

Site Assessment Report

Forest Creek Road Dump Site
DEQ Task Order 067-23-05
ECSI No. 6328

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Prepared by:

Maul Foster & Alongi, Inc.

3140 NE Broadway, Portland, OR 97232

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*The material and data in this report were prepared
under the supervision and direction of the undersigned.*

Maul Foster & Alongi, Inc.



Michael Whitson, RG
Project Geologist



EXPIRES: 1/1/2026

This digital seal certifies the signatory
and document content.

Michael Pickering, RG
Principal Geologist

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Abbreviations

ACM	asbestos-containing material
bgs	below ground surface
CDL	Clandestine Drug Lab
COPC	chemical of potential concern
the County	Josephine County
CSM	conceptual site model
DEQ	Oregon Department of Environmental Quality
DU	decision unit
ECSI	Environmental Cleanup Site Information
EPA	U.S. Environmental Protection Agency
HASP	health and safety plan
ISM	incremental sampling methodology
LOF	locality of facility
MFA	Maul Foster & Alongi, Inc.
MRL	method reporting limit
OHA	Oregon Health Authority
OWRD	Oregon Water Resources Department
PAH	polycyclic aromatic hydrocarbons
PID	photoionization detector
PPE	personal protective equipment
QA/QC	quality assurance/quality control
QAPP	quality assurance project plan
RBC	risk-based concentration
RSL	EPA Regional Screening Level
SA	site assessment
SOP	standard operating procedure
T&E	threatened and endangered
TCRA	Time Critical Removal Action
TEQ	toxicity equivalence
the Site	the Forest Creek Road Dump Site, 113 Forest Creek Road, Selma, Oregon
TPH	total petroleum hydrocarbons
VOC	volatile organic compound

1 Introduction

Maul Foster & Alongi, Inc. (MFA) prepared this report to present the results of a site assessment (SA) conducted at the Forest Creek Road Dump site located at 113 Forest Creek Road in Selma, Oregon (the Site) (Figure 1-1). The Site is listed in the Oregon Department of Environmental Quality's (DEQ) Your DEQ Online database as Site ID 6328. Cleanup and assessment of the Site for future redevelopment are ongoing as directed by the DEQ. This report was prepared for the DEQ under Task 7 of Task Order 067-23-05.

1.1 Purpose

The SA activities were conducted to evaluate several areas of potential surface soil contamination from historical Site activities and determine if further investigation, subsurface investigation, or remedial action is required at the Site. Specifically, the assessment activities included the collection of: (1) composite soil samples from areas with potential impacts (e.g., former drum storage area, burn areas observed during waste removal); and (2) incremental sampling methodology (ISM) surface soil sampling for the remaining areas of the Site.

Chemical data from the investigation activities described in this report were screened against DEQ's risk-based concentrations (RBCs) (DEQ 2024) to assess whether chemicals of potential concern (COPCs) at the Site pose an unacceptable risk to human or ecological health for current and likely future receptors and exposure pathways.

1.2 Scope of Work

Between December 17 and 19, 2024, SA activities were conducted at the Site in general accordance with the SA Work Plan (MFA 2024). The scope of work consisted of the following general tasks:

- Collect composite surface soil samples from the former drum storage area and two burn areas identified during the solid waste removal activities completed at the Site in 2023
- Conduct ISM sampling to assess surface soil conditions across the remainder of the Site
- Manage investigation-derived waste
- Perform a Level 1 Ecological Scoping Visit and documentation
- Develop a conceptual site model (CSM) for the Site, including a beneficial land and water use survey
- Perform a risk screening of data for potentially complete exposure pathways to evaluate whether unacceptable risks are present
- Prepare an assessment report discussing the above activities, the analytical results, and the potential risks posed by chemical contamination at the Site, if present.

The results of these activities are discussed in further detail in this report.

2 Background

2.1 Property Location, History, and Description

The Site is located in the southwest quarter of the northwest quarter of section 34, township 38 south, range 7 west of the Willamette Meridian in Selma, Oregon (Figure 1-1). The Site is comprised of one Josephine County (the County) tax parcel designated as Map & Tax lot No. 380734B000010900 TL109.

The property is zoned RR-5 (rural residential, minimum 5-acres) and is approximately 5.05 acres. Forest Creek Road borders the Site on the east, a residence lies to the north, and there is undeveloped property to the west and south of the Site. Thompson Creek, designated as essential salmonid habitat by the Oregon Department of State Lands, and Haven Creek (also known as East Fork Thompson Creek) both pass through the Site prior to their confluence north of the Site. Prior to federal removal actions performed in 2022, there were several structures located on-site, which were demolished with most materials remaining on-site. There were numerous campers, trailers, and boats, some of which occupants of the Site reportedly used as unpermitted dwellings and Clandestine Drug Labs (CDL). A 1,152 square foot residence constructed in 1972 was among the structures demolished during the removal actions.

The Site is rural and is not connected to municipal water or sewer services. At present, there are no known septic systems or water supply wells located on-site. A potential well casing was discovered during removal activities. It was an 8-inch steel casing placed vertically to a depth of approximately 7 feet. The casing did not appear to have been used as an actual well as the casing bottom was dry, and contained sticks, leaves, and rocks. There was no indication that the casing had been used for dumping. Oregon Health Authority (OHA) was made aware of the discovery of the potential well, and approved backfilling the casing with grout to prevent any future potential use (AEC 2024). The location of the backfilled casing is shown on Figure 2-1.

During the SA field activities, the Site was unoccupied and there was no evidence of recent illicit property use (i.e. no evidence of habitation or illegal dumping). A chain-link fence and vehicle trench were observed along the eastern portion of the property along Forest Creek Road limiting access to the property.

2.2 Geology and Hydrology

The Site is located in the western portion of the Klamath Mountains. The oldest rocks in the vicinity of the Site are Triassic/Jurassic-aged metamorphic rocks of the Applegate Group, marine-sedimentary rocks of the Sexton Mountain Terrane, and Jurassic-aged marine sedimentary rocks of the Galice Formation of the Western Klamath Terrane. These complexes of exotic terranes were accreted to the western boundary of the ancestral North American Plate and are associated with varying degrees of uplift, deformation, and metamorphoses. Most of the vicinity is dominated by these marine sedimentary, igneous, and metamorphic rocks of Jurassic and Triassic age. Over time, uplift and erosion have carved out deep valleys that have accumulated more recent Quaternary-aged deposits of unconsolidated sediments including alluvial, fluvial, and lacustrine deposits—left by the

current and ancestral rivers and streams—and more broadly by the Missoula and Bonneville floods (Murray).

According to nearby water supply well logs listed in the Oregon Water Resources Department (OWRD) well log database, depths to groundwater in the vicinity of Forest Creek Road recorded at the time of drilling ranged between 18 and 80 feet below ground surface (bgs). Static depths to water measured in completed water supply wells ranged from 8 to 50 feet bgs. Site-specific groundwater data are not available or were otherwise not identified during the preparation of this Work Plan.

Topography at the Site and the vicinity is generally flat but gradually slopes down to the north-northwest toward the confluence of Thompson Creek and Haven Creek approximately 500 feet northwest of the Site; Site elevation ranges between approximately 1,630 and 1,650 feet above mean sea level. Both Haven Creek and Thompson Creek bisect the Site property as they flow from the south to the north forming small erosional channels through the middle of the Site. The creeks join just north of the Site and after some distance join the Illinois River (a tributary of the Rogue River) approximately nine miles west-northwest of the Site. Based on the topography of the Site and the flow direction of the creeks that bisect the property, groundwater is expected to flow to the north-northwest.

2.3 Previous Environmental Activities

According to Josephine County Sheriff's Department and Josephine County Code Enforcement accounts, the Site had received solid wastes for decades. The Site has contained various wastes, including automobiles, vehicle parts, waste tires, car batteries, numerous containers with waste oils and automotive fluids, appliances, demolition materials, asbestos-containing materials (ACM), tools, toys, furniture, and household garbage throughout the property.

On July 25, 2019 a General Judgment by Josephine County placed the property and all contents into receivership with County staff. DEQ and the County entered into an Access Agreement providing for DEQ's legal access to the Property and for removal of the property's contents.

The Site is assigned No. 6328 in DEQ's Your DEQ Online database. On April 9, 2019, DEQ declared the Site a Solid Waste Orphan Site under Oregon Revised Statute 465.381 and Oregon Administrative Rule 340-122-0530. This designation enabled DEQ to use the Solid Waste Orphan Site Account to fund Site investigation, stabilization, and clean-up activities.

Because the entire Site was considered a CDL by OHA, all waste evaluation and removal activities at the Site were required to be overseen by an OHA-licensed drug lab decontamination contractor, including the preparation of the Removal Action Work Plan and final reporting.

DEQ issued Task Order 73-18-12 to MFA in January 2020 and held a preliminary Site visit with MFA on February 4, 2020. MFA issued a request for bid documents for drug lab clean up and waste removal services in early June 2020 and held a pre-bid Site walk with prospective bidders (licensed drug lab decontamination firms) on June 23, 2020. Three prospective bidders attended the Site walk, but only one submitted a bid. This resulted in significant delays as DEQ re-evaluated the scope of work and re-bid the project.

In January 2022, DEQ began coordination with the U.S. Environmental Protection Agency (EPA) Superfund and Emergency Management Division to evaluate the need for a Time Critical Removal Action (TCRA) for hazardous materials at the Site. A Removal Site Evaluation was performed by EPA

contractors in February and March 2022, with results identifying ACM, hazardous substances, and contaminated soil. EPA conducted the TCRA in November 2022, which included removal and disposal of ACM, chemicals, petroleum, and other potential hazardous materials. These actions resulted in the removal of 20 cubic yards of ACM and 16 tons of petroleum-contaminated soil from six different locations at the Site. EPA and its contractors also segregated solid waste to the extent practicable and staged materials near the main access off Forest Creek Road for future removal actions by DEQ. The TCRA by EPA changed the scope of work for this Site, with the remaining wastes including only solid wastes such as vehicles, wood waste, construction debris, waste tires, and general household trash, necessitating revision of MFA's subcontractor solicitation approach.

MFA initiated a second subcontractor solicitation in May 2023, and in November and December 2023, MFA coordinated the removal of all remaining solid waste at the property by Anderson Environmental Contracting, LLC of Kelso, Washington, including all building remnants and vehicles. After OHA approved the Removal Action Report and the application for Certificate and Affidavit of Completion and Compliance, it issued a Certificate of Fitness for the Site in a letter dated April 29, 2024. DEQ requested an assessment of soil conditions at the site to evaluate potential risks to human health and the environment. These subsequent environmental investigations (i.e., the surface soil evaluation described in this work plan) and removal of contaminated material from the Site did not need to be overseen by an OHA-licensed drug lab decontamination contractor.

The historical mismanagement of waste and the illicit manufacture of drugs at the property potentially released hazardous substances at the Site, including fuels, lubricants, solvents containing ammonia, benzene, chloroform, ethyl ether, hexane, hydrochloric acid, hydrogen peroxide, hydroiodic acid, lead acetate, lithium aluminum hydride, mercuric chloride, palladium, red phosphorus, sodium cyanide, and sulfuric acid, cadmium, lead, zinc, as well as phthalates into soils. DEQ does not know if tire fires occurred at the property, but if so, they can release harmful emissions into the air that can disperse over a wide area. Such emissions can contain carcinogens, dioxin, heavy metals, sulfur oxides, and volatile organic compounds. Combustion of tires can also result in the generation of pyrolytic oil, which can contain hazardous heavy metals such as arsenic, cadmium, chromium, lead, and carcinogenic compounds such as polycyclic aromatic hydrocarbons.

3 Current and Reasonably Likely Future Uses of Land and Beneficial Uses of Water

To evaluate the potential risks posed by the Site to human health and ecological receptors, the current and reasonably likely future land and water uses within the locality of the facility (LOF) were identified (the "LOF" is defined below). The results of this evaluation are presented below.

3.1 Locality of Facility

The LOF is any point where a human or an ecological receptor contacts or is reasonably likely to come into contact with chemical constituents from the facility (i.e., the Site). The LOF considers the likelihood of the chemical constituents migrating over time. Chemical data from the Site explorations are typically used to approximate the LOF. It is assumed that the LOF includes the entirety of the Site for surface and subsurface soils. Although the majority of stormwater is assumed to infiltrate on the Site, there could be discharge to the two creeks that cross the Site. The extent of LOF downgradient of the Site, through water migration has not been established.

3.2 Land Use

A land use survey was performed for the LOF in general accordance with the DEQ guidance for consideration of land use (DEQ 1998a). The current and reasonably likely future uses of land and water at the Site determine the types of human or ecological receptors that could contact impacted environmental media.

According to the County Assessor's Office, the Site is zoned RR5, which is defined as exclusive to rural residential property use. According to the County, All adjacent properties are also zoned RR5. Potential current and future receptors in the LOF include residential, as well as occupational, construction, and excavation workers. Current and reasonable likely future ecological receptors include local birds, mammals, fish, insects, and plants.

3.3 Groundwater Use

A water use survey was performed for the LOF in general accordance with the DEQ guidance for beneficial water use (DEQ 1998b). A search of the OWRD database and OWRD Well Report Mapping Tool (OWRD 2025a) located 70 wells within approximately one-mile distance of the Site. The wells were completed to total drilled depth of between 20 to 500 feet bgs. First water for the wells ranged between 18 and 365 feet bgs. Approximately 16 of the wells are not associated with an address, and are instead tied to the township, range, and section within one-mile distance of the Site. Locations that could be mapped were reviewed. Five wells are believed to be within 500 feet of the Site. Those wells are detailed below and well logs are presented in Appendix A.

- JOSE 6043—No address provided, mapped based on township, range, section, and quarter-quarter. The domestic water well was drilled to a completed depth of 100 feet bgs, with first water measured at 90 feet bgs. The lithology indicates that clays were encountered from 0 to 22 feet bgs, heavy clay and cracked rock from 22 to 90 feet bgs, and fractured shall from 90 to 100 feet bgs. The well was drilled in October 1976.
- JOSE 59954—Located on a parcel that is present 250 feet north of the Site. The domestic water well was drilled to a completed depth of 100 feet bgs. The well was cased from 2 to 68 feet bgs, with a bentonite seal from 0 to 18 feet bgs. Lithology indicates that clays were present as a significant portion of the soils from 0 to 30 feet bgs, before transitioning to sands and gravels. The well was drilled in November 2016.
- JOSE 60749—Located on a parcel that is present 200 feet east of the Site, across Forest Creek Road. The domestic water well was drilled to a completed depth of 200 feet bgs. The well was cased from 2 to 200 feet bgs, with a bentonite seal from 0 to 18 feet bgs. Lithology indicates

that clays were encountered for the first 11 feet before transitioning to shales. The well was drilled in December 2019.

- JOSE 10871—Located on a parcel that is present 300 feet south of the Site. The domestic water well was drilled to a completed depth of 100 feet bgs. The well was cased from 0 to 80 feet, with a bentonite seal from 1 to 18 feet bgs. Lithology indicates that clays with gravel were encountered from 0 to 65 feet, before transitioning to medium gravels. The well was drilled in November 1981.
- JOSE 6046— No address provided, mapped based on township, range, section, and quarter-quarter. The domestic water well was drilled to a completed depth of 60 feet bgs with a casing from 0 to 44 feet bgs. Lithology indicates that clays with boulders or clays with gravel were encountered for the first 45 feet before transitioning to boulders with gravel. The well was drilled in August 1969.

MFA did not conduct a door-to-door water use survey as part of this SA.

3.4 Surface Water

The Site is crossed by two named surface water features, Haven Creek and Thompson Creek. Haven Creek flows south to north, combining with Thompson Creek north of the Site. As described in Section 2.2, both Haven Creek and Thompson Creek are tributaries of the Illinois River, which itself is a tributary of the Rogue River. According to the U.S. Fish and Wildlife Service's National Wetland Inventory, these creeks are riverine habitat where crossing the Site (USFW 2025).

In addition to ecological use of the surface water, five water rights permits for irrigation and storage are associated with the property adjacent to the south (upstream) of the Site (OWRD 2025b). An additional three water right permits are on file for use of surface water from Thompson Creek within one-mile downstream of the Site for irrigation. Certificate 13838 is associated with irrigation use of water from Thompson Creek, approximately 0.25 mile downstream of the Site. A copy of Certificate 13838 is provided in Appendix A.

