0.00137	1	11/12/2025 07:24	WG2638380
Bromobenzene	ND		0.0171	1	11/12/2025 07:24	WG2638380
Bromodichloromethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Bromoform	ND		0.0341	1	11/12/2025 07:24	WG2638380
Bromomethane	ND	C3	0.0171	1	11/12/2025 07:24	WG2638380
n-Butylbenzene	ND		0.0171	1	11/12/2025 07:24	WG2638380
sec-Butylbenzene	ND		0.0171	1	11/12/2025 07:24	WG2638380
tert-Butylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00683	1	11/12/2025 07:24	WG2638380
Chlorobenzene	ND		0.00341	1	11/12/2025 07:24	WG2638380
Chlorodibromomethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Chloroethane	ND	C3	0.0137	1	11/12/2025 07:24	WG2638380
Chloroform	ND		0.00341	1	11/12/2025 07:24	WG2638380
Chloromethane	ND		0.0171	1	11/12/2025 07:24	WG2638380
2-Chlorotoluene	ND		0.00341	1	11/12/2025 07:24	WG2638380
4-Chlorotoluene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0341	1	11/12/2025 07:24	WG2638380
1,2-Dibromoethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Dibromomethane	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2-Dichlorobenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,3-Dichlorobenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00683	1	11/12/2025 07:24	WG2638380
Dichlorodifluoromethane	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,1-Dichloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
1,2-Dichloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
1,1-Dichloroethene	ND		0.00341	1	11/12/2025 07:24	WG2638380
cis-1,2-Dichloroethene	ND		0.00341	1	11/12/2025 07:24	WG2638380
trans-1,2-Dichloroethene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2-Dichloropropane	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,1-Dichloropropene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,3-Dichloropropane	ND		0.00683	1	11/12/2025 07:24	WG2638380
cis-1,3-Dichloropropene	ND		0.00341	1	11/12/2025 07:24	WG2638380
trans-1,3-Dichloropropene	ND		0.00683	1	11/12/2025 07:24	WG2638380
2,2-Dichloropropane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Di-isopropyl ether	ND		0.00137	1	11/12/2025 07:24	WG2638380
Ethylbenzene	ND		0.00341	1	11/12/2025 07:24	WG2638380
Hexachloro-1,3-butadiene	ND		0.0341	1	11/12/2025 07:24	WG2638380
Isopropylbenzene	ND		0.00341	1	11/12/2025 07:24	WG2638380
p-Isopropyltoluene	ND		0.00683	1	11/12/2025 07:24	WG2638380
2-Butanone (MEK)	ND		0.137	1	11/12/2025 07:24	WG2638380
Methylene Chloride	ND		0.0341	1	11/12/2025 07:24	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0341	1	11/12/2025 07:24	WG2638380
Methyl tert-butyl ether	ND		0.00137	1	11/12/2025 07:24	WG2638380
Naphthalene	ND		0.0171	1	11/12/2025 07:24	WG2638380
n-Propylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
Styrene	ND		0.0171	1	11/12/2025 07:24	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00341	1	11/12/2025 07:24	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00683	1	11/12/2025 07:24	WG2638380
Tetrachloroethene	ND		0.00341	1	11/12/2025 07:24	WG2638380
Toluene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0171	1	11/12/2025 07:24	WG2638380
1,2,4-Trichlorobenzene	ND		0.0171	1	11/12/2025 07:24	WG2638380
1,1,1-Trichloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
1,1,2-Trichloroethane	ND		0.00341	1	11/12/2025 07:24	WG2638380
Trichloroethene	ND		0.00137	1	11/12/2025 07:24	WG2638380
Trichlorofluoromethane	ND		0.00546	1	11/12/2025 07:24	WG2638380
1,2,3-Trichloropropane	ND		0.0171	1	11/12/2025 07:24	WG2638380
1,2,4-Trimethylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,2,3-Trimethylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
1,3,5-Trimethylbenzene	ND		0.00683	1	11/12/2025 07:24	WG2638380
Vinyl chloride	ND	C3	0.00341	1	11/12/2025 07:24	WG2638380
Xylenes, Total	ND		0.00887	1	11/12/2025 07:24	WG2638380
(S) Toluene-d8	*94.5*		*75.0-131*		*11/12/2025 07:24*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*166*	J1	*67.0-138*		*11/12/2025 07:24*	WG2638380
(S) 1,2-Dichloroethane-d4	*115*		*70.0-130*		*11/12/2025 07:24*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C12-C16 Aliphatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C16-C21 Aliphatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C21-C34 Aliphatics	ND		17300	2.99	11/19/2025 18:56	WG2641917
C10-C12 Aromatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C12-C16 Aromatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C16-C21 Aromatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
C21-C34 Aromatics	ND	J4	17300	2.99	11/19/2025 18:56	WG2641917
(S) o-Terphenyl	*64.4*		*50.0-150*		*11/19/2025 18:56*	WG2641917
(S) 1-Chloro-octadecane	*52.6*		*50.0-150*		*11/19/2025 18:56*	WG2641917
(S) 2-Fluorobiphenyl	*98.1*		*50.0-150*		*11/19/2025 18:56*	WG2641917
(S) 2-Bromonaphthalene	*102*		*50.0-150*		*11/19/2025 18:56*	WG2641917

Sample Narrative:

L1916517-17 WG2641917: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Acenaphthene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Acenaphthylene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(a)anthracene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(a)pyrene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(b)fluoranthene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(g,h,i)perylene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Benzo(k)fluoranthene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Chrysene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Dibenz(a,h)anthracene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Fluoranthene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Fluorene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Naphthalene	ND		0.0231	1	11/13/2025 19:30	WG2638729
Phenanthrene	ND		0.00692	1	11/13/2025 19:30	WG2638729
Pyrene	ND		0.00692	1	11/13/2025 19:30	WG2638729
1-Methylnaphthalene	ND		0.0231	1	11/13/2025 19:30	WG2638729
2-Methylnaphthalene	ND		0.0231	1	11/13/2025 19:30	WG2638729
2-Chloronaphthalene	ND		0.0231	1	11/13/2025 19:30	WG2638729
(S) p-Terphenyl-d14	*82.0*		*23.0-120*		*11/13/2025 19:30*	WG2638729
(S) 2-Fluorobiphenyl	*73.4*		*34.0-125*		*11/13/2025 19:30*	WG2638729
(S) 2-Methylnaphthalene-d10	*79.8*		*50.0-150*		*11/13/2025 19:30*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	41.3		1.23	1	11/17/2025 15:24	WG2638534

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.1		1	11/12/2025 09:45	WG2638490

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.47	1	11/17/2025 15:24	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0493	1	11/15/2025 15:44	WG2638573

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.81		2.47	1	11/12/2025 19:49	WG2638534
Cadmium	ND		0.617	1	11/12/2025 19:49	WG2638534
Chromium	41.3		1.23	1	11/12/2025 19:49	WG2638534
Lead	4.69		0.617	1	11/12/2025 19:49	WG2638534
Nickel	38.7		2.47	1	11/12/2025 19:49	WG2638534
Zinc	55.0		6.17	1	11/12/2025 19:49	WG2638534

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.67	1	11/14/2025 16:25	WG2639771
C8-C10 Aromatics	ND		7.67	1	11/14/2025 16:25	WG2639771
(S) 2,5-Dibromotoluene(FID)	*105*		*60.0-140*		*11/14/2025 16:25*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*98.2*		*60.0-140*		*11/14/2025 16:25*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.156	1	11/12/2025 07:44	WG2638380
Acrylonitrile	ND		0.0196	1	11/12/2025 07:44	WG2638380
Benzene	ND		0.00156	1	11/12/2025 07:44	WG2638380
Bromobenzene	ND		0.0196	1	11/12/2025 07:44	WG2638380
Bromodichloromethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Bromoform	ND		0.0391	1	11/12/2025 07:44	WG2638380
Bromomethane	ND	C3	0.0196	1	11/12/2025 07:44	WG2638380
n-Butylbenzene	ND		0.0196	1	11/12/2025 07:44	WG2638380
sec-Butylbenzene	ND		0.0196	1	11/12/2025 07:44	WG2638380
tert-Butylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00782	1	11/12/2025 07:44	WG2638380
Chlorobenzene	ND		0.00391	1	11/12/2025 07:44	WG2638380
Chlorodibromomethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Chloroethane	ND	C3	0.0156	1	11/12/2025 07:44	WG2638380
Chloroform	ND		0.00391	1	11/12/2025 07:44	WG2638380
Chloromethane	ND		0.0196	1	11/12/2025 07:44	WG2638380
2-Chlorotoluene	ND		0.00391	1	11/12/2025 07:44	WG2638380
4-Chlorotoluene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2-Dibromo-3-Chloropropane	ND		0.0391	1	11/12/2025 07:44	WG2638380
1,2-Dibromoethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Dibromomethane	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2-Dichlorobenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,3-Dichlorobenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,4-Dichlorobenzene	ND	C3	0.00782	1	11/12/2025 07:44	WG2638380
Dichlorodifluoromethane	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,1-Dichloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
1,2-Dichloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
1,1-Dichloroethene	ND		0.00391	1	11/12/2025 07:44	WG2638380
cis-1,2-Dichloroethene	ND		0.00391	1	11/12/2025 07:44	WG2638380
trans-1,2-Dichloroethene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2-Dichloropropane	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,1-Dichloropropene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,3-Dichloropropane	ND		0.00782	1	11/12/2025 07:44	WG2638380
cis-1,3-Dichloropropene	ND		0.00391	1	11/12/2025 07:44	WG2638380
trans-1,3-Dichloropropene	ND		0.00782	1	11/12/2025 07:44	WG2638380
2,2-Dichloropropane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Di-isopropyl ether	ND		0.00156	1	11/12/2025 07:44	WG2638380
Ethylbenzene	ND		0.00391	1	11/12/2025 07:44	WG2638380
Hexachloro-1,3-butadiene	ND		0.0391	1	11/12/2025 07:44	WG2638380
Isopropylbenzene	ND		0.00391	1	11/12/2025 07:44	WG2638380
p-Isopropyltoluene	ND		0.00782	1	11/12/2025 07:44	WG2638380
2-Butanone (MEK)	ND		0.156	1	11/12/2025 07:44	WG2638380
Methylene Chloride	ND		0.0391	1	11/12/2025 07:44	WG2638380
4-Methyl-2-pentanone (MIBK)	ND		0.0391	1	11/12/2025 07:44	WG2638380
Methyl tert-butyl ether	ND		0.00156	1	11/12/2025 07:44	WG2638380
Naphthalene	ND		0.0196	1	11/12/2025 07:44	WG2638380
n-Propylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
Styrene	ND		0.0196	1	11/12/2025 07:44	WG2638380
1,1,1,2-Tetrachloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
1,1,2,2-Tetrachloroethane	ND	C3	0.00391	1	11/12/2025 07:44	WG2638380
1,1,2-Trichlorotrifluoroethane	ND		0.00782	1	11/12/2025 07:44	WG2638380
Tetrachloroethene	ND		0.00391	1	11/12/2025 07:44	WG2638380
Toluene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2,3-Trichlorobenzene	ND	C3	0.0196	1	11/12/2025 07:44	WG2638380
1,2,4-Trichlorobenzene	ND		0.0196	1	11/12/2025 07:44	WG2638380
1,1,1-Trichloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
1,1,2-Trichloroethane	ND		0.00391	1	11/12/2025 07:44	WG2638380
Trichloroethene	ND		0.00156	1	11/12/2025 07:44	WG2638380
Trichlorofluoromethane	ND		0.00626	1	11/12/2025 07:44	WG2638380
1,2,3-Trichloropropane	ND		0.0196	1	11/12/2025 07:44	WG2638380
1,2,4-Trimethylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,2,3-Trimethylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
1,3,5-Trimethylbenzene	ND		0.00782	1	11/12/2025 07:44	WG2638380
Vinyl chloride	ND	C3	0.00391	1	11/12/2025 07:44	WG2638380
Xylenes, Total	ND		0.0102	1	11/12/2025 07:44	WG2638380
(S) Toluene-d8	*95.8*		*75.0-131*		*11/12/2025 07:44*	WG2638380

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*11/12/2025 07:44*	WG2638380
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*11/12/2025 07:44*	WG2638380

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C12-C16 Aliphatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C16-C21 Aliphatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C21-C34 Aliphatics	ND		18500	2.99	11/19/2025 19:19	WG2641917
C10-C12 Aromatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C12-C16 Aromatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C16-C21 Aromatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
C21-C34 Aromatics	ND	J4	18500	2.99	11/19/2025 19:19	WG2641917
(S) o-Terphenyl	*66.3*		*50.0-150*		*11/19/2025 19:19*	WG2641917
(S) 1-Chloro-octadecane	*54.3*		*50.0-150*		*11/19/2025 19:19*	WG2641917
(S) 2-Fluorobiphenyl	*96.3*		*50.0-150*		*11/19/2025 19:19*	WG2641917
(S) 2-Bromonaphthalene	*100*		*50.0-150*		*11/19/2025 19:19*	WG2641917

Sample Narrative:

L1916517-19 WG2641917: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Acenaphthene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Acenaphthylene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(a)anthracene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(a)pyrene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(b)fluoranthene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(g,h,i)perylene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Benzo(k)fluoranthene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Chrysene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Dibenz(a,h)anthracene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Fluoranthene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Fluorene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Naphthalene	ND		0.0247	1	11/13/2025 19:50	WG2638729
Phenanthrene	ND		0.00740	1	11/13/2025 19:50	WG2638729
Pyrene	ND		0.00740	1	11/13/2025 19:50	WG2638729
1-Methylnaphthalene	ND		0.0247	1	11/13/2025 19:50	WG2638729
2-Methylnaphthalene	ND		0.0247	1	11/13/2025 19:50	WG2638729
2-Chloronaphthalene	ND		0.0247	1	11/13/2025 19:50	WG2638729
(S) p-Terphenyl-d14	*77.2*		*23.0-120*		*11/13/2025 19:50*	WG2638729
(S) 2-Fluorobiphenyl	*71.9*		*34.0-125*		*11/13/2025 19:50*	WG2638729
(S) 2-Methylnaphthalene-d10	*73.6*		*50.0-150*		*11/13/2025 19:50*	WG2638729

Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	72.2		1.21	1	11/17/2025 15:24	WG2638534

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	83.0		1	11/12/2025 09:45	WG2638490

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.41	1	11/17/2025 15:24	WG2638979

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0934		0.0482	1	11/15/2025 15:47	WG2638573

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.60		2.41	1	11/12/2025 18:46	WG2638534
Cadmium	ND		0.603	1	11/12/2025 18:46	WG2638534
Chromium	74.4		1.21	1	11/12/2025 18:46	WG2638534
Lead	3.38		0.603	1	11/12/2025 18:46	WG2638534
Nickel	26.9		2.41	1	11/12/2025 18:46	WG2638534
Zinc	31.2		6.03	1	11/12/2025 18:46	WG2638534

Volatile Petroleum Hydrocarbons by Method VPHWA

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Unadjusted C5-C6 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Adjusted C5-C6 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Unadjusted C6-C8 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Adjusted C6-C8 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Unadjusted C8-C10 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
Adjusted C8-C10 Aliphatics	ND		7.26	1	11/14/2025 17:02	WG2639771
C8-C10 Aromatics	ND		7.26	1	11/14/2025 17:02	WG2639771
(S) 2,5-Dibromotoluene(FID)	*99.1*		*60.0-140*		*11/14/2025 17:02*	WG2639771
(S) 2,5-Dibromotoluene(PID)	*93.2*		*60.0-140*		*11/14/2025 17:02*	WG2639771

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.145	1	11/14/2025 14:07	WG2639828
Acrylonitrile	ND		0.0182	1	11/14/2025 14:07	WG2639828
Benzene	ND		0.00145	1	11/14/2025 14:07	WG2639828
Bromobenzene	ND	C3	0.0182	1	11/14/2025 14:07	WG2639828
Bromodichloromethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Bromoform	ND		0.0363	1	11/14/2025 14:07	WG2639828
Bromomethane	ND		0.0182	1	11/14/2025 14:07	WG2639828
n-Butylbenzene	ND		0.0182	1	11/14/2025 14:07	WG2639828
sec-Butylbenzene	ND		0.0182	1	11/14/2025 14:07	WG2639828
tert-Butylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Carbon tetrachloride	ND		0.00726	1	11/14/2025 14:07	WG2639828
Chlorobenzene	ND		0.00363	1	11/14/2025 14:07	WG2639828
Chlorodibromomethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Chloroethane	ND		0.0145	1	11/14/2025 14:07	WG2639828
Chloroform	ND		0.00363	1	11/14/2025 14:07	WG2639828
Chloromethane	ND		0.0182	1	11/14/2025 14:07	WG2639828
2-Chlorotoluene	ND		0.00363	1	11/14/2025 14:07	WG2639828
4-Chlorotoluene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2-Dibromo-3-Chloropropane	ND		0.0363	1	11/14/2025 14:07	WG2639828
1,2-Dibromoethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Dibromomethane	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2-Dichlorobenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,3-Dichlorobenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,4-Dichlorobenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
Dichlorodifluoromethane	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,1-Dichloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
1,2-Dichloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
1,1-Dichloroethene	ND		0.00363	1	11/14/2025 14:07	WG2639828
cis-1,2-Dichloroethene	ND		0.00363	1	11/14/2025 14:07	WG2639828
trans-1,2-Dichloroethene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2-Dichloropropane	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,1-Dichloropropene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,3-Dichloropropane	ND		0.00726	1	11/14/2025 14:07	WG2639828
cis-1,3-Dichloropropene	ND		0.00363	1	11/14/2025 14:07	WG2639828
trans-1,3-Dichloropropene	ND		0.00726	1	11/14/2025 14:07	WG2639828
2,2-Dichloropropane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Di-isopropyl ether	ND		0.00145	1	11/14/2025 14:07	WG2639828
Ethylbenzene	ND		0.00363	1	11/14/2025 14:07	WG2639828
Hexachloro-1,3-butadiene	ND		0.0363	1	11/14/2025 14:07	WG2639828
Isopropylbenzene	ND		0.00363	1	11/14/2025 14:07	WG2639828
p-Isopropyltoluene	ND		0.00726	1	11/14/2025 14:07	WG2639828
2-Butanone (MEK)	ND		0.145	1	11/14/2025 14:07	WG2639828
Methylene Chloride	ND		0.0363	1	11/14/2025 14:07	WG2639828
4-Methyl-2-pentanone (MIBK)	ND		0.0363	1	11/14/2025 14:07	WG2639828
Methyl tert-butyl ether	ND		0.00145	1	11/14/2025 14:07	WG2639828
Naphthalene	ND		0.0182	1	11/14/2025 14:07	WG2639828
n-Propylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
Styrene	ND		0.0182	1	11/14/2025 14:07	WG2639828
1,1,1,2-Tetrachloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
1,1,2,2-Tetrachloroethane	ND	C3	0.00363	1	11/14/2025 14:07	WG2639828
1,1,2-Trichlorotrifluoroethane	ND		0.00726	1	11/14/2025 14:07	WG2639828
Tetrachloroethene	ND		0.00363	1	11/14/2025 14:07	WG2639828
Toluene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2,3-Trichlorobenzene	ND		0.0182	1	11/14/2025 14:07	WG2639828
1,2,4-Trichlorobenzene	ND		0.0182	1	11/14/2025 14:07	WG2639828
1,1,1-Trichloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
1,1,2-Trichloroethane	ND		0.00363	1	11/14/2025 14:07	WG2639828
Trichloroethene	ND		0.00145	1	11/14/2025 14:07	WG2639828
Trichlorofluoromethane	ND		0.00581	1	11/14/2025 14:07	WG2639828
1,2,3-Trichloropropane	ND	C3	0.0182	1	11/14/2025 14:07	WG2639828
1,2,4-Trimethylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,2,3-Trimethylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
1,3,5-Trimethylbenzene	ND		0.00726	1	11/14/2025 14:07	WG2639828
Vinyl chloride	ND		0.00363	1	11/14/2025 14:07	WG2639828
Xylenes, Total	ND		0.00944	1	11/14/2025 14:07	WG2639828
(S) Toluene-d8	*94.6*		*75.0-131*		*11/14/2025 14:07*	WG2639828

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*11/14/2025 14:07*	WG2639828
(S) 1,2-Dichloroethane-d4	*89.4*		*70.0-130*		*11/14/2025 14:07*	WG2639828

TPH by Method EPH

Analyte	Result (dry) ug/kg	Qualifier	RDL (dry) ug/kg	Dilution	Analysis date / time	Batch
C10-C12 Aliphatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C12-C16 Aliphatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C16-C21 Aliphatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C21-C34 Aliphatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C10-C12 Aromatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C12-C16 Aromatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C16-C21 Aromatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
C21-C34 Aromatics	ND	J4	6030	1	11/16/2025 08:36	WG2638865
(S) o-Terphenyl	*59.4*		*50.0-150*		*11/16/2025 08:36*	WG2638865
(S) 1-Chloro-octadecane	*57.9*		*50.0-150*		*11/16/2025 08:36*	WG2638865
(S) 2-Fluorobiphenyl	*89.3*		*50.0-150*		*11/16/2025 08:36*	WG2638865
(S) 2-Bromonaphthalene	*93.0*		*50.0-150*		*11/16/2025 08:36*	WG2638865

Sample Narrative:

L1916517-21 WG2638865: Recoveries are within method-defined limits.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Acenaphthene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Acenaphthylene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(a)anthracene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(a)pyrene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(b)fluoranthene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(g,h,i)perylene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Benzo(k)fluoranthene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Chrysene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Dibenz(a,h)anthracene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Fluoranthene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Fluorene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Indeno(1,2,3-cd)pyrene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Naphthalene	ND		0.0241	1	11/13/2025 20:10	WG2638729
Phenanthrene	ND		0.00723	1	11/13/2025 20:10	WG2638729
Pyrene	ND		0.00723	1	11/13/2025 20:10	WG2638729
1-Methylnaphthalene	ND		0.0241	1	11/13/2025 20:10	WG2638729
2-Methylnaphthalene	ND		0.0241	1	11/13/2025 20:10	WG2638729
2-Chloronaphthalene	ND		0.0241	1	11/13/2025 20:10	WG2638729
(S) p-Terphenyl-d14	*87.1*		*23.0-120*		*11/13/2025 20:10*	WG2638729
(S) 2-Fluorobiphenyl	*86.7*		*34.0-125*		*11/13/2025 20:10*	WG2638729
(S) 2-Methylnaphthalene-d10	*87.2*		*50.0-150*		*11/13/2025 20:10*	WG2638729

Method Blank (MB)

(MB) R4300099-1 11/12/25 09:56

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1916517-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1916517-03 11/12/25 09:56 • (DUP) R4300099-3 11/12/25 09:56

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.1	84.5	1	0.396		10

Laboratory Control Sample (LCS)

(LCS) R4300099-2 11/12/25 09:56

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	90.0-110	

Method Blank (MB)

(MB) R4300096-1 11/12/25 09:45

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1916517-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1916517-21 11/12/25 09:45 • (DUP) R4300096-3 11/12/25 09:45

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.0	83.9	1	1.10		10

Laboratory Control Sample (LCS)

(LCS) R4300096-2 11/12/25 09:45

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	90.0-110	

Method Blank (MB)

(MB) R4302086-1 11/17/25 15:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.751	2.00

L1916334-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1916334-02 11/17/25 15:20 • (DUP) R4302086-3 11/17/25 15:20

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	ND	ND	1	0.000		20

L1916517-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1916517-21 11/17/25 15:24 • (DUP) R4302086-7 11/17/25 15:38

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4302086-2 11/17/25 15:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	23.8	99.3	73.0-125	

L1916334-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916334-04 11/17/25 15:20 • (MS) R4302086-5 11/17/25 15:21 • (MSD) R4302086-6 11/17/25 15:21

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	24.2	ND	24.1	23.9	99.8	98.8	1	85.0-115			1.02	20

L1916334-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1916334-04 11/17/25 15:20 • (MS) R4302086-8 11/17/25 15:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	793	ND	848	107	50	85.0-115	

Method Blank (MB)

(MB) R4301552-1 11/15/25 14:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0206	0.0400

Laboratory Control Sample (LCS)

(LCS) R4301552-2 11/15/25 15:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.549	110	80.0-120	

L1916524-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916524-03 11/15/25 15:04 • (MS) R4301552-4 11/15/25 15:09 • (MSD) R4301552-5 11/15/25 15:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	ND	0.555	0.595	104	112	1	75.0-125			7.05	20

Method Blank (MB)

(MB) R4300812-1 11/13/25 15:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0206	0.0400

Laboratory Control Sample (LCS)

(LCS) R4300812-2 11/13/25 15:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.513	103	80.0-120	

L1915977-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1915977-04 11/13/25 15:45 • (MS) R4300812-4 11/13/25 15:50 • (MSD) R4300812-5 11/13/25 15:53

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.501	ND	0.528	0.515	100	97.8	1	75.0-125			2.40	20

Method Blank (MB)

(MB) R4300186-1 11/12/25 14:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.837	2.00
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Zinc	U		0.974	5.00

Laboratory Control Sample (LCS)

(LCS) R4300186-2 11/12/25 14:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	87.6	87.6	80.0-120	
Cadmium	100	87.7	87.7	80.0-120	
Chromium	100	91.6	91.6	80.0-120	
Lead	100	88.8	88.8	80.0-120	
Nickel	100	86.0	86.0	80.0-120	
Zinc	100	89.0	89.0	80.0-120	

L1916166-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916166-02 11/12/25 14:40 • (MS) R4300186-5 11/12/25 14:45 • (MSD) R4300186-6 11/12/25 14:47

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	121	45.4	173	181	105	112	1	75.0-125			4.60	20
Cadmium	121	ND	111	108	91.5	89.0	1	75.0-125			2.71	20
Chromium	121	29.8	138	137	89.6	88.3	1	75.0-125			1.10	20
Lead	121	84.9	213	177	105	76.1	1	75.0-125			18.2	20
Nickel	121	30.4	153	135	101	85.9	1	75.0-125			13.0	20
Zinc	121	260	384	282	102	17.8	1	75.0-125		J3 J6	30.7	20

Method Blank (MB)

(MB) R4300262-1 11/12/25 19:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.837	2.00
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Zinc	U		0.974	5.00

Laboratory Control Sample (LCS)

(LCS) R4300262-2 11/12/25 19:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	98.9	98.9	80.0-120	
Cadmium	100	99.1	99.1	80.0-120	
Chromium	100	103	103	80.0-120	
Lead	100	99.9	99.9	80.0-120	
Nickel	100	96.5	96.5	80.0-120	
Zinc	100	99.4	99.4	80.0-120	

L1916493-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916493-01 11/12/25 19:58 • (MS) R4300262-5 11/12/25 20:03 • (MSD) R4300262-6 11/12/25 20:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	108	3.34	99.1	103	88.5	92.6	1	75.0-125			4.30	20
Cadmium	108	ND	96.4	100	89.2	92.8	1	75.0-125			3.94	20
Chromium	108	28.3	130	132	93.7	95.7	1	75.0-125			1.67	20
Lead	108	3.86	104	108	92.5	96.6	1	75.0-125			4.13	20
Nickel	108	30.3	130	132	91.8	94.0	1	75.0-125			1.82	20
Zinc	108	34.0	133	134	91.7	92.6	1	75.0-125			0.720	20

Method Blank (MB)

(MB) R4303833-3 11/14/25 09:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Unadjusted C5-C6 Aliphatics	U		1.67	5.00
Adjusted C5-C6 Aliphatics	U		1.67	5.00
Unadjusted C6-C8 Aliphatics	U		0.455	5.00
Adjusted C6-C8 Aliphatics	U		0.455	5.00
Unadjusted C8-C10 Aliphatics	U		1.67	5.00
Adjusted C8-C10 Aliphatics	U		1.67	5.00
C8-C10 Aromatics	U		0.555	5.00
(S) 2,5-Dibromotoluene(FID)	*95.3*			*60.0-140*
(S) 2,5-Dibromotoluene(PID)	*92.2*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4303833-1 11/14/25 07:08 • (LCSD) R4303833-2 11/14/25 07:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Unadjusted C5-C6 Aliphatics	30.0	27.8	28.0	92.7	93.3	70.0-130			0.717	25
Adjusted C5-C6 Aliphatics	30.0	27.8	28.0	92.7	93.3	70.0-130			0.717	25
Unadjusted C6-C8 Aliphatics	20.0	19.5	19.6	97.5	98.0	70.0-130			0.512	25
Adjusted C6-C8 Aliphatics	20.0	19.5	19.6	97.5	98.0	70.0-130			0.512	25
Unadjusted C8-C10 Aliphatics	60.0	59.7	59.8	99.5	99.7	70.0-130			0.167	25
Adjusted C8-C10 Aliphatics	60.0	59.7	59.8	99.5	99.7	70.0-130			0.167	25
C8-C10 Aromatics	50.0	45.7	45.8	91.4	91.6	70.0-130			0.219	25
(S) 2,5-Dibromotoluene(FID)				*103*	*103*	*60.0-140*				
(S) 2,5-Dibromotoluene(PID)				*99.0*	*99.3*	*60.0-140*				

Method Blank (MB)

(MB) R4305118-3 11/21/25 12:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Unadjusted C5-C6 Aliphatics	U		1.67	5.00
Adjusted C5-C6 Aliphatics	U		1.67	5.00
Unadjusted C6-C8 Aliphatics	U		0.455	5.00
Adjusted C6-C8 Aliphatics	U		0.455	5.00
Unadjusted C8-C10 Aliphatics	U		1.67	5.00
Adjusted C8-C10 Aliphatics	U		1.67	5.00
C8-C10 Aromatics	U		0.555	5.00
(S) 2,5-Dibromotoluene(FID)	*95.7*			*60.0-140*
(S) 2,5-Dibromotoluene(PID)	*90.6*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4305118-1 11/21/25 09:54 • (LCSD) R4305118-2 11/21/25 10:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Unadjusted C5-C6 Aliphatics	30.0	34.7	36.2	116	121	70.0-130			4.23	25
Adjusted C5-C6 Aliphatics	30.0	34.7	36.2	116	121	70.0-130			4.23	25
Unadjusted C6-C8 Aliphatics	20.0	23.1	23.1	116	116	70.0-130			0.000	25
Adjusted C6-C8 Aliphatics	20.0	23.1	23.1	116	116	70.0-130			0.000	25
Unadjusted C8-C10 Aliphatics	60.0	67.8	66.6	113	111	70.0-130			1.79	25
Adjusted C8-C10 Aliphatics	60.0	67.8	66.6	113	111	70.0-130			1.79	25
C8-C10 Aromatics	50.0	50.6	49.6	101	99.2	70.0-130			2.00	25
(S) 2,5-Dibromotoluene(FID)				*107*	*106*	*60.0-140*				
(S) 2,5-Dibromotoluene(PID)				*101*	*99.7*	*60.0-140*				

L1918248-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1918248-01 11/21/25 16:10 • (MS) R4305118-4 11/21/25 18:01 • (MSD) R4305118-5 11/21/25 18:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Unadjusted C5-C6 Aliphatics	82.9	ND	97.3	92.0	117	111	1	70.0-130			5.55	25
Adjusted C5-C6 Aliphatics	82.9	ND	97.3	92.0	117	111	1	70.0-130			5.55	25
Unadjusted C6-C8 Aliphatics	55.3	ND	60.5	57.5	106	101	1	70.0-130			5.15	25
Adjusted C6-C8 Aliphatics	55.3	ND	60.5	57.5	106	101	1	70.0-130			5.15	25
Unadjusted C8-C10 Aliphatics	166	ND	181	173	109	104	1	70.0-130			4.37	25
Adjusted C8-C10 Aliphatics	166	ND	181	173	109	104	1	70.0-130			4.37	25
C8-C10 Aromatics	138	ND	133	128	95.1	91.3	1	70.0-130			4.03	25
(S) 2,5-Dibromotoluene(FID)					*106*	*107*		*60.0-140*				

L1918248-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1918248-01 11/21/25 16:10 • (MS) R4305118-4 11/21/25 18:01 • (MSD) R4305118-5 11/21/25 18:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 2,5-Dibromotoluene(PID)					*97.0*	*97.6*		*60.0-140*				

Method Blank (MB)