3.5 Beneficial Water Use Determination

MFA reviewed available water supply well logs and identified a total of 70 wells present within one mile of the Site. A municipal water source was not identified in the surrounding area. Five wells are believed to be within 500 feet of the Site and are registered for domestic use. Ecological and water use rights are identified in Haven Creek and Thompson Creek and are present within the presumed LOF. Based on these findings, beneficial uses of surface/groundwater are present within the LOF.

4 Site Investigation Activities

The SA activities were determined based on data gaps identified during previous Site activities. The planned activities include the collection of surface soil samples from areas of suspected contamination to identify potential contaminant impacts and to screen remaining areas of the Site to

inform future cleanup actions (if warranted), development, and reuse. This section presents the scope of work that will be performed to accomplish these activities.

SA activities performed to complete the scope of work identified in Section 1.2 included the collection of composite and ISM soil samples from the surface soils for chemical analysis and assessment of ecological conditions of the Site (see Section 4.4). These assessment activities were performed in general accordance with the DEQ-approved SA Work Plan and DEQ's Brownfield Program Quality Assurance Project Plan (DEQ 2016) and Decision Unit Characterization (DEQ 2020a) guidance document. A photograph log is included as Appendix B. This section presents the scope of work conducted to accomplish these activities.

4.1 Preparatory Activities

Site Health and Safety Plan. MFA prepared a site-specific health and safety plan (HASP) for the SA activities. The HASP was prepared in general accordance with the Occupational Safety and Health Act and Oregon Administrative Rules (OARs). A copy of the HASP maintained onsite for use by MFA staff during the field activities.

Underground Utility Location. A public utility notification request to mark any subsurface structures in the vicinity of the Site was submitted through the Oregon Utility Notification Center.

Property Access and Work Notification. Site access is controlled by the County, who is the current property owner. DEQ and the County have entered into an Access Agreement that provides for DEQ's legal access to the Site property to facilitate the environmental investigation of—and removal or remedial actions at—the property. MFA notified the DEQ and the County of the proposed work schedule, and access to the Site was handled through the Access Agreement.

Site Security and Safety Precautions. For the safety of Site workers, all Site work was conducted by MFA in pairs, where no one person was on-site alone, and field personnel checked in with an in-office member of the project team at the end of each field day. Additionally, MFA was joined by a representative of the Josephine County Sheriff's Office during an initial Site walk on the first day of the field event to assess the current property status and to ensure that no one had been residing at the Site. The Josephine County Sheriff's Office was available to respond to the Site during all Site work.

MFA staff inspected the “tank” trench and associated chain-link fence that had been erected along the eastern Site boundary during prior waste removal activities. The fence remained in-place and in adequate condition to block and deter people from accessing the Site by vehicle from Forest Creek Road. During the SA activities, there was no evidence of recent or ongoing waste dumping, habitation, or illicit activity.

4.2 Assessment Activities

4.2.1 Surface Soil Assessment – Composite Sampling

On December 17 and 18, 2024, composite surface soil samples were collected in general accordance with MFA SOPs 4 and 5 (see Appendix C) and the methods described in the SA Work Plan (MFA 2024). The purpose of the composite surface soil samples were intended to assess the

three areas of concern identified during the waste removal activities completed in December 2023. The three areas selected for additional assessment include:

- The former drum storage area near the entrance to the Site along Forest Creek Road
- An area of stained soil (possible burn area) underneath the former tire pile at the Site
- A former burn area observed on the back portion of the property for the characterization of visibly blackened soils from the burning of unknown materials.

Composite surface soil sample locations are shown on Figure 4-1.

Five-point composite soil samples were collected from each of the areas discussed above. A duplicate sample was also collected from the suspected burn area. At each location, the sample was comprised of five subsamples that were collected from similarly spaced locations within the composite sample area. Each subsample was collected from a depth of 0 to 6-inches bgs, comprised of a homogenous soil texture, and with the same approximate volume. All samples were collected using stainless-steel hand tools that were decontaminated between each sampling location to prevent cross-contamination. Decontamination activities were completed in accordance with SOP 1 (Appendix C).

4.2.2 Surface Soil Assessment – ISM Sampling

Between December 17 and December 23, 2024, MFA collected four primary and two duplicative ISM samples at the Site. Surface soil ISM samples were collected in accordance with MFA SOPs 4 and 5 (Appendix C). The ISM approach (DEQ 2020a) was used to collect representative surface soil samples from larger areas of the Site.

ISM is a structured composite sampling and processing protocol that reduces data variability and increases the probability of identifying areas of elevated concentrations, thereby increasing data representativeness. ISM obtains data that are more representative of average concentrations than data from discrete or conventional composite samples and is particularly appropriate when the receptors of concern are expected to be exposed to larger areas (i.e., multiple areas within a property) rather than discrete locations. ISM provides a single sample for analysis with a concentration representative of the mean concentration in a predefined area termed a decision unit (DU).

The Site has been segregated into four areas selected for further evaluation based on historical Site use and observation made during past Site work. The four areas (DUs) selected for ISM sampling are shown on Figure 4-1 and described below:

- DU-1: The “*front portion*” east end of the parcel on the north side of the property, between Haven Creek and Forest Creek Road. This excludes the former drum storage and tire pile storage areas.
- DU-2: The “*front portion*” east end of the parcel on the south side of the property, between Haven Creek and Forest Creek Road.
- DU-3: The “*middle portion*” of the parcel between Thompson Creek and Haven Creek.
- DU-4: The “*back portion*” of the parcel, west of Thompson Creek to the western parcel boundary, excluding the burn area.

Subsamples (called increments) were manually collected from 0 to 6-inches bgs, following removal of the surface vegetation, at multiple locations placed in a systematic random sampling scheme in each DU, as detailed in the SA Work Plan (MFA 2024). The increments were combined into one ISM sample for each DU, processed by the laboratory, and analyzed to obtain representative average contaminant concentrations for COPCs within that DU. Fifty increments were collected for each ISM sample. Sampling was conducted using protocols developed by the Interstate Technology & Regulatory Council and DEQ guidance documents (ITRC 2020, DEQ 2020a).

Increment locations for each DU were selected based on a systematically random sampling scheme. The locations of each DU and the increment locations are shown on Figure 4-1. During the collection of ISM surface soil samples from the front (eastern) portion of the property (i.e., DU-1 and DU-2), significant gravels and cobbles were encountered in the surface soil, making sample collection with hand tools difficult and laborious. Minor adjustments of less than a few feet were made in the field to avoid obstacles (e.g., tree roots, rocks, etc.).

For quality assurance, duplicate and triplicate ISM samples were collected in DU-1. To avoid impacting DU sample concentrations from areas already assessed by the composite samples, ISM increments were not collected from areas detailed in Section 4.2.1.

4.2.3 Soil Sampling for Volatiles Analysis

ISM and composite soil samples collected for analysis of VOCs were collected in accordance with Section 4.1.4 of the Work Plan (MFA 2024). Sample aliquots for volatiles analysis were collected from surface soil in the immediate vicinity of each increment (within one-foot) using a laboratory-supplied Terra Core Sampler™ and collected using the EPA Method 5035 methodology in accordance with MFA SOP 5 (Appendix C). Each aliquot, consisting of a 5-gram plug of soil was added to a larger sample container and preserved with methanol—supplied by the laboratory—added in the field. In addition, a 2-ounce unpreserved laboratory-supplied soil jar was collected from each DU and each composite soil sample location for dry weight.

4.3 Waste Handling and Disposal

Wastes generated during this project consisted of small quantities of excess soil and decontamination water generated during decontamination of non-disposable field equipment. Following composite and ISM sampling, any excess soil was replaced at the sampling location and covered with removed vegetation, if any. Decontamination water was land-applied at the Site. Disposable sampling equipment and personal protective equipment (PPE) was disposed of as solid waste offsite.

4.4 Ecological Scoping

Ecological features were assessed by evaluating the habitat within the ecological risk assessment study area (i.e., the LOF). Appendix D presents the Level 1 Scoping Checklist used in this evaluation, which was obtained from DEQ's Conducting Ecological Risk Assessments (DEQ 2020b). Threatened and endangered species were not observed at the Site, however habitat to support plants, birds, and mammals was identified. As stated in Section 3.4, the National Wetland Inventory classifies the portions of Thompson and Haven Creek that are present on the Site as riverine habitat (USFW

2025). A map showing wetlands and surface water features in the vicinity of the Site is provided in Appendix D.

5 Chemical Analyses and Results

The soil samples were submitted to Pace Analytical National Laboratory in Mount Juliet, Tennessee, under their Price Agreement with the State of Oregon. The laboratory analytical testing for dioxins and furans were subcontracted by Pace Analytical National to Eurofins Environmental Testing. MFA prepared a data validation memorandum that presents the quality assurance/quality control review of the data. The results of the data quality review indicate that the data are of acceptable quality and are suitable for their intended purpose. Additional discussion regarding the data quality is available in the data validation memorandum. Copies of the laboratory analytical reports and data validation memorandum are presented in Appendix E.

5.1 Analyses Performed

Composite and ISM surface soil samples were analyzed for following COPCs:

- Gasoline-range total petroleum hydrocarbons (TPH) by Northwest Method NWTPH-Gx
- Diesel-range and oil-range TPH by Northwest Method NWTPH-Dx
- Total priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) by EPA Method 6010D/7471B
- Pesticides by EPA Method 8081B
- Herbicides by EPA Method 8151A
- VOCs by EPA Method 8260D
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270-SIM
- Dioxins and furans by EPA Method 1613.

5.2 Chemical Results

The analytical results are presented in Table 5-1, and laboratory reports and the data validation memorandum are presented in Appendix E.

5.2.1 Composite Soil Results

Diesel-range TPH, metals, VOCs, PAHs, and dioxin/furans were detected above the method reporting limits in the composite soil samples analyzed. Results are summarized as follows:

Gasoline-range TPH—None of the composite samples had detections above the method reporting limits.

Diesel-range TPH—Diesel-range TPH was detected in each of the samples. Concentrations ranged from 12.3 to 56.1 (estimated) milligrams per kilogram (mg/kg) in composite soil samples.

Motor oil-range TPH—Motor oil-range TPH was detected in each of the samples. Concentrations ranged from 46.1 to 173 mg/kg in composite soil samples.

Total metals—Each of the metals analyzed were detected in at least one composite sample. Detections summaries are presented below:

- Antimony was detected in one sample (Burn Area duplicate) at an estimated concentration of 1.28 mg/kg.
- Arsenic was detected in all samples at concentrations ranging from 2.67 (estimated) to 3.54 mg/kg.
- Beryllium was detected in three of the four samples, ranging between 0.101 (estimated) to 0.644 mg/kg.
- Cadmium was detected in two samples at concentrations of 0.597 and 3.79 mg/kg.
- Chromium was detected in all samples at concentrations ranging from 74.5 to 186 mg/kg.
- Copper was detected in all samples at concentrations ranging from 44 to 119 mg/kg.
- Lead was detected in all samples at concentrations ranging from 16.2 to 28.6 mg/kg.
- Nickel was detected in all samples at concentrations ranging from 56.7 to 213 mg/kg.
- Mercury was detected in two samples at concentrations of 0.0545 to 0.0812 mg/kg.
- Selenium was detected in all samples at concentrations ranging from 1.97 (estimated) to 3.02 mg/kg.
- Silver was detected in all samples at concentrations ranging from 1.53 to 2.87 mg/kg.
- Thallium was detected in all samples at concentrations ranging from 1.45 (estimated) to 2.44 (estimated) mg/kg.
- Zinc was detected in all samples at concentrations ranging from 118 to 289 mg/kg.

Chlorinated herbicides—None of the composite samples had detections above the method reporting limits.

Pesticides—None of the composite samples had detections above the method reporting limits.

VOCs—Each of the composite samples had detections of individual VOCs analytes. Detection summaries for VOCs are presented below:

- 4-Isopropyltoluene was detected in three samples ranging between 0.00489 (estimated) to 0.00768 (estimated) mg/kg.
- 4-Methyl-2-pentanone was detected in one sample (Tire Pile) at 0.0258 (estimated) mg/kg.
- Chlorobenzene was detected in one sample (Tire Pile) at 0.000425 (estimated) mg/kg.
- Styrene was detected in one sample (Tire Pile) at 0.000304 (estimated) mg/kg.
- Toluene was detected in all of the samples ranging between 0.00186 (estimated) to 0.00388 (estimated) mg/kg.

- Total xylenes was detected in two samples at 0.0012 (estimated) and 0.00437 (estimated) mg/kg.

PAHs—One analyte was detected in the PAH analysis. Naphthalene was detected at 0.00618 (estimated) mg/kg in the Burn Area duplicate sample. All other analytes were not detected above method reporting limits.

Dioxin/Furans—Each of the composite samples had detections of individual dioxin/furans analytes. Key detection of dioxin/furans are presented below:

- 1,2,3,4,6,7,8-HpCDD was detected in three samples ranging between 14.1 to 251 picograms per gram (pg/g).
- 1,2,3,4,6,7,8-HpCDF was detected in two samples at 20.7 and 429 pg/g.
- 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDD, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8-PeCDD, 1,2,3,7,8-PeCDF, 2,3,4,6,7,8-HxCDF, 2,3,4,7,8-PeCDF, and 2,3,7,8-TCDD were each detected only in the Tire Pile sample. Individual concentrations are shown on Table 5-1.
- 2,3,7,8-TCDF was detected in two samples at 1.05 and 14.3 pg/g.
- OCDD was detected in each of the samples ranging between 41.9 and 1,320 pg/g.
- OCDF was detected in two samples at 33.9 and 244 pg/g.

5.2.2 ISM Soil Results

Gasoline and diesel-range TPH, metals, VOCs, PAHs, and dioxin/furans were detected above the method reporting limits in the ISM soil samples analyzed. Results are summarized as follows:

Gasoline-range TPH—Gasoline-range TPH was detected in three of the six samples, ranging in concentration between 4.35 (estimated) to 8.77 (estimated) mg/kg.

Diesel-range TPH—Diesel-range TPH was detected in each of the samples. Concentrations ranged from 16.6 to 94.2 mg/kg.

Motor oil-range TPH—Motor oil-range TPH was detected in each of the samples. Concentrations ranged from 98.4 to 431 mg/kg.

Diesel+Motor oil-range TPH—A combination of diesel+motor oil-range TPH was detected in each of the samples. Concentrations ranged from 58 to 514 mg/kg.

Total metals—Ten of the thirteen metals were detected in at least one of the ISM samples. Detections summaries are presented below:

- Arsenic was detected in all samples at concentrations ranging from 2.08 (estimated) to 3.28 mg/kg.
- Beryllium was detected in all samples at concentrations ranging from 0.189 (estimated) to 0.623 mg/kg.
- Cadmium was detected in all samples at concentrations ranging from 0.325 (estimated) to 1.9 mg/kg.
- Chromium was detected in all samples at concentrations ranging from 81.9 to 179 mg/kg.
- Copper was detected in all samples at concentrations ranging from 49.6 to 225 mg/kg.

- Lead was detected in all samples at concentrations ranging from 21.3 to 61.2 mg/kg.
- Nickel was detected in all samples at concentrations ranging from 78.2 to 242 mg/kg.
- Mercury was detected in all samples at concentrations ranging from 0.0421 (estimated) to 0.184 mg/kg.
- Silver was detected in all samples at concentrations ranging from 0.156 (estimated) to 0.464 (estimated) mg/kg.
- Zinc was detected in all samples at concentrations ranging from 134 to 1,040 mg/kg.

Chlorinated herbicides—None of the composite samples had detections above the method reporting limits.

Pesticides—None of the composite samples had detections above the method reporting limits.

VOCs—Each of the composite samples had detections of individual VOCs analytes. Detection summaries for VOCs are presented below:

- 1,2,4-Trimethylbenzene was detected in two samples at 0.00288 (estimated) and 0.00363 (estimated) mg/kg.
- 2-Butanone was detected in one sample (DU1 duplicate) at 0.118 (estimated) mg/kg.
- 4-Isopropyltoluene was detected in all samples ranging between 0.00556 (estimated) to 0.0724 (estimated) mg/kg.
- 4-Methyl-2-pentanone was detected in one sample (DU1 primary) at 0.00903 (estimated) mg/kg.
- Acetone was detected in one sample (DU1 primary) at 0.169 (estimated) mg/kg.
- Benzene was detected in four of the six samples at concentrations ranging from 0.000703 (estimated) to 0.00431 mg/kg.
- Chlorobenzene was detected in one sample (DU2) at 0.00148 (estimated) mg/kg.
- Ethylbenzene was detected in two samples at 0.00186 (estimated) and 0.00232 (estimated) mg/kg.
- Styrene was detected in three samples ranging from 0.00037 (estimated) to 0.00119 (estimated) mg/kg.
- Toluene was detected in all of the samples ranging between 0.00263 (estimated) to 0.00617 (estimated) mg/kg.
- Trichlorofluoromethane (Freon 11) was detected in two samples at 0.00345 (estimated) and 0.00437 (estimated) mg/kg.
- Total xylenes was detected in four samples ranging between 0.0033 (estimated) to 0.00766 (estimated) mg/kg.