(MB) R4300575-3 11/11/25 23:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0697	0.100
Acrylonitrile	U		0.00803	0.0125
Benzene	U		0.000711	0.00100
Bromobenzene	U		0.00390	0.0125
Bromodichloromethane	U		0.00117	0.00250
Bromoform	U		0.00992	0.0250
Bromomethane	0.0112	J	0.0101	0.0125
n-Butylbenzene	U		0.00625	0.0125
sec-Butylbenzene	U		0.00383	0.0125
tert-Butylbenzene	U		0.00189	0.00500
Carbon tetrachloride	U		0.00301	0.00500
Chlorobenzene	U		0.000858	0.00250
Chlorodibromomethane	U		0.00161	0.00250
Chloroethane	U		0.00569	0.0100
Chloroform	U		0.00162	0.00250
Chloromethane	U		0.00850	0.0125
2-Chlorotoluene	U		0.00129	0.00250
4-Chlorotoluene	U		0.00154	0.00500
1,2-Dibromo-3-Chloropropane	U		0.0107	0.0250
1,2-Dibromoethane	U		0.00126	0.00250
Dibromomethane	U		0.00178	0.00500
1,2-Dichlorobenzene	U		0.00156	0.00500
1,3-Dichlorobenzene	U		0.00165	0.00500
1,4-Dichlorobenzene	U		0.00175	0.00500
Dichlorodifluoromethane	U		0.00435	0.00500
1,1-Dichloroethane	U		0.00101	0.00250
1,2-Dichloroethane	U		0.00146	0.00250
1,1-Dichloroethene	U		0.00153	0.00250
cis-1,2-Dichloroethene	U		0.00129	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00192	0.00500
1,1-Dichloropropene	U		0.00138	0.00500
1,3-Dichloropropane	U		0.00162	0.00500
cis-1,3-Dichloropropene	U		0.00105	0.00250
trans-1,3-Dichloropropene	U		0.00105	0.00500
2,2-Dichloropropane	U		0.00202	0.00250
Di-isopropyl ether	U		0.000769	0.00100
Ethylbenzene	U		0.000987	0.00250
Hexachloro-1,3-butadiene	U		0.0104	0.0250
Isopropylbenzene	U		0.00101	0.00250

Method Blank (MB)

(MB) R4300575-3 11/11/25 23:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00213	0.00500
2-Butanone (MEK)	U		0.0887	0.100
Methylene Chloride	U		0.0110	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00992	0.0250
Methyl tert-butyl ether	U		0.000773	0.00100
Naphthalene	U		0.00763	0.0125
n-Propylbenzene	U		0.00169	0.00500
Styrene	U		0.00445	0.0125
1,1,1,2-Tetrachloroethane	U		0.00130	0.00250
1,1,2,2-Tetrachloroethane	U		0.00116	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.00281	0.00500
Tetrachloroethene	U		0.00152	0.00250
Toluene	U		0.00289	0.00500
1,2,3-Trichlorobenzene	U		0.00699	0.0125
1,2,4-Trichlorobenzene	U		0.00542	0.0125
1,1,1-Trichloroethane	U		0.00145	0.00250
1,1,2-Trichloroethane	U		0.00134	0.00250
Trichloroethene	U		0.000891	0.00100
Trichlorofluoromethane	U		0.00261	0.00400
1,2,3-Trichloropropane	U		0.00612	0.0125
1,2,4-Trimethylbenzene	U		0.00238	0.00500
1,2,3-Trimethylbenzene	U		0.00182	0.00500
1,3,5-Trimethylbenzene	U		0.00228	0.00500
Vinyl chloride	U		0.00201	0.00250
Xylenes, Total	U		0.00280	0.00650
(S) Toluene-d8	*92.8*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*127*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300575-1 11/11/25 20:58 • (LCSD) R4300575-2 11/11/25 21:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	1.25	1.49	1.47	119	118	10.0-160			1.35	31
Acrylonitrile	1.25	1.37	1.34	110	107	45.0-153			2.21	22
Benzene	0.250	0.219	0.211	87.6	84.4	70.0-123			3.72	20
Bromobenzene	0.250	0.232	0.228	92.8	91.2	73.0-121			1.74	20
Bromodichloromethane	0.250	0.261	0.259	104	104	73.0-121			0.769	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300575-1 11/11/25 20:58 • (LCSD) R4300575-2 11/11/25 21:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.250	0.232	0.227	92.8	90.8	64.0-132			2.18	20
Bromomethane	0.250	0.180	0.186	72.0	74.4	56.0-147			3.28	20
n-Butylbenzene	0.250	0.208	0.213	83.2	85.2	68.0-135			2.38	20
sec-Butylbenzene	0.250	0.211	0.206	84.4	82.4	74.0-130			2.40	20
tert-Butylbenzene	0.250	0.226	0.220	90.4	88.0	75.0-127			2.69	20
Carbon tetrachloride	0.250	0.297	0.282	119	113	66.0-128			5.18	20
Chlorobenzene	0.250	0.212	0.210	84.8	84.0	76.0-128			0.948	20
Chlorodibromomethane	0.250	0.234	0.229	93.6	91.6	74.0-127			2.16	20
Chloroethane	0.250	0.185	0.180	74.0	72.0	61.0-134			2.74	20
Chloroform	0.250	0.267	0.263	107	105	72.0-123			1.51	20
Chloromethane	0.250	0.302	0.289	121	116	51.0-138			4.40	20
2-Chlorotoluene	0.250	0.228	0.223	91.2	89.2	75.0-124			2.22	20
4-Chlorotoluene	0.250	0.224	0.221	89.6	88.4	75.0-124			1.35	20
1,2-Dibromo-3-Chloropropane	0.250	0.223	0.214	89.2	85.6	59.0-130			4.12	20
1,2-Dibromoethane	0.250	0.225	0.219	90.0	87.6	74.0-128			2.70	20
Dibromomethane	0.250	0.243	0.242	97.2	96.8	75.0-122			0.412	20
1,2-Dichlorobenzene	0.250	0.218	0.210	87.2	84.0	76.0-124			3.74	20
1,3-Dichlorobenzene	0.250	0.207	0.208	82.8	83.2	76.0-125			0.482	20
1,4-Dichlorobenzene	0.250	0.193	0.206	77.2	82.4	77.0-121			6.52	20
Dichlorodifluoromethane	0.250	0.311	0.307	124	123	43.0-156			1.29	20
1,1-Dichloroethane	0.250	0.253	0.244	101	97.6	70.0-127			3.62	20
1,2-Dichloroethane	0.250	0.284	0.269	114	108	65.0-131			5.42	20
1,1-Dichloroethene	0.250	0.268	0.264	107	106	65.0-131			1.50	20
cis-1,2-Dichloroethene	0.250	0.221	0.222	88.4	88.8	73.0-125			0.451	20
trans-1,2-Dichloroethene	0.250	0.223	0.218	89.2	87.2	71.0-125			2.27	20
1,2-Dichloropropane	0.250	0.236	0.222	94.4	88.8	74.0-125			6.11	20
1,1-Dichloropropene	0.250	0.241	0.238	96.4	95.2	73.0-125			1.25	20
1,3-Dichloropropane	0.250	0.222	0.221	88.8	88.4	80.0-125			0.451	20
cis-1,3-Dichloropropene	0.250	0.250	0.242	100	96.8	76.0-127			3.25	20
trans-1,3-Dichloropropene	0.250	0.250	0.245	100	98.0	73.0-127			2.02	20
2,2-Dichloropropane	0.250	0.266	0.257	106	103	59.0-135			3.44	20
Di-isopropyl ether	0.250	0.264	0.259	106	104	60.0-136			1.91	20
Ethylbenzene	0.250	0.205	0.202	82.0	80.8	74.0-126			1.47	20
Hexachloro-1,3-butadiene	0.250	0.231	0.230	92.4	92.0	57.0-150			0.434	20
Isopropylbenzene	0.250	0.212	0.210	84.8	84.0	72.0-127			0.948	20
p-Isopropyltoluene	0.250	0.218	0.219	87.2	87.6	72.0-133			0.458	20
2-Butanone (MEK)	1.25	1.73	1.71	138	137	30.0-160			1.16	24
Methylene Chloride	0.250	0.232	0.220	92.8	88.0	68.0-123			5.31	20
4-Methyl-2-pentanone (MIBK)	1.25	1.23	1.20	98.4	96.0	56.0-143			2.47	20
Methyl tert-butyl ether	0.250	0.284	0.281	114	112	66.0-132			1.06	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4300575-1 11/11/25 20:58 • (LCSD) R4300575-2 11/11/25 21:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.250	0.213	0.215	85.2	86.0	59.0-130			0.935	20
n-Propylbenzene	0.250	0.216	0.211	86.4	84.4	74.0-126			2.34	20
Styrene	0.250	0.218	0.211	87.2	84.4	72.0-127			3.26	20
1,1,1,2-Tetrachloroethane	0.250	0.232	0.229	92.8	91.6	74.0-129			1.30	20
1,1,2,2-Tetrachloroethane	0.250	0.192	0.190	76.8	76.0	68.0-128			1.05	20
1,1,2-Trichlorotrifluoroethane	0.250	0.249	0.242	99.6	96.8	61.0-139			2.85	20
Tetrachloroethene	0.250	0.227	0.216	90.8	86.4	70.0-136			4.97	20
Toluene	0.250	0.210	0.208	84.0	83.2	75.0-121			0.957	20
1,2,3-Trichlorobenzene	0.250	0.192	0.198	76.8	79.2	59.0-139			3.08	20
1,2,4-Trichlorobenzene	0.250	0.212	0.207	84.8	82.8	62.0-137			2.39	20
1,1,1-Trichloroethane	0.250	0.295	0.286	118	114	69.0-126			3.10	20
1,1,2-Trichloroethane	0.250	0.215	0.197	86.0	78.8	78.0-123			8.74	20
Trichloroethene	0.250	0.259	0.247	104	98.8	76.0-126			4.74	20
Trichlorofluoromethane	0.250	0.306	0.302	122	121	61.0-142			1.32	20
1,2,3-Trichloropropane	0.250	0.265	0.260	106	104	67.0-129			1.90	20
1,2,4-Trimethylbenzene	0.250	0.233	0.227	93.2	90.8	70.0-126			2.61	20
1,2,3-Trimethylbenzene	0.250	0.224	0.220	89.6	88.0	74.0-124			1.80	20
1,3,5-Trimethylbenzene	0.250	0.229	0.230	91.6	92.0	73.0-127			0.436	20
Vinyl chloride	0.250	0.187	0.178	74.8	71.2	63.0-134			4.93	20
Xylenes, Total	0.750	0.625	0.625	83.3	83.3	72.0-127			0.000	20
(S) Toluene-d8				*92.5*	*92.4*	*75.0-131*				
(S) 4-Bromofluorobenzene				*98.2*	*98.0*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*130*	*129*	*70.0-130*				

L1916517-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916517-05 11/12/25 08:23 • (MS) R4300575-4 11/12/25 08:43 • (MSD) R4300575-5 11/12/25 09:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	46.7	ND	43.5	66.2	93.1	142	40	10.0-160		J3	41.4	40
Acrylonitrile	46.7	ND	38.4	55.3	82.3	118	40	10.0-160			35.9	40
Benzene	9.34	0.0561	10.3	9.30	110	99.0	40	10.0-149			10.3	37
Bromobenzene	9.34	ND	9.12	13.5	97.6	144	40	10.0-156		J3	38.6	38
Bromodichloromethane	9.34	ND	10.4	10.3	111	110	40	10.0-143			1.29	37
Bromoform	9.34	ND	6.19	13.6	66.3	146	40	10.0-146		J3	74.9	36
Bromomethane	9.34	ND	6.46	14.4	69.1	154	40	10.0-149		J3 J5	76.2	38
n-Butylbenzene	9.34	0.912	9.20	11.5	88.7	113	40	10.0-160			22.1	40
sec-Butylbenzene	9.34	0.798	8.72	12.0	84.7	120	40	10.0-159			31.8	39
tert-Butylbenzene	9.34	ND	10.9	12.7	116	136	40	10.0-156			15.6	39