PAHs—Samples DU1 through DU3 each had a number of PAH detections. DU4 did not have detections above the method reporting limit. Detections are presented below:

- 2-Methylnaphthalene was detected in one sample (DU1 primary) at a concentration of 0.00676 (estimated) mg/kg.
- Benzo(b)fluoranthene was detected in five of the six samples at concentrations ranging from 0.00199 (estimated) to 0.0031 (estimated) mg/kg.

- Benzo(ghi)perylene was detected in four of the six samples at concentrations ranging from 0.00304 (estimated) to 0.00451 (estimated) mg/kg.
- Fluoranthene was detected in five of the six samples at concentrations ranging from 0.00243 (estimated) to 0.0051 (estimated) mg/kg.
- Naphthalene was detected in two of the six samples at concentrations of 0.00833 (estimated) and 0.00894 (estimated) mg/kg.
- Phenanthrene was detected in five of the six samples at concentrations ranging from 0.00339 (estimated) to 0.00749 mg/kg.
- Pyrene was detected in five of the six samples at concentrations ranging from 0.0022 (estimated) to 0.00499 (estimated) mg/kg.

Chlorinated herbicides—None of the ISM samples had detections above the method reporting limits.

Pesticides—None of the ISM soil samples had detections above the method reporting limits.

Dioxin/Furans—Each of the ISM samples had detections of individual dioxin/furans analytes. Key detection of dioxin/furans are presented below:

- 1,2,3,4,6,7,8-HpCDD was detected in all of the samples ranging between 24.2 to 149 pg/g.
- 1,2,3,4,6,7,8-HpCDF was detected in four samples at concentrations ranging from 47.2 to 226 pg/g.
- 1,2,3,4,7,8,9-HpCDF was detected in one sample (DU2) at a concentration of 8.57 pg/g.
- 1,2,3,4,7,8-HxCDF was detected in five samples at concentrations ranging from 6.78 to 45.8 pg/g.
- 1,2,3,6,7,8-HxCDD was detected in four samples at concentrations ranging from 5.15 to 15 pg/g.
- 1,2,3,6,7,8-HxCDF was detected in four samples at concentrations ranging from 7.99 to 38.6 pg/g.
- 1,2,3,7,8,9-HxCDD was detected in three samples at concentrations ranging from 5.79 to 14.7 pg/g.
- 1,2,3,7,8-PeCDD was detected in one sample (DU2) at a concentration of 7.64 pg/g.
- 1,2,3,7,8-PeCDF was detected in two samples at concentrations of 6.58 and 17.9 pg/g.
- 2,3,4,6,7,8-HxCDF was detected in five samples at concentrations ranging from 10.2 to 51.8 pg/g.
- 2,3,4,7,8-PeCDF was detected in five samples at concentrations ranging from 7 to 39.7 pg/g.
- 2,3,7,8-TCDF was detected in five samples at concentrations ranging from 4.08 to 20 pg/g.
- OCDD was detected in all samples at concentrations ranging from 214 to 1,030 pg/g.
- OCDF was detected in all samples at concentrations ranging from 15.1 to 65.8 pg/g.

6 Conceptual Site Model

A conceptual site model summarizes the potential receptors and exposure pathways to contaminants at the Site under current or reasonably anticipated future conditions. To evaluate ecological and human exposure to residual chemical contamination requires an assessment of the type and extent of that exposure, based on current and reasonably likely future use. DEQ publishes RBCs for contaminants commonly encountered for different types of exposure scenarios and receptors. RBCs are conservative estimates of protective levels of contaminants in soil, groundwater, and air.

6.1 Sources

The primary sources of contamination at the Site are due to releases of hazardous substances to the shallow soils from illegal disposal of wastes as detailed in Section 2.3. Dumping of waste products at and burning of materials on the Site appear to have ceased since the acquisition of the Site by the County in 2019 and the waste removal actions completed in 2024. Secondary sources of some COPCs include natural background levels of metals (from regional geology) and wildfires and other natural events (dioxins).

6.2 Exposure Pathways and Receptors

Current and reasonably likely future land uses (as discussed in Section 3.0) at the Site were used to identify potentially complete current and future exposure pathways at the Site. The zoning defined by the County allows residential and commercial uses of the area. Residential and commercial uses associated with agricultural uses are also evident in the surrounding area. Therefore, potential human health receptors present at the Site include residents, occupational workers, construction workers, excavation workers, and trespassers.

Beneficial water uses (as discussed in Section 3.5) are present within, adjacent to, or downgradient of the LOF. Groundwater wells are noted on the adjacent property to the south and at least 4 other groundwater wells are within 500 feet of the Site. Surface water rights are also present to the north and south of the Site.

Additionally, based on the findings of ecological scoping (see Section 4.4 and Appendix D), potential ecological receptors present at the Site could include plants and invertebrates exposed to surface soils, threatened and endangered (T&E) and non-T&E birds and mammals (direct exposure to surface soils), birds and mammals ingesting prey that have accumulated contaminants from surface soils (i.e., bioaccumulation), fish and aquatic invertebrates exposed to surface waters at the Site, and wildlife ingesting surface water at the Site.

The table below shows the exposure pathways and potential receptors for the Site:

Pathway	Potential Receptor	Complete Pathway?	Basis for Selection/Exclusion
SOIL			
Ingestion, dermal contact, and inhalation	Residential	Potential	Potential future residents, trespassers, or occupational workers could come in contact with impacted Site surface soil. See Section 3 for additional information.
	Occupational		
	Construction worker	Potential	There is the potential for future construction and/or excavation workers to come in contact with impacted Site soils.
	Excavation worker		
Volatilization to outdoor air	Residential	Potential	Potential future residents, trespassers, or occupational workers could be exposed to contaminants through outdoor air.
	Occupational		
Leaching to groundwater	Residential	Yes	No on-site wells were identified, however, nearby properties have domestic water wells and future residential and occupational use is allowed under current zoning.
	Occupational		
Ecological: Direct Toxicity	Plants and Invertebrates	Yes	Ecological receptors could come in contact with impacted Site surface soil.
Ecological: Ground Feeding, Top Consumer	Birds and Mammals	Yes	Ecological receptors could come in contact with impacted Site surface soil or prey that has come into contact with impacted Site surface soil (bioaccumulation).
GROUNDWATER/SURFACE WATER			
Ingestion and inhalation from tap water	Residential	Potential	There is potential that this pathway is complete. There are a number of wells nearby the Site and the LOF for groundwater/surface water has not been established.
	Occupational	Potential	
Vapor intrusion into buildings and volatilization to outdoor air	Residential	Potential	This is a potentially complete pathway, as the groundwater/surface water LOF has not been established.
	Occupational	Potential	
Groundwater in excavation	Construction and excavation worker	Potential	Depth to groundwater is not currently known. There are two surface water bodies that cross the Site. Groundwater well logs for the greater area indicate that productive aquifers typically encounter first water at depths exceeding 18 bgs, however, clays present in the near surface soils (shallower than 18 feet bgs) could cause perching of groundwater.
Ecological: Exposure to Surface Water	Ecological (Fish and Aquatic Invertebrates)	Potential	Ecological receptors could come in contact with potentially impacted surface water from the Site.
Ecological: Wildlife Ingestion of Surface Water	Ecological (Wildlife)	Potential	Ecological receptors could ingest potentially impacted surface water from the Site.

Notes: Yes = Pathway is complete; No = Pathway is incomplete; Potential = Pathway may be potentially complete in the future

6.3 Risk-Based Screening of Analytical Data

The data collected during this scope of work were compared to the following applicable DEQ RBCs (i.e., screening criteria for complete or potentially complete pathways, as discussed above):

- Ingestion, dermal contact, and inhalation (soil direct contact) for residential, occupational, construction, and excavation workers
- Volatilization to outdoor air for residential and occupational receptors (soil)
- Leaching to groundwater (soil) for residential and occupational receptors.

Results were also screened against DEQ's background metal concentrations (DEQ 2013), ecological risk screening for mammals and birds, direct toxicity to plants and invertebrates (DEQ 2020b), and EPA's Regional Screening Levels (RSLs) for residential and industrial soil (EPA 2024).

6.3.1 Soil

Soil analytical results are presented in Table 5-1.

6.3.1.1 Background Metals

Concentrations of metals occur naturally in soil; therefore, the total metals data was compared against the DEQ-established background concentrations for the Klamath Mountain range. Detections above applicable screening levels, but below regional background were not considered exceedances of a screening level.

6.3.1.2 Ingestion, Dermal Contact, and Inhalation (Direct Contact)

Composite Soil—Each of the composite soil samples exceeded the direct contact RBCs for residential receptor exposure to dioxin/furan toxicity equivalence (TEQ). The TEQ, is a calculated value that is the sum of each congener concentration multiplied by a corresponding mammalian toxicity equivalence factor value that is established by World Health Organization (Van den Berg, M. et al. 2006). For this calculation, non-detect values for individual congeners are multiplied by one-half the reporting limit. Additionally, the Tire Pile composite sample also exceeded the occupational exposure RBC.

ISM Soil—Each of the ISM samples exceeded the one or more direct contact RBCs for dioxin/furan TEQ. Samples DU1 (primary, duplicate, and triplicate), DU2, and DU3 exceeded residential and occupational direct contact RBC. Sample DU4 exceeded the residential direct contact RBC.

6.3.1.3 Volatilization to Outdoor Air

None of the samples exceeded any of the RBCs for volatilization to outdoor air.

6.3.1.4 Leaching to Groundwater

Composite Soil—Samples collected from the Drum Area and Tire Pile areas exceed the residential leaching to groundwater RBC for dioxin/furan TEQ. The Tire Pile sample also exceeded the RBC for occupational leaching to groundwater.

ISM Soil

- Lead—Samples DU1 (primary, duplicate, and triplicate), DU2, and DU3 exceeded the leaching to groundwater RBC for residential and occupational receptors.
- Dioxin/Furan TEQ—Samples DU1 (primary, duplicate, and triplicate) and DU3 exceeded the residential leaching to groundwater RBC, and DU2 exceeded both residential and occupational leaching to groundwater RBCs.

6.3.1.5 Ecological RBCs for Direct Toxicity to Plants and Invertebrates

Composite Soil—Each of the composite soil samples exceeded the direct toxicity for one or more total metals concentrations. Exceedances are summarized below:

- Copper—The Tire Pile sample exceeded the plant and invertebrates direct toxicity RBCs.
- Selenium—Burn Area (primary and duplicate), Drum Area, and Tire Pile samples exceeded the plant direct toxicity RBC. None of these detections exceeded direct toxicity for invertebrates.
- Thallium—Burn Area (primary and duplicate), Drum Area, and Tire Pile samples exceeded the plant direct toxicity RBC.
- Zinc—Burn Area (primary and duplicate) and Tire Pile samples exceeded the plant and invertebrates direct toxicity RBCs.

ISM Soil

- Diesel+Oil—The diesel+oil ecological RBC is a calculated sum of the detection of diesel-range TPH and motor oil-range TPH values. Samples DU1 (primary), DU2, and DU4 all exceed the plant and invertebrate direct toxicity RBCs.
- Copper—DU2 sample exceeded the plant and invertebrates direct toxicity RBCs.
- Mercury—DU1 (primary) sample exceeded the invertebrates direct toxicity RBC.
- Zinc—DU1 (primary, duplicate, and triplicate), DU2, and DU3 samples exceeded the plant and invertebrates direct toxicity RBCs.

6.3.1.6 Ecological RBCs for Ground Feeding Birds

Composite Soil

- Cadmium—The Drum Area sample exceeded the T&E and non-T&E RBCs, while the Tire Pile sample only exceeded the T&E RBC.
- Copper—Tire Pile sample exceeded the T&E and non-T&E RBCs.
- Selenium—Burn Area (primary and duplicate), Drum Area, and Tire Pile samples exceeded T&E and non-T&E RBCs.
- Silver—The Tire Pile sample exceeded the T&E RBC.
- Zinc—Burn Area (primary and duplicate) and Tire Pile samples exceeded the T&E and non-T&E RBCs.
- Dioxin/furans—All of the composite samples exceeded one or more of the individual congeners or the dioxin/furan TEQ RBCs for T&E and non-T&E pathways.

ISM Soil

- Cadmium—Samples DU1 (primary, duplicate, and triplicate), DU2, and DU3 exceeded the T&E RBC. Sample DU2 also exceeded the non-T&E RBC.
- Copper—DU2 sample exceeded the T&E and non-T&E RBCs.
- Lead—Samples DU1 (primary, duplicate, and triplicate), DU2, and DU3 exceeded the T&E and non-T&E RBCs.
- Mercury—DU1 (primary) sample exceeded the T&E and non-T&E RBCs.
- Zinc—DU1 (primary, duplicate, and triplicate), DU2, and DU3 samples exceeded the T&E and non-T&E RBCs.
- Dioxin/furans—All of the ISM samples exceeded one or more of the individual congeners or the dioxin/furan TEQ RBCs for T&E and non-T&E pathways.

6.3.1.7 Ecological RBCs for Top Consumer Birds

Composite Soil

- Cadmium—The Drum Area sample exceeded the T&E RBC.
- Copper—Tire Pile sample exceeded the T&E RBC.
- Zinc—Tire Pile sample exceeded the T&E RBC.
- Dioxin/furans—All of the composite samples exceeded one or more of the individual congeners or the dioxin/furan TEQ RBCs for T&E pathway.

ISM Soil

- Cadmium—Samples DU1 (duplicate) and DU2 exceeded the T&E RBC.
- Copper—DU2 sample exceeded the T&E RBC.
- Mercury—DU1 (primary) sample exceeded the T&E RBC.
- Zinc—DU1 (primary, duplicate, and triplicate), DU2, and DU3 samples exceeded the T&E RBC. DU2 also exceeded the non-T&E RBC.
- Dioxin/furans—All of the ISM samples exceeded one or more of the individual congeners or the dioxin/furan TEQ RBCs for T&E pathway.

6.3.1.8 Ecological RBCs for Ground Feeding Mammals

Composite Soil

- Antimony—The Burn Area (duplicate) sample exceeded the T&E RBC.
- Cadmium—The Drum Area and Tire Pile samples exceeded the T&E RBC.
- Copper—Tire Pile sample exceeded the T&E and non-T&E RBCs.
- Selenium—Burn Area (primary and duplicate), Drum Area, and Tire Pile samples exceeded T&E and non-T&E RBCs.
- Thallium—Burn Area (primary and duplicate), Drum Area, and Tire Pile samples exceeded T&E RBC.

- Zinc—Tire Pile sample exceeded the T&E RBC.
- Dioxin/furans—The Tire Pile sample exceeded the T&E and Non-T&E RBCs for all dioxin/furan congeners, except for 1,2,3,7,8,9-HxCDF. All composite soil samples exceeded the T&E and non-T&E RBCs for dioxin/furan TEQ.

ISM Soil

- Cadmium—Samples DU1 (primary, duplicate, and triplicate), DU2, and DU3 exceeded the T&E RBC.
- Copper—DU2 sample exceeded the T&E and non-T&E RBCs.
- Lead—Samples DU1 (primary, duplicate, and triplicate), DU2, and DU3 exceeded the T&E RBC.
- Zinc—DU1 (primary, duplicate, and triplicate), DU2, and DU3 samples exceeded the T&E RBC. DU2 also exceeded the non-T&E RBC.
- Dioxin/furans—All of the ISM samples exceeded one or more of the individual congeners or the dioxin/furan TEQ RBCs for T&E pathway. DU1 (primary, duplicate, and triplicate), DU2, and DU3 exceeded several the T&E and non-T&E RBCs, while DU4 exceeded several T&E RBCs.

6.3.1.9 Ecological RBCs for Top Consumer Mammals

Composite Soil

- Dioxin/furans—All composite soil samples exceeded the T&E and non-T&E RBCs for dioxin/furan TEQ and at least one congener.