L1916517-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916517-05 11/12/25 08:23 • (MS) R4300575-4 11/12/25 08:43 • (MSD) R4300575-5 11/12/25 09:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	9.34	ND	6.07	11.9	65.0	127	40	10.0-145		J3	64.8	37
Chlorobenzene	9.34	ND	8.37	9.06	89.6	97.0	40	10.0-152			7.96	39
Chlorodibromomethane	9.34	ND	8.36	9.62	89.4	103	40	10.0-146			14.1	37
Chloroethane	9.34	ND	8.56	17.8	91.6	190	40	10.0-146		J3 J5	69.9	40
Chloroform	9.34	ND	6.03	10.9	64.6	117	40	10.0-146		J3	57.4	37
Chloromethane	9.34	ND	13.7	11.9	147	127	40	10.0-159			14.4	37
2-Chlorotoluene	9.34	ND	8.41	13.5	90.0	144	40	10.0-159		J3	46.3	38
4-Chlorotoluene	9.34	ND	8.70	13.1	93.1	140	40	10.0-155		J3	40.2	39
1,2-Dibromo-3-Chloropropane	9.34	ND	10.8	10.4	116	111	40	10.0-151			4.41	39
1,2-Dibromoethane	9.34	ND	9.49	9.28	102	99.3	40	10.0-148			2.28	34
Dibromomethane	9.34	ND	11.5	9.88	123	106	40	10.0-147			14.9	35
1,2-Dichlorobenzene	9.34	ND	8.60	9.87	92.0	106	40	10.0-155			13.7	37
1,3-Dichlorobenzene	9.34	ND	7.98	8.89	85.4	95.1	40	10.0-153			10.8	38
1,4-Dichlorobenzene	9.34	ND	8.22	8.97	88.0	96.0	40	10.0-151			8.70	38
Dichlorodifluoromethane	9.34	ND	10.9	12.6	117	135	40	10.0-160			14.5	35
1,1-Dichloroethane	9.34	ND	5.78	10.1	61.9	108	40	10.0-147		J3	54.6	37
1,2-Dichloroethane	9.34	ND	8.93	10.5	95.6	112	40	10.0-148			16.0	35
1,1-Dichloroethene	9.34	ND	5.71	10.8	61.1	116	40	10.0-155		J3	61.8	37
cis-1,2-Dichloroethene	9.34	ND	5.47	9.64	58.6	103	40	10.0-149		J3	55.1	37
trans-1,2-Dichloroethene	9.34	ND	5.23	9.38	56.0	100	40	10.0-150		J3	56.8	37
1,2-Dichloropropane	9.34	ND	11.8	9.87	126	106	40	10.0-148			17.8	37
1,1-Dichloropropene	9.34	ND	5.34	10.3	57.1	110	40	10.0-153		J3	63.1	35
1,3-Dichloropropane	9.34	ND	9.20	8.97	98.4	96.0	40	10.0-154			2.50	35
cis-1,3-Dichloropropene	9.34	ND	9.12	10.0	97.6	107	40	10.0-151			9.35	37
trans-1,3-Dichloropropene	9.34	ND	8.52	10.0	91.1	107	40	10.0-148			16.1	37
2,2-Dichloropropane	9.34	ND	5.58	10.3	59.7	110	40	10.0-138		J3	59.1	36
Di-isopropyl ether	9.34	ND	6.29	10.1	67.3	108	40	10.0-147		J3	46.7	36
Ethylbenzene	9.34	1.08	9.01	9.60	84.8	91.1	40	10.0-160			6.31	38
Hexachloro-1,3-butadiene	9.34	ND	11.5	12.0	123	128	40	10.0-160			4.44	40
Isopropylbenzene	9.34	0.661	5.39	14.8	50.6	152	40	10.0-155		J3	93.3	38
p-Isopropyltoluene	9.34	0.296	8.92	11.2	92.3	116	40	10.0-160			22.3	40
2-Butanone (MEK)	46.7	ND	53.8	78.2	115	167	40	10.0-160		J5	37.0	40
Methylene Chloride	9.34	ND	5.65	9.70	60.4	104	40	10.0-141		J3	52.9	37
4-Methyl-2-pentanone (MIBK)	46.7	4.63	60.2	54.6	119	107	40	10.0-160			9.77	35
Methyl tert-butyl ether	9.34	ND	7.30	11.3	78.1	121	40	11.0-147		J3	43.4	35
Naphthalene	9.34	6.29	15.9	18.3	103	128	40	10.0-160			14.1	36
n-Propylbenzene	9.34	1.83	9.29	15.4	79.9	145	40	10.0-158		J3	49.2	38
Styrene	9.34	12.0	17.4	34.4	57.0	240	40	10.0-160		J3 J5	66.0	40
1,1,1,2-Tetrachloroethane	9.34	ND	7.48	9.45	80.0	101	40	10.0-149			23.3	39

L1916517-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916517-05 11/12/25 08:23 • (MS) R4300575-4 11/12/25 08:43 • (MSD) R4300575-5 11/12/25 09:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,2,2-Tetrachloroethane	9.34	ND	8.56	14.6	91.6	156	40	10.0-160		J3	51.9	35
1,1,2-Trichlorotrifluoroethane	9.34	ND	5.34	9.87	57.1	106	40	10.0-160		J3	59.5	36
Tetrachloroethene	9.34	ND	6.78	9.38	72.6	100	40	10.0-156			32.2	39
Toluene	9.34	0.478	7.72	9.28	77.5	94.2	40	10.0-156			18.4	38
1,2,3-Trichlorobenzene	9.34	ND	8.41	9.25	90.0	99.0	40	10.0-160			9.52	40
1,2,4-Trichlorobenzene	9.34	ND	9.04	9.49	96.7	102	40	10.0-160			4.90	40
1,1,1-Trichloroethane	9.34	ND	6.23	11.8	66.7	126	40	10.0-144		J3	61.4	35
1,1,2-Trichloroethane	9.34	ND	9.28	9.10	99.3	97.4	40	10.0-160			1.89	35
Trichloroethene	9.34	ND	8.90	10.7	95.3	115	40	10.0-156			18.6	38
Trichlorofluoromethane	9.34	ND	8.46	16.0	90.6	171	40	10.0-160		J3 J5	61.7	40
1,2,3-Trichloropropane	9.34	ND	11.4	14.4	122	154	40	10.0-156			23.1	35
1,2,4-Trimethylbenzene	9.34	2.96	11.5	14.8	91.6	127	40	10.0-160			25.0	36
1,2,3-Trimethylbenzene	9.34	1.30	9.12	10.1	83.6	94.2	40	10.0-160			10.3	36
1,3,5-Trimethylbenzene	9.34	0.754	9.18	14.3	90.2	145	40	10.0-160		J3	43.5	38
Vinyl chloride	9.34	ND	10.0	18.2	107	194	40	10.0-160		J3 J5	57.6	37
Xylenes, Total	28.0	1.95	28.3	35.4	94.0	119	40	10.0-160			22.2	38
(S) Toluene-d8					*84.9*	*94.2*		*75.0-131*				
(S) 4-Bromofluorobenzene					*63.6*	*151*		*67.0-138*	J2	J1		
(S) 1,2-Dichloroethane-d4					*107*	*117*		*70.0-130*				

Method Blank (MB)

(MB) R4301689-3 11/14/25 11:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0697	0.100
Acrylonitrile	U		0.00803	0.0125
Benzene	U		0.000711	0.00100
Bromobenzene	U		0.00390	0.0125
Bromodichloromethane	U		0.00117	0.00250
Bromoform	U		0.00992	0.0250
Bromomethane	U		0.0101	0.0125
n-Butylbenzene	U		0.00625	0.0125
sec-Butylbenzene	U		0.00383	0.0125
tert-Butylbenzene	U		0.00189	0.00500
Carbon tetrachloride	U		0.00301	0.00500
Chlorobenzene	U		0.000858	0.00250
Chlorodibromomethane	U		0.00161	0.00250
Chloroethane	U		0.00569	0.0100
Chloroform	U		0.00162	0.00250
Chloromethane	U		0.00850	0.0125
2-Chlorotoluene	U		0.00129	0.00250
4-Chlorotoluene	U		0.00154	0.00500
1,2-Dibromo-3-Chloropropane	U		0.0107	0.0250
1,2-Dibromoethane	U		0.00126	0.00250
Dibromomethane	U		0.00178	0.00500
1,2-Dichlorobenzene	U		0.00156	0.00500
1,3-Dichlorobenzene	U		0.00165	0.00500
1,4-Dichlorobenzene	U		0.00175	0.00500
Dichlorodifluoromethane	U		0.00435	0.00500
1,1-Dichloroethane	U		0.00101	0.00250
1,2-Dichloroethane	U		0.00146	0.00250
1,1-Dichloroethene	U		0.00153	0.00250
cis-1,2-Dichloroethene	U		0.00129	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00192	0.00500
1,1-Dichloropropene	U		0.00138	0.00500
1,3-Dichloropropane	U		0.00162	0.00500
cis-1,3-Dichloropropene	U		0.00105	0.00250
trans-1,3-Dichloropropene	U		0.00105	0.00500
2,2-Dichloropropane	U		0.00202	0.00250
Di-isopropyl ether	U		0.000769	0.00100
Ethylbenzene	U		0.000987	0.00250
Hexachloro-1,3-butadiene	U		0.0104	0.0250
Isopropylbenzene	U		0.00101	0.00250

Method Blank (MB)

(MB) R4301689-3 11/14/25 11:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00213	0.00500
2-Butanone (MEK)	U		0.0887	0.100
Methylene Chloride	U		0.0110	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00992	0.0250
Methyl tert-butyl ether	U		0.000773	0.00100
Naphthalene	U		0.00763	0.0125
n-Propylbenzene	U		0.00169	0.00500
Styrene	U		0.00445	0.0125
1,1,1,2-Tetrachloroethane	U		0.00130	0.00250
1,1,2,2-Tetrachloroethane	U		0.00116	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.00281	0.00500
Tetrachloroethene	U		0.00152	0.00250
Toluene	U		0.00289	0.00500
1,2,3-Trichlorobenzene	U		0.00699	0.0125
1,2,4-Trichlorobenzene	U		0.00542	0.0125
1,1,1-Trichloroethane	U		0.00145	0.00250
1,1,2-Trichloroethane	U		0.00134	0.00250
Trichloroethene	U		0.000891	0.00100
Trichlorofluoromethane	U		0.00261	0.00400
1,2,3-Trichloropropane	U		0.00612	0.0125
1,2,4-Trimethylbenzene	U		0.00238	0.00500
1,2,3-Trimethylbenzene	U		0.00182	0.00500
1,3,5-Trimethylbenzene	U		0.00228	0.00500
Vinyl chloride	U		0.00201	0.00250
Xylenes, Total	U		0.00280	0.00650
(S) Toluene-d8	*93.9*			*75.0-131*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*86.8*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301689-1 11/14/25 09:22 • (LCSD) R4301689-2 11/14/25 09:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	1.25	1.44	1.40	115	112	10.0-160			2.82	31
Acrylonitrile	1.25	1.27	1.10	102	88.0	45.0-153			14.3	22
Benzene	0.250	0.238	0.230	95.2	92.0	70.0-123			3.42	20
Bromobenzene	0.250	0.196	0.207	78.4	82.8	73.0-121			5.46	20
Bromodichloromethane	0.250	0.278	0.264	111	106	73.0-121			5.17	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301689-1 11/14/25 09:22 • (LCSD) R4301689-2 11/14/25 09:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.250	0.227	0.214	90.8	85.6	64.0-132			5.90	20
Bromomethane	0.250	0.338	0.342	135	137	56.0-147			1.18	20
n-Butylbenzene	0.250	0.221	0.219	88.4	87.6	68.0-135			0.909	20
sec-Butylbenzene	0.250	0.220	0.216	88.0	86.4	74.0-130			1.83	20
tert-Butylbenzene	0.250	0.223	0.223	89.2	89.2	75.0-127			0.000	20
Carbon tetrachloride	0.250	0.305	0.296	122	118	66.0-128			3.00	20
Chlorobenzene	0.250	0.241	0.235	96.4	94.0	76.0-128			2.52	20
Chlorodibromomethane	0.250	0.239	0.235	95.6	94.0	74.0-127			1.69	20
Chloroethane	0.250	0.234	0.222	93.6	88.8	61.0-134			5.26	20
Chloroform	0.250	0.240	0.235	96.0	94.0	72.0-123			2.11	20
Chloromethane	0.250	0.265	0.259	106	104	51.0-138			2.29	20
2-Chlorotoluene	0.250	0.206	0.219	82.4	87.6	75.0-124			6.12	20
4-Chlorotoluene	0.250	0.202	0.209	80.8	83.6	75.0-124			3.41	20
1,2-Dibromo-3-Chloropropane	0.250	0.207	0.183	82.8	73.2	59.0-130			12.3	20
1,2-Dibromoethane	0.250	0.222	0.226	88.8	90.4	74.0-128			1.79	20
Dibromomethane	0.250	0.270	0.257	108	103	75.0-122			4.93	20
1,2-Dichlorobenzene	0.250	0.230	0.220	92.0	88.0	76.0-124			4.44	20
1,3-Dichlorobenzene	0.250	0.220	0.221	88.0	88.4	76.0-125			0.454	20
1,4-Dichlorobenzene	0.250	0.217	0.221	86.8	88.4	77.0-121			1.83	20
Dichlorodifluoromethane	0.250	0.298	0.299	119	120	43.0-156			0.335	20
1,1-Dichloroethane	0.250	0.229	0.226	91.6	90.4	70.0-127			1.32	20
1,2-Dichloroethane	0.250	0.263	0.248	105	99.2	65.0-131			5.87	20
1,1-Dichloroethene	0.250	0.204	0.206	81.6	82.4	65.0-131			0.976	20
cis-1,2-Dichloroethene	0.250	0.271	0.264	108	106	73.0-125			2.62	20
trans-1,2-Dichloroethene	0.250	0.281	0.273	112	109	71.0-125			2.89	20
1,2-Dichloropropane	0.250	0.230	0.230	92.0	92.0	74.0-125			0.000	20
1,1-Dichloropropene	0.250	0.248	0.248	99.2	99.2	73.0-125			0.000	20
1,3-Dichloropropane	0.250	0.211	0.204	84.4	81.6	80.0-125			3.37	20
cis-1,3-Dichloropropene	0.250	0.251	0.242	100	96.8	76.0-127			3.65	20
trans-1,3-Dichloropropene	0.250	0.209	0.205	83.6	82.0	73.0-127			1.93	20
2,2-Dichloropropane	0.250	0.258	0.257	103	103	59.0-135			0.388	20
Di-isopropyl ether	0.250	0.252	0.244	101	97.6	60.0-136			3.23	20
Ethylbenzene	0.250	0.231	0.235	92.4	94.0	74.0-126			1.72	20
Hexachloro-1,3-butadiene	0.250	0.299	0.272	120	109	57.0-150			9.46	20
Isopropylbenzene	0.250	0.250	0.238	100	95.2	72.0-127			4.92	20
p-Isopropyltoluene	0.250	0.225	0.224	90.0	89.6	72.0-133			0.445	20
2-Butanone (MEK)	1.25	1.15	1.04	92.0	83.2	30.0-160			10.0	24
Methylene Chloride	0.250	0.254	0.249	102	99.6	68.0-123			1.99	20
4-Methyl-2-pentanone (MIBK)	1.25	1.13	1.07	90.4	85.6	56.0-143			5.45	20
Methyl tert-butyl ether	0.250	0.252	0.235	101	94.0	66.0-132			6.98	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301689-1 11/14/25 09:22 • (LCSD) R4301689-2 11/14/25 09:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.250	0.230	0.220	92.0	88.0	59.0-130			4.44	20
n-Propylbenzene	0.250	0.208	0.214	83.2	85.6	74.0-126			2.84	20
Styrene	0.250	0.247	0.235	98.8	94.0	72.0-127			4.98	20
1,1,1,2-Tetrachloroethane	0.250	0.259	0.244	104	97.6	74.0-129			5.96	20
1,1,2,2-Tetrachloroethane	0.250	0.188	0.188	75.2	75.2	68.0-128			0.000	20
1,1,2-Trichlorotrifluoroethane	0.250	0.247	0.242	98.8	96.8	61.0-139			2.04	20
Tetrachloroethene	0.250	0.232	0.238	92.8	95.2	70.0-136			2.55	20
Toluene	0.250	0.213	0.215	85.2	86.0	75.0-121			0.935	20
1,2,3-Trichlorobenzene	0.250	0.218	0.213	87.2	85.2	59.0-139			2.32	20
1,2,4-Trichlorobenzene	0.250	0.239	0.224	95.6	89.6	62.0-137			6.48	20
1,1,1-Trichloroethane	0.250	0.278	0.270	111	108	69.0-126			2.92	20
1,1,2-Trichloroethane	0.250	0.243	0.239	97.2	95.6	78.0-123			1.66	20
Trichloroethene	0.250	0.282	0.284	113	114	76.0-126			0.707	20
Trichlorofluoromethane	0.250	0.320	0.312	128	125	61.0-142			2.53	20
1,2,3-Trichloropropane	0.250	0.199	0.198	79.6	79.2	67.0-129			0.504	20
1,2,4-Trimethylbenzene	0.250	0.202	0.202	80.8	80.8	70.0-126			0.000	20
1,2,3-Trimethylbenzene	0.250	0.203	0.196	81.2	78.4	74.0-124			3.51	20
1,3,5-Trimethylbenzene	0.250	0.204	0.202	81.6	80.8	73.0-127			0.985	20
Vinyl chloride	0.250	0.306	0.283	122	113	63.0-134			7.81	20
Xylenes, Total	0.750	0.748	0.730	99.7	97.3	72.0-127			2.44	20
(S) Toluene-d8				*88.7*	*91.1*	*75.0-131*				
(S) 4-Bromofluorobenzene				*107*	*103*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*96.2*	*89.4*	*70.0-130*				

Method Blank (MB)

(MB) R4301821-2 11/16/25 20:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Naphthalene	U		0.00763	0.0125
(S) Toluene-d8	*91.5*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*126*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4301821-1 11/16/25 19:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.250	0.237	94.8	59.0-130	
(S) Toluene-d8			*93.7*	*75.0-131*	
(S) 4-Bromofluorobenzene			*95.2*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*125*	*70.0-130*	

Method Blank (MB)

(MB) R4301666-1 11/15/25 16:13

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aliphatics	U		3870	5000
C12-C16 Aliphatics	U		3870	5000
C16-C21 Aliphatics	U		3870	5000
C21-C34 Aliphatics	U		4510	5000
(S) 1-Chloro-octadecane	*65.4*			*50.0-150*

Method Blank (MB)

(MB) R4301666-1 11/15/25 16:13

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aromatics	U		3120	5000
C12-C16 Aromatics	U		3120	5000
C16-C21 Aromatics	U		3120	5000
C21-C34 Aromatics	U		3120	5000
(S) o-Terphenyl	*64.7*			*50.0-150*
(S) 2-Fluorobiphenyl	*89.5*			*50.0-150*
(S) 2-Bromonaphthalene	*93.4*			*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301666-2 11/15/25 16:36 • (LCSD) R4301666-3 11/15/25 16:59

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	6650	2710	2880	40.8	43.3	70.0-130	J J4	J J4	6.08	20
C12-C16 Aliphatics	13300	6370	6720	47.9	50.5	70.0-130	J4	J4	5.35	20
C16-C21 Aliphatics	20000	10700	11000	53.5	55.0	70.0-130	J4	J4	2.76	20
C21-C34 Aliphatics	33300	17900	19300	53.8	58.0	70.0-130	J4	J4	7.53	20
(S) 1-Chloro-octadecane				*51.7*	*54.3*	*50.0-150*				

Sample Narrative:

LCS: Recoveries are within method-defined limits.

LCSD: Recoveries are within method-defined limits.