ISM Soil

- Dioxin/furans—All of the ISM samples exceeded one or more of the individual congeners or the dioxin/furan TEQ RBCs for T&E and non-T&E pathways.

6.3.1.10 EPA RSLs for Residential and Industrial Soil

Composite Soil

- Thallium—All composite soil samples exceeded the EPA RSL for residential soil for thallium.
- Dioxin/furans—All composite soil samples exceeded the EPA RSL for residential soil for dioxin/furan TEQ. The composite soil sample collected from the tire pile area exceeded the EPA RSL for residential soil for total HxCDDs and the EPA RSL for industrial soil for dioxin/furan TEQ.

ISM Soil

- Dioxin/furans—All ISM samples exceeded the EPA RSL for residential soil for dioxin/furan TEQ. The ISM sample collected from DU2 exceeded the EPA RSL for industrial soil for dioxin/furan TEQ.

6.4 Contaminants of Concern

Each of the COPCs were detected in surface soil samples at the Site, with the exception of chlorinated herbicides and pesticides. Additionally, there were no exceedances of applicable screening levels for gasoline-range TPH, VOCs, or PAHs, as noted in Section 6.3. Based on the results of this site assessment, the contaminants of concern for the Site include TPH (diesel- and oil-range),

total metals (antimony, cadmium, copper, lead, mercury, selenium, silver, thallium, and zinc), and dioxin/furans.

7 Summary and Conclusions

The SA activities included ecological scoping, collection of shallow soil samples (composite and ISM) for chemical analysis, and human health risk screening.

A CSM was developed to identify potentially complete exposure pathways whereby site contamination could potentially pose an unacceptable risk to human and ecological receptors. Chemical data from this investigation was screened against DEQ's RBCs for the identified exposure pathways and receptors.

Based on the results of the assessment, there is a potential risk to current and future residential and occupational receptors at the Site through direct contact (dioxin/furans TEQ) and leaching to groundwater pathways (lead and dioxin/furans TEQ). However, groundwater well logs in the vicinity of the Site indicate that clays are typically encountered from the surface to depths exceeding 60 feet bgs and first water for productive aquifers exceeds 18 feet bgs. Therefore, the leaching to groundwater pathway is likely incomplete.

Ecological risks were also identified, with exceedances of ecological RBCs noted for diesel+oil, total metals (cadmium, copper, lead, mercury, selenium, silver, thallium, and zinc), and both individual congeners and TEQ for dioxin/furans. In certain instances, the detected concentrations of these COPCs exceed their respective ecological RBCs by an order of magnitude or more.

The LOF includes the Site, but off-site impacts have not been evaluated (e.g., soil, surface water, and groundwater).

No obvious impacts to the ecological study area and surrounding area attributable to contaminated environmental media were observed. Obvious impacts would include stressed vegetation, staining, odor, sheen, or other observable nuisances or disruptions to ecological health.

Soil that exceeds human health and ecological RBCs for potentially complete pathways was identified in the top 6 inches at the Site. Based on the findings of this assessment, MFA identified the following data gaps:

- Surface soils in proximity to the creeks have the potential to be eroded, entrained in surface water, and deposited as sediment. Surface waters and sediment at and downgradient of the Site (Thompson and Haven Creeks) have not been assessed. Surface water rights users are present within 0.25-mile downgradient of the Site and ecological receptors are present in the nearby riverine habitat.
- Soil below a depth of 6 inches has not been evaluated at the Site. This could result in exposure to human and ecological receptors (i.e., burrowing insects and mammals).

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Limitations

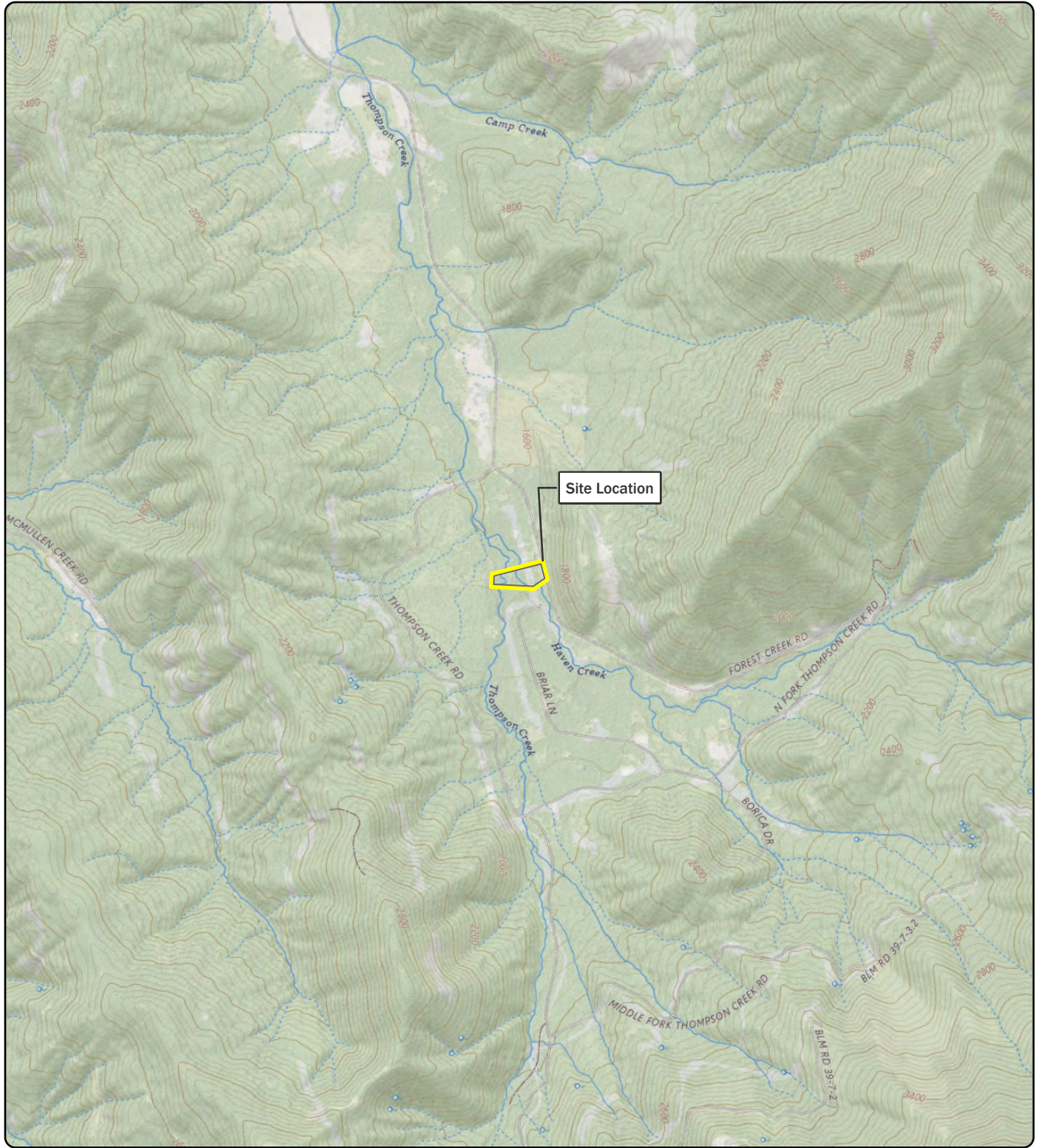
The services undertaken in completing this plan were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This plan is solely for the use and information of our client unless otherwise noted. Any reliance on this plan by a third party is at such party's sole risk.

Opinions and recommendations contained in this plan apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this plan.

Figures



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Notes

U.S. Geological Survey 7.5-minute topographic quadrangle (2020): Holland.
Township 38 south, range 7 west, section 34.

Data Source

Property boundary obtained from Josephine County.



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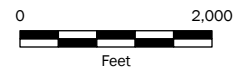
Legend



Site Boundary

Figure 1-1 Site Location

Forest Creek Road Dump Site
Site Assessment Report
Oregon Department of Environmental Quality
113 Forest Creek Road
Selma, OR



Path: X:\0785\12\001\Proj\0785_12_001_005.aprx Fig 2-1 Site Features
Print Date: 11/1/2024
Reviewed By: mwhitson
Produced By: sturner
Project: 0785 12 001

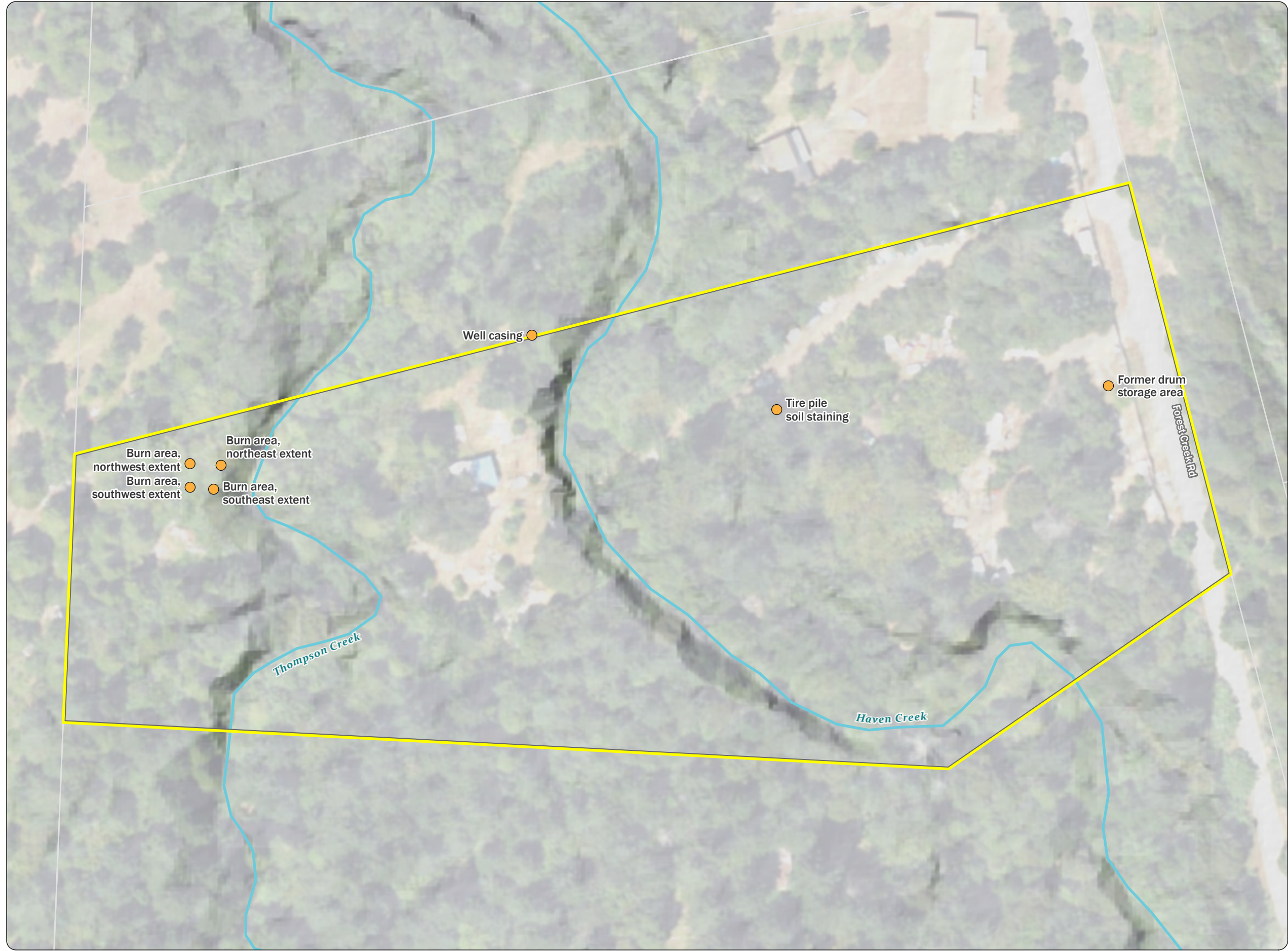


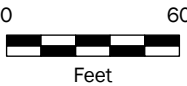
Figure 2-1 Site Features

Forest Creek Road Dump Site
Site Assessment Report
Oregon Department of
Environmental Quality
113 Forest Creek Road
Selma, OR

Legend

- Field Observations
- Stream
- Property Boundary
- Tax Lot

Note
Field observations logged by MFA staff on December 12, 2023 using real-time kinematic global navigation satellite service receiver.



Data Sources
Aerial photograph (2022) obtained from the Oregon Geospatial Enterprise Office; lidar topography (2011) obtained from the Oregon Department of Geology and Mineral Industries; tax lot data obtained from Josephine County.



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Path: X:\0785-12\001\Pro\0785_12_001_005.aprx Fig 3-1 Site Features Proposed Soil Sample Locations
Print Date: 11/1/2024
Reviewed By: mwhitson
Produced By: sturner
Project: M0785-12-001

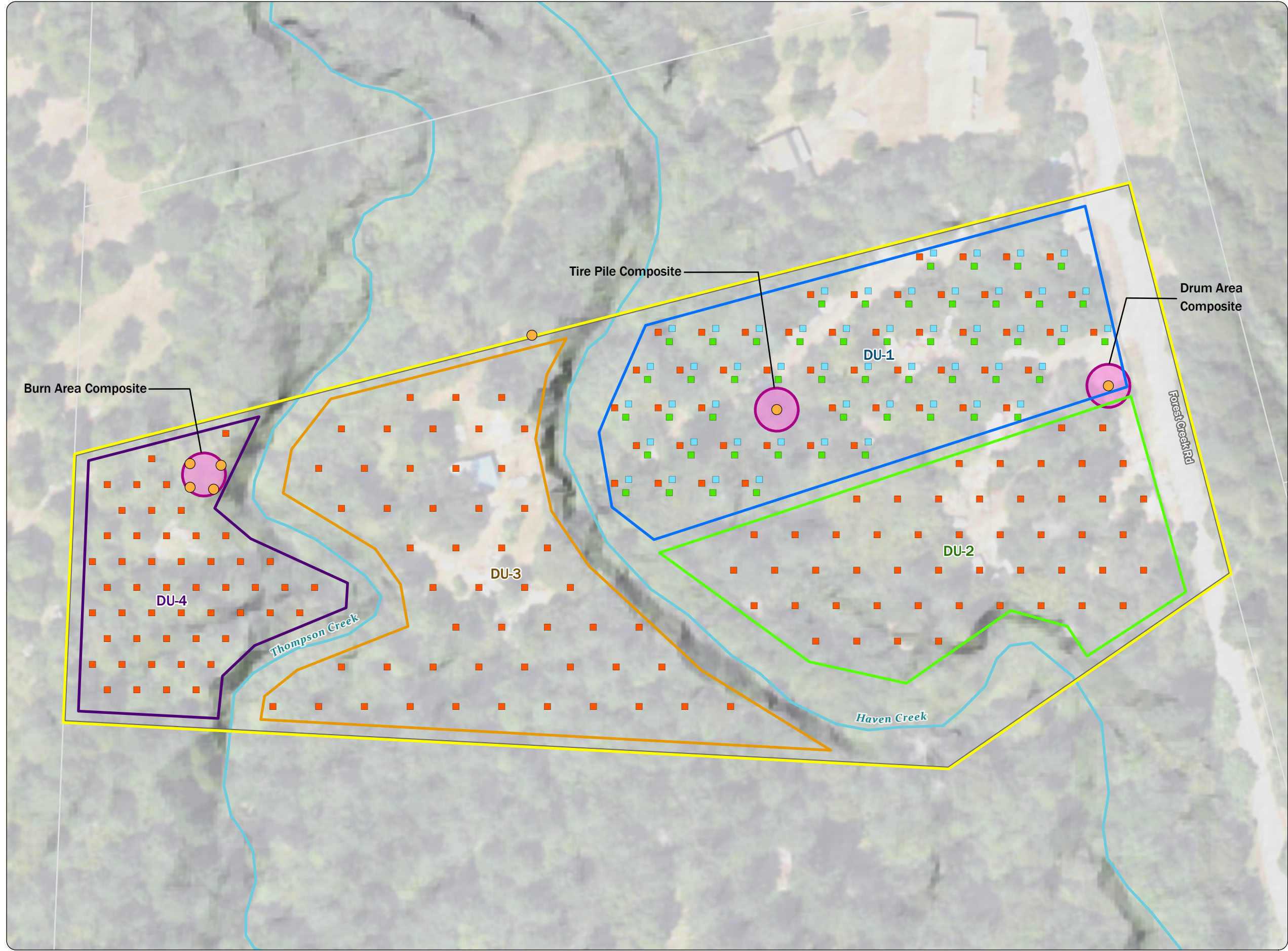
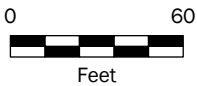


Figure 4-1
Soil Sample Locations

Forest Creek Road Dump Site
Site Assessment Report
Oregon Department of
Environmental Quality
113 Forest Creek Road
Selma, OR

Legend

- Field Observations (See Figure 2-1)
- ISM Sample
- ISM Sample Replicate
- ISM Sample Triplicate
- Five-Point Composite Sample
- Decision Unit 1
- Decision Unit 2
- Decision Unit 3
- Decision Unit 4
- Property Boundary
- Tax Lot
- Stream



Data Sources
Aerial photograph (2022) obtained from the Oregon Geospatial Enterprise Office; lidar topography (2011) obtained from the Oregon Department of Geology and Mineral Industries; tax lot data obtained from Josephine County.