QUALITY CONTROL SUMMARY

L1916517-05,06,07,09,11,13,21

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301666-2 11/15/25 16:36 • (LCSD) R4301666-3 11/15/25 16:59

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	6650	3860	4290	58.0	64.5	70.0-130	J J4	J J4	10.6	20
C12-C16 Aromatics	20000	10500	11700	52.5	58.5	70.0-130	J4	J4	10.8	20
C16-C21 Aromatics	33300	19500	20800	58.6	62.5	70.0-130	J4	J4	6.45	20
C21-C34 Aromatics	53200	33300	35400	62.6	66.5	70.0-130	J4	J4	6.11	20
(S) o-Terphenyl				*60.7*	*62.0*	*50.0-150*				
(S) 2-Fluorobiphenyl				*78.9*	*86.7*	*50.0-150*				
(S) 2-Bromonaphthalene				*82.7*	*90.6*	*50.0-150*				

L1916619-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916619-05 11/16/25 03:16 • (MS) R4301666-4 11/16/25 03:39 • (MSD) R4301666-5 11/16/25 04:02

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	19600	ND	ND	ND	0.000	0.000	2.94	70.0-130	J6	J6	0.000	20
C12-C16 Aliphatics	39100	ND	25500	26400	65.2	67.0	2.94	70.0-130	J6	J6	3.47	20
C16-C21 Aliphatics	58700		41400	43100	70.5	72.9	2.94	70.0-130			4.02	20
C21-C34 Aliphatics	97800		70300	73100	71.9	74.2	2.94	70.0-130			3.91	20
(S) 1-Chloro-octadecane					*54.0*	*70.3*		*50.0-150*				

Sample Narrative:

OS: Dilution due to matrix impact during extraction procedure

L1916619-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916619-05 11/16/25 03:16 • (MS) R4301666-4 11/16/25 03:39 • (MSD) R4301666-5 11/16/25 04:02

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	19600	ND	ND	ND	55.6	64.0	2.94	70.0-130	J6	J6	14.5	20
C12-C16 Aromatics	58700	ND	30600	34800	52.1	58.9	2.94	70.0-130	J6	J6	12.8	20
C16-C21 Aromatics	97800	ND	55000	61600	56.2	62.5	2.94	70.0-130	J6	J6	11.3	20
C21-C34 Aromatics	156000	ND	85100	100000	54.6	63.3	2.94	70.0-130	J6	J6	16.1	20
(S) o-Terphenyl					*55.0*	*62.3*		*50.0-150*				
(S) 2-Fluorobiphenyl					*80.8*	*84.8*		*50.0-150*				
(S) 2-Bromonaphthalene					*84.6*	*88.6*		*50.0-150*				

Sample Narrative:

OS: Dilution due to matrix impact during extraction procedure

QUALITY CONTROL SUMMARY

L1916517-01

Method Blank (MB)

(MB) R4301562-1 11/14/25 10:49

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aliphatics	U		3870	5000
C12-C16 Aliphatics	U		3870	5000
C16-C21 Aliphatics	U		3870	5000
C21-C34 Aliphatics	U		4510	5000
(S) 1-Chloro-octadecane	*61.8*			*50.0-150*

Method Blank (MB)

(MB) R4301562-1 11/14/25 10:49

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aromatics	U		3120	5000
C12-C16 Aromatics	U		3120	5000
C16-C21 Aromatics	U		3120	5000
C21-C34 Aromatics	U		3120	5000
(S) o-Terphenyl	*66.2*			*50.0-150*
(S) 2-Fluorobiphenyl	*90.0*			*50.0-150*
(S) 2-Bromonaphthalene	*94.0*			*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301562-2 11/14/25 11:12 • (LCSD) R4301562-3 11/14/25 11:35

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	6650	3500	3780	52.6	56.8	70.0-130	J J4	J J4	7.69	20
C12-C16 Aliphatics	13300	8240	8690	62.0	65.3	70.0-130	J4	J4	5.32	20
C16-C21 Aliphatics	20000	13300	13800	66.5	69.0	70.0-130	J4	J4	3.69	20
C21-C34 Aliphatics	33300	22100	22800	66.4	68.5	70.0-130	J4	J4	3.12	20
(S) 1-Chloro-octadecane				*63.5*	*65.2*	*50.0-150*				

Sample Narrative:

LCS: Recoveries are within method-defined limits.

LCSD: Recoveries are within method-defined limits.

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4301562-2 11/14/25 11:12 • (LCSD) R4301562-3 11/14/25 11:35

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	6650	4790	5220	72.0	78.5	70.0-130	J		8.59	20
C12-C16 Aromatics	20000	12900	13800	64.5	69.0	70.0-130	J4	J4	6.74	20
C16-C21 Aromatics	33300	22900	24000	68.8	72.1	70.0-130	J4		4.69	20
C21-C34 Aromatics	53200	38700	40600	72.7	76.3	70.0-130			4.79	20
(S) o-Terphenyl				*69.4*	*71.2*	*50.0-150*				
(S) 2-Fluorobiphenyl				*91.4*	*94.4*	*50.0-150*				
(S) 2-Bromonaphthalene				*95.7*	*98.9*	*50.0-150*				

Sample Narrative:

LCS: Recoveries are within method-defined limits.

LCSD: Recoveries are within method-defined limits.

L1916021-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916021-09 11/14/25 13:07 • (MS) R4301562-4 11/14/25 13:29 • (MSD) R4301562-5 11/14/25 13:52

Analyte	Spike Amount (dry) ug/kg	Original Result (dry) ug/kg	MS Result (dry) ug/kg	MSD Result (dry) ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	7610	ND	5940	ND	69.5	64.9	1	70.0-130	J6	J6	5.38	20
C12-C16 Aromatics	22800	ND	15900	14700	69.7	63.5	1	70.0-130	J6	J6	8.30	20
C16-C21 Aromatics	38100	ND	28200	25500	73.9	66.4	1	70.0-130		J6	9.89	20
C21-C34 Aromatics	60900	ND	48300	43100	79.4	70.3	1	70.0-130			11.3	20
(S) o-Terphenyl					*65.5*	*60.3*		*50.0-150*				
(S) 2-Fluorobiphenyl					*93.2*	*93.2*		*50.0-150*				
(S) 2-Bromonaphthalene					*97.7*	*97.6*		*50.0-150*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R4303586-1 11/19/25 13:35

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aliphatics	U		3870	5000
C12-C16 Aliphatics	U		3870	5000
C16-C21 Aliphatics	U		3870	5000
C21-C34 Aliphatics	U		4510	5000
(S) 1-Chloro-octadecane	*46.6*	J2		*50.0-150*

Method Blank (MB)

(MB) R4303586-1 11/19/25 13:35

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
C10-C12 Aromatics	U		3120	5000
C12-C16 Aromatics	U		3120	5000
C16-C21 Aromatics	U		3120	5000
C21-C34 Aromatics	U		3120	5000
(S) o-Terphenyl	*56.6*			*50.0-150*
(S) 2-Fluorobiphenyl	*89.1*			*50.0-150*
(S) 2-Bromonaphthalene	*92.7*			*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4303586-2 11/19/25 13:58 • (LCSD) R4303586-3 11/19/25 14:21

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aliphatics	6650	3220	3530	48.4	53.1	70.0-130	J J4	J J4	9.19	20
C12-C16 Aliphatics	13300	7830	8670	58.9	65.2	70.0-130	J4	J4	10.2	20
C16-C21 Aliphatics	20000	13700	14200	68.5	71.0	70.0-130	J4		3.58	20
C21-C34 Aliphatics	33300	23400	24300	70.3	73.0	70.0-130			3.77	20
(S) 1-Chloro-octadecane				*65.6*	*62.8*	*50.0-150*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4303586-2 11/19/25 13:58 • (LCSD) R4303586-3 11/19/25 14:21

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	6650	4440	5040	66.8	75.8	70.0-130	J J4		12.7	20
C12-C16 Aromatics	20000	12100	13800	60.5	69.0	70.0-130	J4	J4	13.1	20
C16-C21 Aromatics	33300	22800	25100	68.5	75.4	70.0-130	J4		9.60	20
C21-C34 Aromatics	53200	36900	40200	69.4	75.6	70.0-130	J4		8.56	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4303586-2 11/19/25 13:58 • (LCSD) R4303586-3 11/19/25 14:21

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) o-Terphenyl				*72.9*	*75.9*	*50.0-150*				
(S) 2-Fluorobiphenyl				*94.2*	*99.8*	*50.0-150*				
(S) 2-Bromonaphthalene				*98.5*	*104*	*50.0-150*				

L1916418-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916418-15 11/20/25 04:10 • (MS) R4303586-4 11/20/25 04:33 • (MSD) R4303586-5 11/20/25 04:56

Analyte	Spike Amount (dry) ug/kg	Original Result (dry) ug/kg	MS Result (dry) ug/kg	MSD Result (dry) ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	19700	ND	ND	ND	61.4	61.6	2.96	70.0-130	J6	J6	0.823	20
C12-C16 Aromatics	59200	ND	35100	34700	59.2	58.3	2.96	70.0-130	J6	J6	1.15	20
C16-C21 Aromatics	98700	ND	66300	62600	67.2	63.3	2.96	70.0-130	J6	J6	5.75	20
C21-C34 Aromatics	158000	ND	105000	97200	66.5	61.4	2.96	70.0-130	J6	J6	7.92	20
(S) o-Terphenyl					*68.4*	*64.6*		*50.0-150*				
(S) 2-Fluorobiphenyl					*91.1*	*87.3*		*50.0-150*				
(S) 2-Bromonaphthalene					*95.6*	*91.1*		*50.0-150*				

Sample Narrative:

OS: Dilution due to matrix impact during extraction procedure

L1916418-35 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916418-35 11/20/25 05:19 • (MS) R4303586-6 11/20/25 05:42 • (MSD) R4303586-7 11/20/25 06:05

Analyte	Spike Amount (dry) ug/kg	Original Result (dry) ug/kg	MS Result (dry) ug/kg	MSD Result (dry) ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C12 Aromatics	19700	ND	ND	ND	73.0	66.0	2.93	70.0-130		J6	11.1	20
C12-C16 Aromatics	58900	ND	41500	37000	70.5	63.2	2.93	70.0-130		J6	11.5	20
C16-C21 Aromatics	98100	ND	73400	69400	74.8	71.1	2.93	70.0-130			5.62	20
C21-C34 Aromatics	156000	ND	115000	108000	73.7	69.2	2.93	70.0-130		J6	6.28	20
(S) o-Terphenyl					*76.9*	*73.7*		*50.0-150*				
(S) 2-Fluorobiphenyl					*91.0*	*94.2*		*50.0-150*				
(S) 2-Bromonaphthalene					*94.9*	*98.7*		*50.0-150*				

Sample Narrative:

OS: Dilution due to matrix impact during extraction procedure

Method Blank (MB)

(MB) R4301437-2 11/13/25 14:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00163	0.00600
Acenaphthene	U		0.00162	0.00600
Acenaphthylene	U		0.00159	0.00600
Benzo(a)anthracene	U		0.00200	0.00600
Benzo(a)pyrene	U		0.00163	0.00600
Benzo(b)fluoranthene	U		0.00275	0.00600
Benzo(g,h,i)perylene	U		0.00193	0.00600
Benzo(k)fluoranthene	U		0.00213	0.00600
Chrysene	U		0.00206	0.00600
Dibenz(a,h)anthracene	U		0.00201	0.00600
Fluoranthene	U		0.00239	0.00600
Fluorene	U		0.00180	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00234	0.00600
Naphthalene	U		0.00579	0.0200
Phenanthrene	U		0.00305	0.00600
Pyrene	U		0.00205	0.00600
1-Methylnaphthalene	U		0.00219	0.0200
2-Methylnaphthalene	U		0.00571	0.0200
2-Chloronaphthalene	U		0.00129	0.0200
(S) p-Terphenyl-d14	*121*	J1		*23.0-120*
(S) 2-Fluorobiphenyl	*103*			*34.0-125*
(S) 2-Methylnaphthalene-d10	*103*			*50.0-150*

Laboratory Control Sample (LCS)