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Table



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Table 5-1
Forest Creek Soil Analytical Results
Oregon Department of Environment Quality



Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	DU1	DU1 (cont.)	DU1 (cont.)		
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							DU1-ISM	DU1-ISM-DUP	DU1-ISM-TRIP		
Sample Type:																						ISM	ISM	ISM		
Collection Date:											Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.				Plants	Inverts	Birds		Mammals
Collection Depth (ft bgs):	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	0-0.5	0-0.5									0-0.5							
TPH (mg/kg)																										
Gasoline-range hydrocarbons	1,200	20,000	9,700	NV	5,900	69,000	31	130	120	120	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	NV	NV	NV	8.77 J	4.03 UJ	4.10 UJ		
Diesel-range hydrocarbons	1,100	14,000	4,600	NV	NV	NV	9,500	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	37.7	34.8	22.4		
Motor oil-range hydrocarbons	1,100 ^(a)	14,000 ^(a)	4,600 ^(a)	NV	NV	NV	9,500 ^(a)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	263	204	179		
Diesel+ Oil ^(b)	1,100 ^(a)	14,000 ^(a)	4,600 ^(a)	NV	NV	NV	9,500 ^(a)	NV	260	260	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	NV	NV	NV	301	239	201		
Total Metals (mg/kg)																										
Antimony	NV	NV	NV	NV	NV	NV	NV	NV	11	78	NV	NV	0.27	2.7	NV	NV	4.9	49	31	470	0.59	0.739 U	0.74 U	0.738 U		
Arsenic	0.43	1.9	15	420	NV	NV	NV	NV	18	6.8	15	32	19	31	100	1,000	170	290	0.68	3.0	12	2.08 J	2.39	3.14		
Beryllium	160	2,300	700	19,000	NV	NV	NV	NV	2.5	40	NV	NV	21	42	NV	NV	90	110	160	2,300	1.4	0.204 J	0.274	0.189 J		
Cadmium	78	1,100	350	9,700	NV	NV	NV	NV	32	140	0.29	1.6	0.27	4	1.3	7.7	84	1,700	7.1	100	0.52	1.1	1.49	0.847		
Chromium	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	73	34	1,600	170	560	180	10,000	NV	NV	890	131	179	145		
Copper	3,100	47,000	14,000	390,000	NV	NV	NV	NV	70	80	14	43	42	70	80	240	560	1,600	3,100	47,000	110	98.6	108	85.4		
Lead	400	800	800	800	NV	NV	30	30	120	1,700	11	23	56	170	83	160	460	1,600	200	800	36	48.7	38.9	31.2		
Nickel	1,500	22,000	7,000	190,000	NV	NV	NV	NV	38	280	20	81	10	21	110	440	130	580	1,400	17,000	630	202	242	216		
Mercury	23	350	110	2,900	NV	NV	NV	NV	34	0.05	0.013	0.13	1.7	17	0.058	0.58	26	130	7.1	30	0.17	0.184	0.104	0.106		
Selenium	NV	NV	NV	NV	NV	NV	NV	NV	0.52	4.1	0.71	1.4	0.63	1	3.7	7.5	2.8	33	390	5,800	0.8	1.15 U	1.15 U	1.14 U		
Silver	390	5,800	1,800	49,000	NV	NV	NV	NV	560	NV	2.6	26	14	140	13	130	990	10,000	390	5,800	0.16	0.322 J	0.271 J	0.237 J		
Thallium	NV	NV	NV	NV	NV	NV	NV	NV	0.05	NV	4.5	45	0.42	4.2	48	480	5	50	0.78	12	0.31	0.554 U	0.554 U	0.553 U		
Zinc	NV	NV	NV	NV	NV	NV	NV	NV	160	120	46	120	79	980	220	590	3,100	30,000	23,000	350,000	140	254	263	351		
Chlorinated Herbicides (mg/kg)																										
2,4,5-T	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6,300	8,200	NV	0.0253 UJ	0.0253 UJ	0.0252 UJ		
2,4-D	630	8,200	2,700	74,000	NV	NV	2.3	16	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	700	9,600	NV	0.0275 UJ	0.0275 UJ	0.0274 UJ		
2,4-DB	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0199 U	0.0199 U	0.0199 U		
Dalapon	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	25,000	NV	0.0471 U	0.0471 U	0.047 U		
Dicamba	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	25,000	NV	0.0242 U	0.0242 U	0.0241 U		
Dichlorprop	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0196 UJ	0.0196 UJ	0.0195 UJ		
Dinoseb	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	820	NV	0.0273 U	0.0273 U	0.0272 U		
MCPA	32	410	130	3,700	NV	NV	0.097	0.61	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	32	410	NV	1.99 U	1.99 U	1.99 U		
MCPP (Mecoprop)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	820	NV	2.17 U	2.17 U	2.17 U		
Silvex	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	510	6,600	NV	0.02 U	0.02 U	0.02 U		
VOCs (mg/kg)																										
1,1,1,2-Tetrachloroethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.8	NV	0.0014 U	0.00153 U	0.00156 U		
1,1,1-Trichloroethane	53,000	870,000	470,000	NV	NV	NV	190	880	NV	NV	NV	NV	260	1,300	NV	NV	91,000	450,000	8,100	36,000	NV	0.00137 U	0.00149 U	0.00151 U		
1,1,2,2-Tetrachloroethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.60	2.7	NV	0.00103 U	0.00112 U	0.00114 U		
1,1,2-Trichloroethane	3.2	26	54	1,500	5.6	24	0.0063	0.029	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	5	NV	0.000884 U	0.000962 U	0.000979 U		
1,1-Dichloroethane	58	260	3,200	89,000	56	240	0.044	0.2	NV	NV	NV	NV	210	2,100	NV	NV	250,000	2,500,000	3.6	16	NV	0.000727 U	0.000791 U	0.000805 U		
1,1-Dichloroethene	1,800	29,000	13,000	370,000	NV	NV	6.7	32	NV	NV	NV	NV	11	60	NV	NV	320	1,600	4.8	20	NV	0.000897 U	0.000976 U	0.000994 U		
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0012 U	0.0013 U	0.00133 U		
1,2,3-Trichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	930	NV	0.0109 U	0.0118 UJ	0.012 U		
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0051	0.11	NV	0.0024 U	0.00261 U	0.00266 U		
1,2,3-Trimethylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	340	2,000	NV	0.00234 U	0.00255 U	0.00259 U		

Table 5-1
Forest Creek Soil Analytical Results
Oregon Department of Environment Quality



Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	DU1	DU1 (cont.)	DU1 (cont.)
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							DU1-ISM	DU1-ISM-DUP	DU1-ISM-TRIP
Sample Type:																						ISM	ISM	ISM
Collection Date:											Res. Soil	Ind. Soil	12/20/2024	12/20/2024	12/20/2024									
Collection Depth (ft bgs):													0-0.5	0-0.5	0-0.5									
1,2,4-Trichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.2	NV	NV	0.27	2.7	NV	NV	110	1,100	24	110	NV	0.00652 U	0.00709 U	0.00722 U
1,2,4-Trimethylbenzene	430	6,900	2,900	81,000	NV	NV	10	48	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	300	1,800	NV	0.00234 U	0.00255 U	0.00259 U
1,2-Dibromo-3-chloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0053	0.064	NV	0.00578 U	0.00628 UJ	0.0064 U
1,2-Dibromoethane	0.16	0.73	9	250	0.15	0.65	0.00012	0.00056	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.036	0.16	NV	0.00096 U	0.00104 U	0.00106 U
1,2-Dichlorobenzene	2,200	36,000	20,000	560,000	NV	NV	36	160	NV	NV	NV	NV	0.92	9.2	NV	NV	480	4,800	1,800	9,300	NV	0.000629 U	0.000685 U	0.000697 U
1,2-Dichloroethane	3.6	16	200	5,600	3.4	15	0.0028	0.013	NV	NV	0.85	1.6	27	270	22	44	8,400	84,000	0.46	2	NV	0.000961 U	0.00105 U	0.00106 U
1,2-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.5	11	NV	0.0021 U	0.00229 U	0.00233 U
1,3,5-Trimethylbenzene	430	6,900	2,900	81,000	NV	NV	11	53	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	270	1,500	NV	0.00296 U	0.00322 U	0.00328 U
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.74	7.4	NV	NV	380	3,800	NV	NV	NV	0.000888 U	0.000967 U	0.000984 U
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.000742 U	0.000807 U	0.000822 U
1,4-Dichlorobenzene	14	64	1,300	36,000	8.1	36	0.057	0.25	NV	1.2	NV	NV	0.89	3.5	NV	NV	470	1,800	2.6	11	NV	0.00104 U	0.00113 U	0.00115 U
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00204 U	0.00222 U	0.00226 UJ
2-Butanone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	350	920	NV	NV	1,300,000	3,500,000	27,000	190,000	NV	0.094 U	0.118 J	0.104 U
2-Chlorotoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.00128 U	0.00139 U	0.00142 U
4-Chlorotoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.000666 U	0.000725 U	0.000738 U
4-Isopropyltoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	170	1,100	NV	0.0724 J	0.00556 J	0.0131 J
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	9.7	97	NV	NV	18,000	180,000	33,000	140,000	NV	0.00903 J	0.00367 UJ	0.00374 UJ
Acetone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7.5	75	1.2	6.3	840	8,400	1,800	8,900	70,000	1,100,000	NV	0.169 J	0.0588 UJ	0.0599 UJ
Acrylonitrile	0.86	4	40	1,100	1.3	5.8	0.00036	0.0017	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.25	1.1	NV	0.00535 U	0.00582 U	0.00592 U
Benzene	8.2	37	380	11,000	11	50	0.023	0.1	NV	NV	NV	NV	24	240	NV	NV	4,300	43,000	1.2	5.1	NV	0.000703 J	0.00109 J	0.000766 U
Bromobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	290	1,800	NV	0.00133 U	0.00145 U	0.00148 U
Bromodichloromethane	3.4	15	230	6,300	2.4	11	0.002	0.0088	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.29	1.3	NV	0.00107 U	0.00117 U	0.00119 U
Bromoform	57	260	2,700	74,000	81	360	0.046	0.22	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	19	86	NV	0.00173 U	0.00189 UJ	0.00192 U
Bromomethane	46	750	370	10,000	170	700	0.083	0.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6.8	30	NV	0.00292 UJ	0.00317 U	0.00323 U
Carbon tetrachloride	7.5	34	320	8,900	15	65	0.013	0.058	NV	NV	NV	NV	2	9.8	NV	NV	3	15	0.65	2.9	NV	0.00133 U	0.00145 U	0.00147 U
Chlorobenzene	530	8,700	4,700	130,000	NV	NV	5.8	27	NV	2.4	NV	NV	43	430	NV	NV	25,000	250,000	280	1,300	NV	0.000311 U	0.000338 U	0.000344 U
Chloroethane	160,000	NV	NV	NV	NV	NV	310	1,300	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.00252 U	0.00274 U	0.00279 U
Chloroform	5.8	26	410	11,000	3.9	17	0.0034	0.015	NV	NV	NV	NV	8	21	NV	NV	2,200	6,000	0.32	1.4	NV	0.00153 U	0.00166 U	0.00169 U
Chloromethane	1,400	25,000	25,000	700,000	NV	NV	2.2	9.1	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	110	460	NV	0.00644 U	0.00701 U	0.00714 U
cis-1,2-Dichloroethene	160	2,300	710	20,000	NV	NV	0.63	4.5	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	370	NV	0.00109 U	0.00118 U	0.0012 U
cis-1,3-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00112 U	0.00122 U	0.00124 U
Dibromochloromethane	3.7	17	210	5,800	3.3	14	0.0024	0.011	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	8.3	39	NV	0.000906 U	0.000986 UJ	0.001 U
Dibromomethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	24	99	NV	0.00111 U	0.00121 U	0.00123 U
Dichlorodifluoromethane (Freon 12)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	87	370	NV	0.00238 U	0.00259 U	0.00264 U
Diisopropyl ether	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,200	9,400	NV	0.000607 U	0.000661 U	0.000673 U
Ethylbenzene	34	150	1,700	49,000	36	160	0.22	0.9	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.8	25	NV	0.00109 U	0.00119 U	0.00121 U
Freon 113	400,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6,700	28,000	NV	0.00112 U	0.00121 U	0.00124 U
Hexachlorobutadiene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.2	5.3	NV	0.00888 U	0.00967 U	0.00984 U
Isopropylbenzene	3,500	57,000	27,000	750,000	NV	NV	96	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	9,900	NV	0.000629 U	0.000685 U	0.000697 U
Methyl tert-butyl ether	250	1,100	12,000	320,000	340	1,500	0.11	0.54	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	47	210	NV	0.000518 U	0.000564 U	0.000574 U
Methylene chloride	76	1,600	2,100	58,000	NV	NV	0.14	2.4	1,600	NV	NV	NV	2.6	22	NV	NV	1,000	8,500	57	1,000	NV	0.00983 U	0.0107 U	0.0109 U

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Oregon Department of Environment Quality



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Collection Date:											Res. Soil	Ind. Soil	12/20/2024		12/20/2024		12/20/2024							
Collection Depth (ft bgs):													0-0.5	0-0.5	0-0.5									
Naphthalene	5.3	23	580	16,000	6.4	83	0.077	0.34	1	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.6	NV	0.00723 U	0.00786 UJ	0.00801 U	
n-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,900	58,000	NV	0.00777 U	0.00846 U	0.00861 U	
n-Propylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,800	24,000	NV	0.00141 U	0.00153 U	0.00156 U	
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7,800	120,000	NV	0.00426 U	0.00464 U	0.00472 U	
Styrene	7,900	130,000	56,000	NV	NV	NV	170	800	3.2	1.2	NV	NV	NV	NV	NV	NV	NV	6,000	35,000	NV	0.00037 J	0.000806 J	0.000376 UJ	
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7,800	120,000	NV	0.00289 U	0.00314 U	0.0032 U	
Tetrachloroethene (PCE)	220	1,000	1,800	50,000	NV	NV	0.46	1.9	10	NV	NV	NV	0.18	0.94	NV	NV	42	210	24	100	NV	0.00133 U	0.00144 UJ	0.00147 U
Toluene	5,800	88,000	28,000	770,000	NV	NV	84	490	200	NV	NV	NV	23	230	NV	NV	3,300	33,000	4,900	47,000	NV	0.00344 J	0.00263 J	0.00271 J
trans-1,2-Dichloroethene	1,600	23,000	7,100	200,000	NV	NV	7	51	NV	NV	NV	NV	NV	NV	NV	NV	NV	70	300	NV	0.00154 U	0.00168 U	0.00171 U	
trans-1,3-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00169 U	0.00184 U	0.00187 U
Trichloroethene (TCE)	6.7	51	130	3,700	15	96	0.013	0.087	NV	NV	NV	NV	42	420	NV	NV	11,000	110,000	0.94	6.0	NV	0.000865 U	0.000941 U	0.000958 U
Trichlorofluoromethane (Freon 11)	7,600	130,000	69,000	NV	NV	NV	61	280	NV	NV	NV	NV	52	350	NV	NV	62,000	420,000	23,000	350,000	NV	0.00437 J	0.00133 UJ	0.00136 UJ
Vinyl chloride	0.36	4.4	34	950	5.3	89	0.00057	0.01	NV	NV	NV	NV	0.12	1.2	NV	NV	28	280	0.059	1.7	NV	0.00172 U	0.00187 U	0.0019 U
Xylenes (total) ^(c)	1,400	25,000	20,000	560,000	5.3	89	23	100	100	NV	41	410	1.4	1.8	190	1,900	210	260	580	2,500	NV	0.0036 J	0.0033 J	0.00144 U
PAHs (mg/kg)																								
1-Methylnaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.18	0.77	NV	0.00481 U	0.00481 U	0.00479 U
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	4,800	60,000	NV	0.00499 U	0.00499 U	0.00497 U
2-Methylnaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	240	3,000	NV	0.00676 J	0.00457 U	0.00456 U
Acenaphthene	4,700	70,000	21,000	590,000	NV	NV	NV	NV	0.25	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,600	45,000	NV	0.00224 U	0.00224 U	0.00223 U
Acenaphthylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00231 U	0.00231 U	0.00231 U
Anthracene	23,000	350,000	110,000	NV	NV	NV	NV	NV	6.8	NV	NV	NV	NV	NV	NV	NV	NV	NV	18,000	230,000	NV	0.00246 U	0.00246 U	0.00245 U
Benzo(a)anthracene	1.1	21	170	4800	NV	NV	1.6	NV	18	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.00185 U	0.00185 U	0.00185 U
Benzo(a)pyrene	0.11	2.1	17	490	NV	NV	4.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11	2.1	NV	0.00192 U	0.00192 U	0.00191 U
Benzo(b)fluoranthene	1.1	21	170	4900	NV	NV	NV	NV	18	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.00258 J	0.00248 J	0.00231 J
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00451 J	0.00368 J	0.00304 J
Benzo(k)fluoranthene	11	210	1,700	49,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	11	210	NV	0.0023 U	0.0023 U	0.00229 U
Chrysene	110	2,100	17,000	490,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	110	2,100	NV	0.00248 U	0.00248 U	0.00248 U
Dibenzo(a,h)anthracene	0.11	2.1	17	490	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11	2.1	NV	0.00184 U	0.00184 U	0.00184 U
Fluoranthene	2,400	30,000	10,000	280,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,400	30,000	NV	0.00244 J	0.00277 J	0.00243 J
Fluorene	3,100	47,000	14,000	390,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,400	30,000	NV	0.00219 U	0.00219 U	0.00219 U
Indeno(1,2,3-cd)pyrene	1.1	21	170	4,900	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.00194 U	0.00194 U	0.00193 U
Naphthalene	5.3	23	580	16,000	6.4	83	0.077	0.34	1	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.6	NV	0.00437 U	0.00437 U	0.00435 U
Phenanthrene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00462 J	0.00339 J	0.00433 J
Pyrene	1,800	23,000	7,500	210,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,800	23,000	NV	0.00233 J	0.00282 J	0.0022 J
cPAH TEQ ^{(d)(5)}	0.11	2.1	17	490	NV	NV	4.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00234 JT	0.00233 JT	0.00231 JT
HPAH ^(e)	NV	NV	NV	NV	NV	NV	NV	NV	NV	18	0.11	0.55	1.1	5.9	6.4	64	110	550	NV	NV	NV	0.018 JT	0.0179 JT	0.0161 JT
LPAH ^(f)	NV	NV	NV	NV	NV	NV	NV	NV	NV	29	13	67	100	540	7,500	37,000	1,200	59,000	NV	NV	NV	0.0507 JT	0.0498 JT	0.0465 JT
Pesticides (mg/kg)																								
4,4'-DDD	2.2	12	9.7	270	NV	NV	1.1	2.6	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	9.6	NV	0.00738 U	0.00739 U	0.00736 U
4,4'-DDE	1.8	8.2	66	1,800	NV	NV	1.6	7.5	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	9.3	NV	0.0072 U	0.0072 U	0.00718 U
4,4'-DDT	1.9	8.5	66	1,800	NV	NV	12	70	4.1	NV	0.041	0.41	0.047	0.24	0.12	1.2	0.02	0.099	1.9	8.5	NV	0.0082 U	0.0082 U	0.00818 U

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Oregon Department of Environment Quality



Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	DU1	DU1 (cont.)	DU1 (cont.)
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							DU1-ISM	DU1-ISM-DUP	DU1-ISM-TRIP
Sample Type:																						ISM	ISM	ISM
Collection Date:											Res. Soil	Ind. Soil	12/20/2024		12/20/2024		12/20/2024							
Collection Depth (ft bgs):													0-0.5	0-0.5	0-0.5									
Aldrin	0.031	0.13	1.1	30	NV	NV	0.023	0.1	NV	NV	8.5E-05	0.0043	0.037	0.18	0.062	3.1	4.4	22	0.039	0.18	NV	0.0069 U	0.0069 U	0.00688 U
alpha-BHC	0.086	0.36	3	83	NV	NV	0.0063	0.023	NV	NV	0.21	0.85	0.0096	0.096	120	470	0.88	8.8	0.086	0.36	NV	0.00682 U	0.00682 U	0.0068 U
beta-BHC	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.30	1.3	NV	0.00674 U	0.00674 U	0.00672 U
Chlordane	1.7	7.4	61	1,700	NV	NV	0.45	2.1	NV	NV	0.28	1.4	0.27	1.4	NV	NV	120	590	1.7	7.7	NV	0.106 U	0.106 U	0.106 U
delta-BHC	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0038	0.049	NV	0.0068 U	0.0068 U	0.00678 U
Dieldrin	0.034	0.14	1.2	33	NV	NV	0.01	0.03	10	NV	0.012	0.64	0.0045	0.009	0.056	3	0.0065	0.013	0.034	0.14	NV	0.00746 U	0.00746 U	0.00744 U
Endosulfan I	380	4,900	1,600	45,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	470	7,000	NV	0.00646 U	0.00647 U	0.00645 U
Endosulfan II	380	4,900	1,600	45,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	470	7,000	NV	0.00707 U	0.00708 U	0.00705 U
Endosulfan sulfate	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	380	4,900	NV	0.00687 U	0.00687 U	0.00685 U
Endrin	19	250	80	2,200	NV	NV	11	NV	0.0034	NV	0.0014	0.014	0.023	0.23	0.0068	0.068	2.1	21	19	250	NV	0.00798 U	0.00798 U	0.00796 U
Endrin aldehyde	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00631 U	0.00632 U	0.0063 U
Endrin ketone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00744 U	0.00744 U	0.00742 U
Heptachlor	0.11	0.45	4	110	18	230	0.017	0.048	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.13	0.63	NV	0.00742 U	0.00742 U	0.0074 U
Heptachlor epoxide	0.055	0.24	2	56	28	NV	0.0042	0.016	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.070	0.33	NV	0.00696 U	0.00696 U	0.00694 U
Hexachlorobenzene	0.21	0.93	11	320	1	13	0.018	0.084	10	10	0.079	0.79	0.2	2	0.37	3.7	59	590	0.21	0.96	NV	0.00651 U	0.00651 U	0.00649 U
Lindane	0.49	2.1	17	470	NV	NV	0.036	0.13	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.057	0.80	NV	0.00723 U	0.00724 U	0.00722 U
Methoxychlor	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	18	92	5.1	10	87	8,800	300	600	320	4,100	NV	0.00863 U	0.00863 U	0.0086 U
Toxaphene	0.49	2.1	17	470	NV	NV	0.36	0.93	NV	NV	4.1	21	5.9	30	19	190	430	2,100	0.49	2.1	NV	0.229 U	0.229 U	0.228 U
DDx ⁽⁹⁾	NV	NV	NV	NV	NV	NV	NV	NV	4.1	NV	0.041	0.41	0.047	0.24	0.12	1.2	0.02	0.099	NV	NV	NV	0.0082 UT	0.0082 UT	0.00818 UT
Dioxin/Furan (pg/g)																								
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	150	1,500	1	7	1,500	15,000	1.6	11	NV	NV	NV	102	123	90.7
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	230	1.6	11	230	2,300	2.5	17	NV	NV	NV	52.5	52.9 UK	61.9
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	230	1.6	11	230	2,300	2.5	17	NV	NV	NV	5.00 U	5.00 U	5.00 U
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.1	51	0.18	1.2	50	500	0.27	1.8	NV	NV	NV	5.00 U	5.00 U	5.00 U
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	9.18	6.78	11.9
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	19	190	0.13	0.89	190	1,900	0.2	1.4	NV	NV	NV	5.15	5.55	5.00 U
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	9.77	7.99	10.1
1,2,3,7,8,9-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.9	19	0.13	0.89	19	190	0.2	1.4	NV	NV	NV	5.79	5.00 U	5.00 U
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3	30	0.21	1.4	30	300	0.32	2.2	NV	NV	NV	5.00 U	5.00 U	5.00 U
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.59	5.9	0.042	0.28	5.9	59	0.064	0.43	NV	NV	NV	5.00 UJ	5.00 UJ	5.00 UJ
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	4.1	41	0.97	6.5	40	400	1.5	9.8	NV	NV	NV	5.00 U	5.00 U	5.00 U
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	10.5	10.2	11
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.41	4.1	0.097	0.65	4	40	0.15	0.98	NV	NV	NV	8.81	7	7.77
2,3,7,8-TCDD	4.7	16	170	4,800	10,000	130,000	6.8	31	NV	5,000,000	0.52	5.2	0.037	0.25	5.2	52	0.057	0.38	4.8	22	NV	1.00 UJK	1.00 U	1.00 U
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.64	6.4	0.45	3	6.3	63	0.69	4.6	NV	NV	NV	4.08	4.33	5.12
OCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	19,000	45	300	19,000	190,000	68	460	NV	NV	NV	797	1,030	685
OCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,400	14,000	33	220	14,000	140,000	51	340	NV	NV	NV	40.2	49.5	41.5
Total HpCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	183	229	165
Total HpCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	93.3	97.6 K	97.8
Total HxCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	100	470	NV	50.1 K	44.4	30.2
Total HxCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	84.3 K	74.2	78.2 K

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Oregon Department of Environment Quality



Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	DU1	DU1 (cont.)	DU1 (cont.)								
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							DU1-ISM	DU1-ISM-DUP	DU1-ISM-TRIP								
Sample Type:																						ISM	ISM	ISM								
Collection Date:									Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts	Birds			Mammals		Birds		Mammals		Res. Soil	Ind. Soil	12/20/2024	12/20/2024	12/20/2024
Collection Depth (ft bgs):																			T&E	Non T&E		T&E	Non T&E	T&E	Non T&E	T&E	Non T&E			T&E	Non T&E	0-0.5
Total PeCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	18.5 UK	5.00 U	5.00 U								
Total PeCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	72.9 K	52.3 K	38.8								
Total TCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	10.1 UK	8.82 K	6.2 UK								
Total TCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	67.7 K	54.5 K	59.7								
Dioxin/Furan TEQ ^{(h)(6)}	4.7	16	170	4,800	10,000	130,000	6.8	31	NV	5,000,000	0.52	5.2	0.037	0.25	5.2	52	0.057	0.38	4.8	22	NV	12.5 T	11.3 T	12 T								

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Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	DU2	DU3	DU4	
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							DU2-ISM	DU3-ISM	DU4-ISM	
Sample Type:																						ISM	ISM	ISM	
Collection Date:																						Birds		Mammals	
Collection Depth (ft bgs):	Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	Res. Soil	Ind. Soil	0-0.5	0-0.5	0-0.5		
TPH (mg/kg)																									
Gasoline-range hydrocarbons	1,200	20,000	9,700	NV	5,900	69,000	31	130	120	120	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	NV	NV	NV	6.91 J+	3.95 U	4.35 J+	
Diesel-range hydrocarbons	1,100	14,000	4,600	NV	NV	NV	9,500	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	83	16.6	94.2	
Motor oil-range hydrocarbons	1,100 ^(a)	14,000 ^(a)	4,600 ^(a)	NV	NV	NV	9,500 ^(a)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	431	98.4	263	
Diesel+Oil ^(b)	1,100 ^(a)	14,000 ^(a)	4,600 ^(a)	NV	NV	NV	9,500 ^(a)	NV	260	260	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	NV	NV	NV	514	115	357	
Total Metals (mg/kg)																									
Antimony	NV	NV	NV	NV	NV	NV	NV	NV	11	78	NV	NV	0.27	2.7	NV	NV	4.9	49	31	470	0.59	0.759 U	0.731 U	0.743 U	
Arsenic	0.43	1.9	15	420	NV	NV	NV	NV	18	6.8	15	32	19	31	100	1,000	170	290	0.68	3.0	12	2.81	2.45	3.28	
Beryllium	160	2,300	700	19,000	NV	NV	NV	NV	2.5	40	NV	NV	21	42	NV	NV	90	110	160	2,300	1.4	0.234	0.445	0.623	
Cadmium	78	1,100	350	9,700	NV	NV	NV	NV	32	140	0.29	1.6	0.27	4	1.3	7.7	84	1,700	7.1	100	0.52	1.9	0.877	0.325 J	
Chromium	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	73	34	1,600	170	560	180	10,000	NV	NV	890	143	108	81.9	
Copper	3,100	47,000	14,000	390,000	NV	NV	NV	NV	70	80	14	43	42	70	80	240	560	1,600	3,100	47,000	110	225	94.5	49.6	
Lead	400	800	800	800	NV	NV	30	30	120	1,700	11	23	56	170	83	160	460	1,600	200	800	36	61.2	44.6	21.3	
Nickel	1,500	22,000	7,000	190,000	NV	NV	NV	NV	38	280	20	81	10	21	110	440	130	580	1,400	17,000	630	204	125	78.2	
Mercury	23	350	110	2,900	NV	NV	NV	NV	34	0.05	0.013	0.13	1.7	17	0.058	0.58	26	130	7.1	30	0.17	0.163	0.0638	0.0421 J	
Selenium	NV	NV	NV	NV	NV	NV	NV	NV	0.52	4.1	0.71	1.4	0.63	1	3.7	7.5	2.8	33	390	5,800	0.8	1.18 U	1.13 U	1.15 U	
Silver	390	5,800	1,800	49,000	NV	NV	NV	NV	560	NV	2.6	26	14	140	13	130	990	10,000	390	5,800	0.16	0.464 J	0.268 J	0.156 J	
Thallium	NV	NV	NV	NV	NV	NV	NV	NV	0.05	NV	4.5	45	0.42	4.2	48	480	5	50	0.78	12	0.31	0.569 U	0.548 U	0.557 U	
Zinc	NV	NV	NV	NV	NV	NV	NV	NV	160	120	46	120	79	980	220	590	3,100	30,000	23,000	350,000	140	1,040	285	134	
Chlorinated Herbicides (mg/kg)																									
2,4,5-T	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6,300	8,200	NV	0.0259 U	0.025 UJ	0.0254 U	
2,4-D	630	8,200	2,700	74,000	NV	NV	2.3	16	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	700	9,600	NV	0.0282 UJ	0.0272 UJ	0.0276 U	
2,4-DB	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0204 U	0.0197 U	0.02 U	
Dalapon	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	25,000	NV	0.0484 U	0.0466 U	0.0473 U	
Dicamba	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	25,000	NV	0.0248 U	0.0239 U	0.0243 U	
Dichlorprop	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0201 UJ	0.0194 UJ	0.0197 U	
Dinoseb	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	820	NV	0.028 U	0.027 U	0.0274 U	
MCPA	32	410	130	3,700	NV	NV	0.097	0.61	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	32	410	NV	2.04 U	1.97 U	2 U	
MCPP (Mecoprop)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	820	NV	2.23 U	2.15 U	2.18 U	
Silvex	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	510	6,600	NV	0.0205 U	0.0198 U	0.0201 U	
VOCs (mg/kg)																									
1,1,1,2-Tetrachloroethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.8	NV	0.00156 U	0.0015 U	0.00163 U	
1,1,1-Trichloroethane	53,000	870,000	470,000	NV	NV	NV	190	880	NV	NV	NV	NV	260	1,300	NV	NV	91,000	450,000	8,100	36,000	NV	0.00152 U	0.00146 U	0.00159 U	
1,1,2,2-Tetrachloroethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.60	2.7	NV	0.00114 U	0.0011 U	0.0012 U	
1,1,2-Trichloroethane	3.2	26	54	1,500	5.6	24	0.0063	0.029	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	5	NV	0.000982 U	0.000943 U	0.00103 U	
1,1-Dichloroethane	58	260	3,200	89,000	56	240	0.044	0.2	NV	NV	NV	NV	210	2,100	NV	NV	250,000	2,500,000	3.6	16	NV	0.000807 U	0.000775 U	0.000844 U	
1,1-Dichloroethene	1,800	29,000	13,000	370,000	NV	NV	6.7	32	NV	NV	NV	NV	11	60	NV	NV	320	1,600	4.8	20	NV	0.000997 U	0.000957 U	0.00104 U	
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00133 U	0.00128 U	0.00139 U	
1,2,3-Trichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	930	NV	0.0121 U	0.0116 UJ	0.0126 U	
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0051	0.11	NV	0.00266 U	0.00256 U	0.00279 U	
1,2,3-Trimethylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	340	2,000	NV	0.0026 U	0.00249 U	0.00272 U	