(LCS) R4301437-1 11/13/25 13:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0833	104	50.0-126	
Acenaphthene	0.0800	0.0805	101	50.0-120	
Acenaphthylene	0.0800	0.0824	103	50.0-120	
Benzo(a)anthracene	0.0800	0.0815	102	45.0-120	
Benzo(a)pyrene	0.0800	0.0718	89.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0842	105	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0808	101	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0776	97.0	49.0-125	
Chrysene	0.0800	0.0833	104	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0846	106	47.0-125	
Fluoranthene	0.0800	0.0870	109	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4301437-1 11/13/25 13:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0842	105	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0687	85.9	46.0-125	
Naphthalene	0.0800	0.0799	99.9	50.0-120	
Phenanthrene	0.0800	0.0840	105	47.0-120	
Pyrene	0.0800	0.0832	104	43.0-123	
1-Methylnaphthalene	0.0800	0.0883	110	51.0-121	
2-Methylnaphthalene	0.0800	0.0850	106	50.0-120	
2-Chloronaphthalene	0.0800	0.0812	102	50.0-120	
(S) p-Terphenyl-d14			*103*	*23.0-120*	
(S) 2-Fluorobiphenyl			*101*	*34.0-125*	
(S) 2-Methylnaphthalene-d10			*102*	*50.0-150*	

L1916514-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1916514-07 11/13/25 15:50 • (MS) R4301437-3 11/13/25 16:10 • (MSD) R4301437-4 11/13/25 16:30

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0834	ND	0.0784	0.0765	94.0	91.8	1	10.0-145			2.40	30
Acenaphthene	0.0834	0.0156	0.0929	0.0944	111	113	1	14.0-127			1.63	27
Acenaphthylene	0.0834	0.00739	0.0894	0.0914	107	110	1	21.0-124			2.17	25
Benzo(a)anthracene	0.0834	ND	0.0949	0.0983	114	118	1	10.0-139			3.50	30
Benzo(a)pyrene	0.0834	ND	0.0796	0.0800	95.4	95.9	1	10.0-141			0.547	31
Benzo(b)fluoranthene	0.0834	0.00753	0.0818	0.0796	98.0	95.4	1	10.0-140			2.71	36
Benzo(g,h,i)perylene	0.0834	0.0139	0.0815	0.0824	97.6	98.8	1	10.0-140			1.20	33
Benzo(k)fluoranthene	0.0834	ND	0.0710	0.0705	85.1	84.6	1	10.0-137			0.617	31
Chrysene	0.0834	0.0136	0.108	0.114	130	136	1	10.0-145			4.83	30
Dibenz(a,h)anthracene	0.0834	ND	0.0776	0.0768	93.1	92.0	1	10.0-132			1.13	31
Fluoranthene	0.0834	0.0112	0.0966	0.0978	116	117	1	10.0-153			1.24	33
Fluorene	0.0834	0.148	0.231	0.240	99.5	110	1	11.0-130			3.70	29
Indeno(1,2,3-cd)pyrene	0.0834	ND	0.0677	0.0684	81.2	81.9	1	10.0-137			0.963	32
Naphthalene	0.0834	0.0432	0.0918	0.107	58.2	75.9	1	10.0-135			14.9	27
Phenanthrene	0.0834	0.237	0.309	0.323	86.4	103	1	10.0-144			4.49	31
Pyrene	0.0834	0.0155	0.0962	0.0997	115	120	1	10.0-148			3.57	35
1-Methylnaphthalene	0.0834	0.412	0.499	0.507	105	114	1	10.0-142			1.52	28
2-Methylnaphthalene	0.0834	0.0290	0.110	0.105	97.4	91.5	1	10.0-137			4.56	28
2-Chloronaphthalene	0.0834	ND	0.0764	0.0774	91.6	92.8	1	29.0-120			1.28	24
(S) p-Terphenyl-d14					*87.9*	*89.9*		*23.0-120*				
(S) 2-Fluorobiphenyl					*92.6*	*91.7*		*34.0-125*				
(S) 2-Methylnaphthalene-d10					*99.1*	*100*		*50.0-150*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C5	The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.

GLOSSARY OF TERMS

Qualifier	Description
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Phillips 66 - TRC

13810 SE Eastgate Way
Suite 440
Bellevue. WA 98005

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Pres Chk

Report to: Eric Larsen
~~Madison Taylor 425-512-7073~~ 425.566.0403

Email To: elarsen ; cc: gmon
~~MPTaylor~~@trccompanies.com; ~~David.Miller@trc~~

Project Description: Phillips 66

City/State Collected: Ferndale, WA

Please Circle: (PT) MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # 670297

Lab Project # PHILLIPSTRC-FERNDALE

Collected by (print): Madison Taylor, Dan Miller

Site/Facility ID # FERNDALE, WA

P.O. # 4301690948

Collected by (signature): Madison

Immediately Packed on Ice N___ Y X

☆Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day X 10 Day (Rad Only)
___ Three Day X STD TAT

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Metals 8ozClr-NoPres	CR6, CR3 8ozClr-NoPres	EPHWA 4ozAmb-NoPres	SV8270PAHSIM 8ozClr-NoPres +naphthalene	V8260 40mlAmb/MeOH10ml/Syr	VPHWA 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
B-5-25:6.3	G	SS	6.3	11/5/25	0935	4	X	X	X	X	X	X		-01
B-5-25:11.3		SS	11.3		0940									-02
B-4-25:7 MT		SS	7.0		1030		X	X	X	X	X	X		-03
B-4-25:12 MT		SS	12.0		1040									-04
B-3-25:7.5		SS	7.5		1105		X	X	X	X	X	X		-05
B-3-25:11.5		SS	11.5		1125		X	X	X	X	X	X		-06
B-2-25:7.2		SS	7.2		1200		X	X	X	X	X	X		-07
B-2-25:12.2		SS	12.2		1210									-08
B-1-25:7 MT		SS	7.0		1235		X	X	X	X	X	X		-09
B-1-25:12 MT	↓	SS	12.0	↓	1245	↓								-10

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 191617

I178

Acctnum: PHILLIPSTRC
Template: T283558
Prelogin: P1187933
PM: 3976 - Naomi M Sackett
PB: V@11/03/25mV
Shipped Via: FedEX Priority

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:*Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg
8260: hVOCs+BTEX
☆- we would like to do 7-day TAT for VPHo EPH to determine if additional samples will be ran

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 9858 5191 1169

Sample Receipt Checklist
COC Seal Present/Intact: __NP √Y __N
COC Signed/Accurate: √Y __N
Bottles arrive intact: √Y __N
Correct bottles used: √Y __N
Sufficient volume sent: √Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: √Y __N
RAD Screen <0.5 mR/hr: √Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) No HCl MeoH TBR	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Madison	11/7/25	0952		3	TLA9 4.0 T D T+4.0	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)			
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/8/25	Time: 900	Hold: / Condition NCF / OK

Company Name/Address:
Phillips 66 - TRC

13810 SE Eastgate Way
Suite 440
Bellevue. WA 98005

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Pres Chk

cc:

Report to:
Madison Taylor 425-512-7073

Email To: elarsen ; cmoon ~~MPTaylor@trccompanies.com;David.Miller@trc~~

Project Description: Phillips 66

City/State Collected: Ferndale, WA

Please Circle: PT MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # 670297

Lab Project # PHILLIPSTRC-FERNDALE

Collected by (print): Madison Taylor David Miller

Site/Facility ID # FERNDALE, WA

P.O. # 4301690948

Collected by (signature):

Rush? (Lab MUST Be Notified) ☆ see note on p. 1
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X STD TAT

Quote #

Date Results Needed

Immediately
Packed on Ice N ___ Y X

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Metals 8ozClr-NoPres	CR6, CR3 8ozClr-NoPres	EPHWA 4ozAmb-NoPres	SV8270PAHSIM 8ozClr-NoPres +naphthalene	V8260 40mlAmb/MeOH10ml/Syr	VPHWA 40mlAmb/MeOH10ml/Syr				Remarks	Sample # (lab only)
B-6-25:7.5	G	SS	7.5	11/6/25	0800	4	X	X	X	X	X	X					-11
B-6-25:12.5		SS	12.5		0820												-12
B-7-25:7.5		SS	7.5		0900		X	X	X	X	X	X					-13
B-7-25:12.5		SS	12.5		0915												-14
B-8-25:7 MT		SS	7.0		1410		X	X	X	X	X	X					-15
B-8-25:12 MT		SS	12.0		1420												-16
B-9-25:7		SS	7.0		1435		X	X	X	X	X	X					-17
B-9-25:12		SS	12.0		1445												-18
B-10-25:7		SS	7.0		1305		X	X	X	X	X	X					-19
B-10-25:12		SS	12.0		1320												-20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg
8260: hVOCs+BTEX

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 420858 5191 1109

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	
	11/7/25	0952		3	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 88	If preservation required by Login: Date/Time
				TEMP 4.0 TDT4.0	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/9/25 Time: 900	Hold: Condition: NCF / OK

Chain of Custody Page 2 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 191617

Table #

Acctnum: PHILLIPSTRC
Template: T283558
Prelogin: P1187933
PM: 3976 - Naomi M Sackett
PB: 11/03/25 mv
Shipped Via: FedEX Priority

Company Name/Address:
Phillips 66 - TRC

13810 SE Eastgate Way
Suite 440
Bellevue. WA 98005

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Pres Chk

Report to:
Madison Taylor 425-512-7073

Email To: klarsen, cmcon
MPTaylor@trccompanies.com;David.Miller@tre

Project Description: Phillips 66

City/State Collected: Ferndale, WA

Please Circle: (PT) MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project # 670297

Lab Project # PHILLIPSTRC-FERNDALE

Collected by (print): Madison Taylor David Miller

Site/Facility ID # FERNDALE, WA

P.O. # 4301690948

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified) # see notes p.1
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X 8TD TAT

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Metals 8ozClr-NoPres	CR6, CR3 8ozClr-NoPres	EPHWA 4ozAmb-NoPres	SV8270PAHSIM 8ozClr-NoPres & naphthalene	V8260 40mlAmb/MeOH10ml/Syr	VPHWA 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
B-11-25:13	G	SS	13.0	11/6/25	1550	4	X	X	X	X	X	X		-21
B-11-25:15	G	SS	15.0	11/6/25	1600	4								-22
		SS												
		SS												
		SS												

Chain of Custody Page 3 of 3

Pace
PEOPLE ADVANCING SCIENCE

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SDG # 191617

Table #

Acctnum: PHILLIPSTRC

Template: T283558

Prelogin: P1187933

PM: 3976 - Naomi M Sackett

PB: 10 11/03/25 mv

Shipped Via: FedEX Priority

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *Metals = As, Cd, Cr, Pb, Ni, Zn, & Hg
8260: hVOCs+BTEX

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 9085 5192 1109

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	Preservation required by Login: Date/Time
Madison	11/7/25	0952		3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 8D	
				TLA94-0TD+410	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/8/25 Time: 900	Hold: Condition: NCF / OK
			Annwood		

Multiple Parcel Form L# 191617

Parcel Tracking Number	Infrared Thermometer ID	Temperature Reading (°C)	Correction Factor (°C)	Corrected Temperature (°C)	Custody Seal Intact
8858 5196 1169	TLA9	4.0	0	4.0	Yes / No / Not Present
8858 5196 1170	TLA9	1.0	0	1.0	Yes / No / Not Present
8858 5196 1158	TLA9	0.9	0	0.9	Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present

ANNWOODS
Name

11/8/25
Date