Table 5-1
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Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	DU2	DU3	DU4
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							DU2-ISM	DU3-ISM	DU4-ISM
Sample Type:																						ISM	ISM	ISM
Collection Date:											Res. Soil	Ind. Soil	12/17/2024	12/23/2024	12/18/2024									
Collection Depth (ft bgs):													0-0.5	0-0.5	0-0.5									
1,2,4-Trichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.2	NV	NV	0.27	2.7	NV	NV	110	1,100	24	110	NV	0.00724 U	0.00695 U	0.00757 U
1,2,4-Trimethylbenzene	430	6,900	2,900	81,000	NV	NV	10	48	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	300	1,800	NV	0.00288 J	0.00363 J	0.00272 U
1,2-Dibromo-3-chloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0053	0.064	NV	0.00641 U	0.00616 UJ	0.00671 U
1,2-Dibromoethane	0.16	0.73	9	250	0.15	0.65	0.00012	0.00056	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.036	0.16	NV	0.00107 U	0.00102 U	0.00111 U
1,2-Dichlorobenzene	2,200	36,000	20,000	560,000	NV	NV	36	160	NV	NV	NV	NV	0.92	9.2	NV	NV	480	4,800	1,800	9,300	NV	0.000699 U	0.000671 U	0.000731 U
1,2-Dichloroethane	3.6	16	200	5,600	3.4	15	0.0028	0.013	NV	NV	0.85	1.6	27	270	22	44	8,400	84,000	0.46	2	NV	0.00107 U	0.00102 U	0.00112 U
1,2-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.5	11	NV	0.00234 U	0.00224 U	0.00244 U
1,3,5-Trimethylbenzene	430	6,900	2,900	81,000	NV	NV	11	53	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	270	1,500	NV	0.00329 U	0.00316 U	0.00344 U
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.74	7.4	NV	NV	380	3,800	NV	NV	NV	0.000987 U	0.000947 U	0.00103 U
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.000824 U	0.000791 U	0.000862 U
1,4-Dichlorobenzene	14	64	1,300	36,000	8.1	36	0.057	0.25	NV	1.2	NV	NV	0.89	3.5	NV	NV	470	1,800	2.6	11	NV	0.00115 U	0.00111 U	0.0012 U
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00227 UJ	0.00218 U	0.00237 UJ
2-Butanone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	350	920	NV	NV	1,300,000	3,500,000	27,000	190,000	NV	0.104 U	0.1 U	0.109 U
2-Chlorotoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.00142 U	0.00137 U	0.00149 U
4-Chlorotoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.00074 U	0.00071 U	0.000774 U
4-Isopropyltoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	170	1,100	NV	0.0237	0.00703 J	0.0147
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	9.7	97	NV	NV	18,000	180,000	33,000	140,000	NV	0.00375 U	0.0036 U	0.00392 U
Acetone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7.5	75	1.2	6.3	840	8,400	1,800	8,900	70,000	1,100,000	NV	0.06 U	0.0576 U	0.0628 U
Acrylonitrile	0.86	4	40	1,100	1.3	5.8	0.00036	0.0017	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.25	1.1	NV	0.00594 U	0.0057 U	0.00621 U
Benzene	8.2	37	380	11,000	11	50	0.023	0.1	NV	NV	NV	NV	24	240	NV	NV	4,300	43,000	1.2	5.1	NV	0.00411	0.00431	0.000803 U
Bromobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	290	1,800	NV	0.00148 U	0.00142 U	0.00155 U
Bromodichloromethane	3.4	15	230	6,300	2.4	11	0.002	0.0088	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.29	1.3	NV	0.00119 U	0.00114 U	0.00125 U
Bromoform	57	260	2,700	74,000	81	360	0.046	0.22	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	19	86	NV	0.00192 U	0.00185 UJ	0.00201 U
Bromomethane	46	750	370	10,000	170	700	0.083	0.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6.8	30	NV	0.00324 U	0.00311 U	0.00339 U
Carbon tetrachloride	7.5	34	320	8,900	15	65	0.013	0.058	NV	NV	NV	NV	2	9.8	NV	NV	3	15	0.65	2.9	NV	0.00148 U	0.00142 U	0.00154 U
Chlorobenzene	530	8,700	4,700	130,000	NV	NV	5.8	27	NV	2.4	NV	NV	43	430	NV	NV	25,000	250,000	280	1,300	NV	0.00148 J	0.000332 U	0.000361 U
Chloroethane	160,000	NV	NV	NV	NV	NV	310	1,300	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.0028 U	0.00268 U	0.00292 U
Chloroform	5.8	26	410	11,000	3.9	17	0.0034	0.015	NV	NV	NV	NV	8	21	NV	NV	2,200	6,000	0.32	1.4	NV	0.00169 U	0.00163 U	0.00177 U
Chloromethane	1,400	25,000	25,000	700,000	NV	NV	2.2	9.1	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	110	460	NV	0.00715 U	0.00687 U	0.00748 U
cis-1,2-Dichloroethene	160	2,300	710	20,000	NV	NV	0.63	4.5	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	370	NV	0.00121 U	0.00116 U	0.00126 U
cis-1,3-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00124 U	0.0012 U	0.0013 U
Dibromochloromethane	3.7	17	210	5,800	3.3	14	0.0024	0.011	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	8.3	39	NV	0.00101 U	0.000966 UJ	0.00105 U
Dibromomethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	24	99	NV	0.00123 U	0.00118 U	0.00129 U
Dichlorodifluoromethane (Freon 12)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	87	370	NV	0.00265 U	0.00254 U	0.00277 U
Diisopropyl ether	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,200	9,400	NV	0.000674 U	0.000647 U	0.000705 U
Ethylbenzene	34	150	1,700	49,000	36	160	0.22	0.9	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.8	25	NV	0.00186 J	0.00232 J	0.00127 U
Freon 113	400,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6,700	28,000	NV	0.00124 U	0.00119 U	0.0013 U
Hexachlorobutadiene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.2	5.3	NV	0.00987 U	0.00947 U	0.0103 U
Isopropylbenzene	3,500	57,000	27,000	750,000	NV	NV	96	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	9,900	NV	0.000699 U	0.000671 U	0.000731 U
Methyl tert-butyl ether	250	1,100	12,000	320,000	340	1,500	0.11	0.54	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	47	210	NV	0.000576 U	0.000553 U	0.000602 U
Methylene chloride	76	1,600	2,100	58,000	NV	NV	0.14	2.4	1,600	NV	NV	NV	2.6	22	NV	NV	1,000	8,500	57	1,000	NV	0.0109 U	0.0105 U	0.0114 U

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Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							DU2-ISM	DU3-ISM	DU4-ISM										
Sample Type:																						ISM	ISM	ISM										
Collection Date:											Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts		Birds		Mammals		Birds		Mammals		Res. Soil	Ind. Soil	12/17/2024	12/23/2024	12/18/2024
Collection Depth (ft bgs):																						T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E			T&E	Non T&E	0-0.5
Naphthalene	5.3	23	580	16,000	6.4	83	0.077	0.34	1	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.6	NV	0.00803 U	0.0077 UJ	0.00839 U										
n-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,900	58,000	NV	0.00863 U	0.00829 U	0.00903 U										
n-Propylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,800	24,000	NV	0.00156 U	0.0015 U	0.00163 U										
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7,800	120,000	NV	0.00474 U	0.00455 U	0.00495 U										
Styrene	7,900	130,000	56,000	NV	NV	NV	170	800	3.2	1.2	NV	NV	NV	NV	NV	NV	NV	NV	6,000	35,000	NV	0.00119 J	0.000362 U	0.000394 U										
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7,800	120,000	NV	0.00321 U	0.00308 U	0.00335 U										
Tetrachloroethene (PCE)	220	1,000	1,800	50,000	NV	NV	0.46	1.9	10	NV	NV	NV	0.18	0.94	NV	NV	42	210	24	100	NV	0.00147 U	0.00141 UJ	0.00154 U										
Toluene	5,800	88,000	28,000	770,000	NV	NV	84	490	200	NV	NV	NV	23	230	NV	NV	3,300	33,000	4,900	47,000	NV	0.00617 J	0.00489 J	0.00425 J										
trans-1,2-Dichloroethene	1,600	23,000	7,100	200,000	NV	NV	7	51	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	70	300	NV	0.00171 U	0.00164 U	0.00179 U										
trans-1,3-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00187 U	0.0018 U	0.00196 U										
Trichloroethene (TCE)	6.7	51	130	3,700	15	96	0.013	0.087	NV	NV	NV	NV	42	420	NV	NV	11,000	110,000	0.94	6.0	NV	0.00096 U	0.000922 U	0.001 U										
Trichlorofluoromethane (Freon 11)	7,600	130,000	69,000	NV	NV	NV	61	280	NV	NV	NV	NV	52	350	NV	NV	62,000	420,000	23,000	350,000	NV	0.00345 J	0.00131 U	0.00142 U										
Vinyl chloride	0.36	4.4	34	950	5.3	89	0.00057	0.01	NV	NV	NV	NV	0.12	1.2	NV	NV	28	280	0.059	1.7	NV	0.00191 U	0.00183 U	0.00199 U										
Xylenes (total) ^(c)	1,400	25,000	20,000	560,000	5.3	89	23	100	100	NV	41	410	1.4	1.8	190	1,900	210	260	580	2,500	NV	0.00671 J	0.00766 J	0.00151 U										
PAHs (mg/kg)																																		
1-Methylnaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.18	0.77	NV	0.00493 U	0.00475 U	0.00483 U										
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	4,800	60,000	NV	0.00512 U	0.00493 U	0.00501 U										
2-Methylnaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	240	3,000	NV	0.00469 U	0.00452 U	0.00459 U										
Acenaphthene	4,700	70,000	21,000	590,000	NV	NV	NV	NV	0.25	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,600	45,000	NV	0.0023 U	0.00221 U	0.00225 U										
Acenaphthylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00237 U	0.00229 U	0.00232 U										
Anthracene	23,000	350,000	110,000	NV	NV	NV	NV	NV	6.8	NV	NV	NV	NV	NV	NV	NV	NV	NV	18,000	230,000	NV	0.00253 U	0.00243 U	0.00247 U										
Benzo(a)anthracene	1.1	21	170	4800	NV	NV	1.6	NV	18	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.0019 J	0.00183 U	0.00186 U										
Benzo(a)pyrene	0.11	2.1	17	490	NV	NV	4.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11	2.1	NV	0.00197 U	0.00189 U	0.00193 U										
Benzo(b)fluoranthene	1.1	21	170	4900	NV	NV	NV	NV	18	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.0031 J	0.00199 J	0.00165 U										
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00358 J	0.00187 U	0.0019 U										
Benzo(k)fluoranthene	11	210	1,700	49,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	11	210	NV	0.00236 U	0.00228 U	0.00231 U										
Chrysene	110	2,100	17,000	490,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	110	2,100	NV	0.00255 U	0.00246 U	0.0025 U										
Dibenzo(a,h)anthracene	0.11	2.1	17	490	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11	2.1	NV	0.00189 U	0.00182 U	0.00185 U										
Fluoranthene	2,400	30,000	10,000	280,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,400	30,000	NV	0.0051 J	0.00403 J	0.00244 U										
Fluorene	3,100	47,000	14,000	390,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,400	30,000	NV	0.00225 U	0.00217 U	0.0022 U										
Indeno(1,2,3-cd)pyrene	1.1	21	170	4,900	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.00199 U	0.00192 U	0.00195 U										
Naphthalene	5.3	23	580	16,000	6.4	83	0.077	0.34	1	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.6	NV	0.00833 J	0.00894 J	0.00439 U										
Phenanthrene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00749	0.00711	0.00248 U										
Pyrene	1,800	23,000	7,500	210,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,800	23,000	NV	0.00499 J	0.0031 J	0.00215 U										
cPAH TEQ ^{(d)(5)}	0.11	2.1	17	490	NV	NV	4.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00254 JT	0.00225 JT	0.0025 UT										
HPAH ^(e)	NV	NV	NV	NV	NV	NV	NV	NV	NV	18	0.11	0.55	1.1	5.9	6.4	64	110	550	NV	NV	NV	0.0241 JT	0.0162 JT	0.0025 UT										
LPAH ^(f)	NV	NV	NV	NV	NV	NV	NV	NV	NV	29	13	67	100	540	7,500	37,000	1,200	59,000	NV	NV	NV	0.0747 JT	0.057 JT	0.00439 UT										
Pesticides (mg/kg)																																		
4,4'-DDD	2.2	12	9.7	270	NV	NV	1.1	2.6	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	9.6	NV	0.00758 U	0.0073 U	0.00742 U										
4,4'-DDE	1.8	8.2	66	1,800	NV	NV	1.6	7.5	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	9.3	NV	0.0074 U	0.00712 U	0.00724 U										
4,4'-DDT	1.9	8.5	66	1,800	NV	NV	12	70	4.1	NV	0.041	0.41	0.047	0.24	0.12	1.2	0.02	0.099	1.9	8.5	NV	0.00842 U	0.00811 U	0.00824 U										

Table 5-1
Forest Creek Soil Analytical Results
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Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	DU2	DU3	DU4										
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							DU2-ISM	DU3-ISM	DU4-ISM										
Sample Type:																						ISM	ISM	ISM										
Collection Date:											Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts		Birds		Mammals		Birds		Mammals		Res. Soil	Ind. Soil	12/17/2024	12/23/2024	12/18/2024
Collection Depth (ft bgs):																						T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E			0-0.5	0-0.5	0-0.5
Aldrin	0.031	0.13	1.1	30	NV	NV	0.023	0.1	NV	NV	8.5E-05	0.0043	0.037	0.18	0.062	3.1	4.4	22	0.039	0.18	NV	0.00709 U	0.00683 U	0.00694 U										
alpha-BHC	0.086	0.36	3	83	NV	NV	0.0063	0.023	NV	NV	0.21	0.85	0.0096	0.096	120	470	0.88	8.8	0.086	0.36	NV	0.007 U	0.00674 U	0.00685 U										
beta-BHC	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.30	1.3	NV	0.00692 U	0.00667 U	0.00678 U										
Chlordane	1.7	7.4	61	1,700	NV	NV	0.45	2.1	NV	NV	0.28	1.4	0.27	1.4	NV	NV	120	590	1.7	7.7	NV	0.109 U	0.105 U	0.106 U										
delta-BHC	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0038	0.049	NV	0.00698 U	0.00672 U	0.00683 U										
Dieldrin	0.034	0.14	1.2	33	NV	NV	0.01	0.03	10	NV	0.012	0.64	0.0045	0.009	0.056	3	0.0065	0.013	0.034	0.14	NV	0.00766 U	0.00738 U	0.0075 U										
Endosulfan I	380	4,900	1,600	45,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	470	7,000	NV	0.00664 U	0.00639 U	0.0065 U										
Endosulfan II	380	4,900	1,600	45,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	470	7,000	NV	0.00726 U	0.007 U	0.00711 U										
Endosulfan sulfate	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	380	4,900	NV	0.00705 U	0.0068 U	0.0069 U										
Endrin	19	250	80	2,200	NV	NV	11	NV	0.0034	NV	0.0014	0.014	0.023	0.23	0.0068	0.068	2.1	21	19	250	NV	0.0082 U	0.0079 U	0.00802 U										
Endrin aldehyde	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00648 U	0.00625 U	0.00635 U										
Endrin ketone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00764 U	0.00736 U	0.00747 U										
Heptachlor	0.11	0.45	4	110	18	230	0.017	0.048	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.13	0.63	NV	0.00762 U	0.00734 U	0.00745 U										
Heptachlor epoxide	0.055	0.24	2	56	28	NV	0.0042	0.016	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.070	0.33	NV	0.00714 U	0.00688 U	0.00699 U										
Hexachlorobenzene	0.21	0.93	11	320	1	13	0.018	0.084	10	10	0.079	0.79	0.2	2	0.37	3.7	59	590	0.21	0.96	NV	0.00668 U	0.00644 U	0.00654 U										
Lindane	0.49	2.1	17	470	NV	NV	0.036	0.13	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.057	0.80	NV	0.00743 U	0.00716 U	0.00727 U										
Methoxychlor	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	18	92	5.1	10	87	8,800	300	600	320	4,100	NV	0.00886 U	0.00853 U	0.00867 U										
Toxaphene	0.49	2.1	17	470	NV	NV	0.36	0.93	NV	NV	4.1	21	5.9	30	19	190	430	2,100	0.49	2.1	NV	0.235 U	0.227 U	0.23 U										
DDx ⁽⁹⁾	NV	NV	NV	NV	NV	NV	NV	NV	4.1	NV	0.041	0.41	0.047	0.24	0.12	1.2	0.02	0.099	NV	NV	NV	0.00842 UT	0.00811 UT	0.00824 UT										
Dioxin/Furan (pg/g)																																		
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	150	1,500	1	7	1,500	15,000	1.6	11	NV	NV	NV	149	80.4	24.2										
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	230	1.6	11	230	2,300	2.5	17	NV	NV	NV	226	47.2	5.00 U										
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	230	1.6	11	230	2,300	2.5	17	NV	NV	NV	8.57	5.00 U	5.00 U										
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.1	51	0.18	1.2	50	500	0.27	1.8	NV	NV	NV	6.78 UK	5.00 U	5.00 U										
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	45.8	13.4	5.00 U										
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	19	190	0.13	0.89	190	1,900	0.2	1.4	NV	NV	NV	15	5.68	5.00 U										
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	38.6	9.32 UK	5.00 U										
1,2,3,7,8,9-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.9	19	0.13	0.89	19	190	0.2	1.4	NV	NV	NV	14.7	6.64	5.00 U										
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3	30	0.21	1.4	30	300	0.32	2.2	NV	NV	NV	5 U	5 U	5.00 U										
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.59	5.9	0.042	0.28	5.9	59	0.064	0.43	NV	NV	NV	7.64	5 U	5.00 U										
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	4.1	41	0.97	6.5	40	400	1.5	9.8	NV	NV	NV	17.9	6.58	5.00 U										
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	51.8	10.8	5.00 U										
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.41	4.1	0.097	0.65	4	40	0.15	0.98	NV	NV	NV	39.7	10.8	5.00 U										
2,3,7,8-TCDD	4.7	16	170	4,800	10,000	130,000	6.8	31	NV	5,000,000	0.52	5.2	0.037	0.25	5.2	52	0.057	0.38	4.8	22	NV	1.95 UK	1.00 UJK	1.00 U										
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.64	6.4	0.45	3	6.3	63	0.69	4.6	NV	NV	NV	20	9.14	1.00 U										
OCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	19,000	45	300	19,000	190,000	68	460	NV	NV	NV	702	668	214										
OCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,400	14,000	33	220	14,000	140,000	51	340	NV	NV	NV	65.8	19.8	15.1										
Total HpCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	299	158	40.9										
Total HpCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	308	71.4 K	8.07										
Total HxCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	100	470	NV	244 UK	72.4	5.00 U									
Total HxCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	376 K	84.9 UK	5.00 U										

Table 5-1
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Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							DU2-ISM	DU3-ISM	DU4-ISM								
Sample Type:																						ISM	ISM	ISM								
Collection Date:									Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts	Birds			Mammals		Birds		Mammals		Res. Soil	Ind. Soil	12/17/2024	12/23/2024	12/18/2024
Collection Depth (ft bgs):																			T&E	Non T&E		T&E	Non T&E	T&E	Non T&E	T&E	Non T&E			T&E	Non T&E	0-0.5
Total PeCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	146 K	29.6	5.00 U								
Total PeCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	351 K	80.3	5.00 U								
Total TCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	138 UK	29 UK	1.29								
Total TCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	375	97.6	7.33 UJK								
Dioxin/Furan TEQ ^{(h)(6)}	4.7	16	170	4,800	10,000	130,000	6.8	31	NV	5,000,000	0.52	5.2	0.037	0.25	5.2	52	0.057	0.38	4.8	22	NV	44.3 T	13.5 T	5.99 T								

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Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							BURNAREA-COMP-S	BURNAREA-COMP-S-DUP	DRUMAREA-COMP-S	
Sample Type:																						Composite	Composite	Composite	
Collection Date:											Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts		Birds		Mammals	
Collection Depth (ft bgs):	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	0-0.5	0-0.5												0-0.5			
TPH (mg/kg)																									
Gasoline-range hydrocarbons	1,200	20,000	9,700	NV	5,900	69,000	31	130	120	120	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	NV	NV	NV	4.92 U	5.12 U	3.33 U	
Diesel-range hydrocarbons	1,100	14,000	4,600	NV	NV	NV	9,500	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	41	51.9	56.1 J	
Motor oil-range hydrocarbons	1,100 ^(a)	14,000 ^(a)	4,600 ^(a)	NV	NV	NV	9,500 ^(a)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	82.5	83	173	
Diesel+Oil ^(b)	1,100 ^(a)	14,000 ^(a)	4,600 ^(a)	NV	NV	NV	9,500 ^(a)	NV	260	260	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	NV	NV	NV	124	135	229	
Total Metals (mg/kg)																									
Antimony	NV	NV	NV	NV	NV	NV	NV	NV	11	78	NV	NV	0.27	2.7	NV	NV	4.9	49	31	470	0.59	0.99 U	1.28 J	0.853 U	
Arsenic	0.43	1.9	15	420	NV	NV	NV	NV	18	6.8	15	32	19	31	100	1,000	170	290	0.68	3.0	12	2.67 J	3.54	3.41	
Beryllium	160	2,300	700	19,000	NV	NV	NV	NV	2.5	40	NV	NV	21	42	NV	NV	90	110	160	2,300	1.4	0.463	0.644	0.101 J	
Cadmium	78	1,100	350	9,700	NV	NV	NV	NV	32	140	0.29	1.6	0.27	4	1.3	7.7	84	1,700	7.1	100	0.52	0.0936 U	0.0929 U	3.79	
Chromium	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	73	34	1,600	170	560	180	10,000	NV	NV	890	74.5	88.7	121	
Copper	3,100	47,000	14,000	390,000	NV	NV	NV	NV	70	80	14	43	42	70	80	240	560	1,600	3,100	47,000	110	44	46.5	91.7	
Lead	400	800	800	800	NV	NV	30	30	120	1,700	11	23	56	170	83	160	460	1,600	200	800	36	16.2	18.8	28.1	
Nickel	1,500	22,000	7,000	190,000	NV	NV	NV	NV	38	280	20	81	10	21	110	440	130	580	1,400	17,000	630	56.7	68.9	213	
Mercury	23	350	110	2,900	NV	NV	NV	NV	34	0.05	0.013	0.13	1.7	17	0.058	0.58	26	130	7.1	30	0.17	0.0295 U	0.0293 U	0.0545	
Selenium	NV	NV	NV	NV	NV	NV	NV	NV	0.52	4.1	0.71	1.4	0.63	1	3.7	7.5	2.8	33	390	5,800	0.8	2.12 J	3.02	1.97 J	
Silver	390	5,800	1,800	49,000	NV	NV	NV	NV	560	NV	2.6	26	14	140	13	130	990	10,000	390	5,800	0.16	1.53	2.19	1.83	
Thallium	NV	NV	NV	NV	NV	NV	NV	NV	0.05	NV	4.5	45	0.42	4.2	48	480	5	50	0.78	12	0.31	1.45 J	2.44 J	1.86 J	
Zinc	NV	NV	NV	NV	NV	NV	NV	NV	160	120	46	120	79	980	220	590	3,100	30,000	23,000	350,000	140	162	194	118	
Chlorinated Herbicides (mg/kg)																									
2,4,5-T	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6,300	8,200	NV	0.0338 U	0.0336 U	0.0291 U	
2,4-D	630	8,200	2,700	74,000	NV	NV	2.3	16	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	700	9,600	NV	0.0368 U	0.0366 U	0.0317 U	
2,4-DB	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0267 U	0.0265 U	0.023 U	
Dalapon	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	25,000	NV	0.0631 U	0.0626 U	0.0543 U	
Dicamba	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	25,000	NV	0.0324 U	0.0322 U	0.0279 U	
Dichlorprop	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0262 U	0.026 U	0.0226 U	
Dinoseb	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	820	NV	0.0365 U	0.0363 U	0.0315 U	
MCPA	32	410	130	3,700	NV	NV	0.097	0.61	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	32	410	NV	2.67 U	2.65 U	2.3 U	
MCPP (Mecoprop)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	820	NV	2.91 U	BURNAREA U	2.5 U	
Silvex	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	510	6,600	NV	0.0268 U	0.0266 U	0.0231 U	
VOCs (mg/kg)																									
1,1,1,2-Tetrachloroethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.8	NV	0.00186 U	0.00195 U	0.00126 U	
1,1,1-Trichloroethane	53,000	870,000	470,000	NV	NV	NV	190	880	NV	NV	NV	NV	260	1,300	NV	NV	91,000	450,000	8,100	36,000	NV	0.00181 U	0.00189 U	0.00123 U	
1,1,2,2-Tetrachloroethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.60	2.7	NV	0.00136 U	0.00142 U	0.000927 U	
1,1,2-Trichloroethane	3.2	26	54	1,500	5.6	24	0.0063	0.029	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	5	NV	0.00117 U	0.00122 U	0.000796 U	
1,1-Dichloroethane	58	260	3,200	89,000	56	240	0.044	0.2	NV	NV	NV	NV	210	2,100	NV	NV	250,000	2,500,000	3.6	16	NV	0.000965 U	0.00101 U	0.000654 U	
1,1-Dichloroethene	1,800	29,000	13,000	370,000	NV	NV	6.7	32	NV	NV	NV	NV	11	60	NV	NV	320	1,600	4.8	20	NV	0.00119 U	0.00124 U	0.000807 U	
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00159 U	0.00165 U	0.00108 U	
1,2,3-Trichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	930	NV	0.0143 U	0.0151 U	0.00977 U	
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0051	0.11	NV	0.00318 U	0.00332 U	0.00216 U	
1,2,3-Trimethylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	340	2,000	NV	0.0031 U	0.00324 U	0.00211 U	

Table 5-1
Forest Creek Soil Analytical Results
Oregon Department of Environment Quality



Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	Burn Area	Burn Area (cont.)	Drum Area
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							BURNAREA-COMP-S	BURNAREA-COMP-S-DUP	DRUMAREA-COMP-S
Sample Type:																						Composite	Composite	Composite
Collection Date:											Birds		Mammals		Birds		Mammals		Res. Soil	Ind. Soil		12/18/2024	12/18/2024	12/17/2024
Collection Depth (ft bgs):											T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E				0-0.5	0-0.5	0-0.5
1,2,4-Trichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.2	NV	NV	0.27	2.7	NV	NV	110	1,100	24	110	NV	0.00864 U	0.00902 U	0.00586 U
1,2,4-Trimethylbenzene	430	6,900	2,900	81,000	NV	NV	10	48	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	300	1,800	NV	0.0031 U	0.00324 U	0.00211 U
1,2-Dibromo-3-chloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0053	0.064	NV	0.00765 U	0.008 U	0.00519 U
1,2-Dibromoethane	0.16	0.73	9	250	0.15	0.65	0.00012	0.00056	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.036	0.16	NV	0.00127 U	0.00133 U	0.000864 U
1,2-Dichlorobenzene	2,200	36,000	20,000	560,000	NV	NV	36	160	NV	NV	NV	NV	0.92	9.2	NV	NV	480	4,800	1,800	9,300	NV	0.000834 U	0.000871 U	0.000566 U
1,2-Dichloroethane	3.6	16	200	5,600	3.4	15	0.0028	0.013	NV	NV	0.85	1.6	27	270	22	44	8,400	84,000	0.46	2	NV	0.00127 U	0.00133 U	0.000865 U
1,2-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.5	11	NV	0.00279 U	0.0029 U	0.00189 U
1,3,5-Trimethylbenzene	430	6,900	2,900	81,000	NV	NV	11	53	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	270	1,500	NV	0.00393 U	0.0041 U	0.00267 U
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.74	7.4	NV	NV	380	3,800	NV	NV	NV	0.00118 U	0.00123 U	0.0008 U
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.000983 U	0.00103 U	0.000668 U
1,4-Dichlorobenzene	14	64	1,300	36,000	8.1	36	0.057	0.25	NV	1.2	NV	NV	0.89	3.5	NV	NV	470	1,800	2.6	11	NV	0.00137 U	0.00144 U	0.000933 U
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00271 UJ	0.00283 UJ	0.00184 UJ
2-Butanone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	350	920	NV	NV	1,300,000	3,500,000	27,000	190,000	NV	0.125 U	0.13 U	0.0846 U
2-Chlorotoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.00171 U	0.00178 U	0.00115 U
4-Chlorotoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.000884 U	0.000922 U	0.0006 U
4-Isopropyltoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	170	1,100	NV	0.00737 J	0.00768 J	0.00339 U
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	9.7	97	NV	NV	18,000	180,000	33,000	140,000	NV	0.00447 U	0.00467 U	0.00304 U
Acetone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7.5	75	1.2	6.3	840	8,400	1,800	8,900	70,000	1,100,000	NV	0.0717 U	0.0749 U	0.0486 U
Acrylonitrile	0.86	4	40	1,100	1.3	5.8	0.00036	0.0017	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.25	1.1	NV	0.00709 U	0.0074 U	0.00481 U
Benzene	8.2	37	380	11,000	11	50	0.023	0.1	NV	NV	NV	NV	24	240	NV	NV	4,300	43,000	1.2	5.1	NV	0.000917 U	0.000956 U	0.000622 U
Bromobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	290	1,800	NV	0.00176 U	0.00185 U	0.0012 U
Bromodichloromethane	3.4	15	230	6,300	2.4	11	0.002	0.0088	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.29	1.3	NV	0.00142 U	0.00148 U	0.000966 U
Bromoform	57	260	2,700	74,000	81	360	0.046	0.22	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	19	86	NV	0.00229 U	0.00239 U	0.00155 U
Bromomethane	46	750	370	10,000	170	700	0.083	0.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6.8	30	NV	0.00387 U	0.00404 U	0.00263 U
Carbon tetrachloride	7.5	34	320	8,900	15	65	0.013	0.058	NV	NV	NV	NV	2	9.8	NV	NV	3	15	0.65	2.9	NV	0.00176 U	0.00184 U	0.0012 U
Chlorobenzene	530	8,700	4,700	130,000	NV	NV	5.8	27	NV	2.4	NV	NV	43	430	NV	NV	25,000	250,000	280	1,300	NV	0.000413 U	0.00043 U	0.00028 U
Chloroethane	160,000	NV	NV	NV	NV	NV	310	1,300	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV	0.00334 U	0.00349 U	0.00227 U
Chloroform	5.8	26	410	11,000	3.9	17	0.0034	0.015	NV	NV	NV	NV	8	21	NV	NV	2,200	6,000	0.32	1.4	NV	0.00202 U	0.00211 U	0.00137 U
Chloromethane	1,400	25,000	25,000	700,000	NV	NV	2.2	9.1	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	110	460	NV	0.00854 U	0.00891 U	0.0058 U
cis-1,2-Dichloroethene	160	2,300	710	20,000	NV	NV	0.63	4.5	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	370	NV	0.00145 U	0.00151 U	0.000979 U
cis-1,3-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00149 U	0.00155 U	0.00101 U
Dibromochloromethane	3.7	17	210	5,800	3.3	14	0.0024	0.011	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	8.3	39	NV	0.0012 U	0.00125 U	0.000816 U
Dibromomethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	24	99	NV	0.00148 U	0.00154 U	0.001 U
Dichlorodifluoromethane (Freon 12)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	87	370	NV	0.00317 U	0.0033 U	0.00215 U
Diisopropyl ether	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,200	9,400	NV	0.000805 U	0.00084 U	0.000547 U
Ethylbenzene	34	150	1,700	49,000	36	160	0.22	0.9	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.8	25	NV	0.00145 U	0.00151 U	0.000982 U
Freon 113	400,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6,700	28,000	NV	0.00148 U	0.00155 U	0.001 U
Hexachlorobutadiene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.2	5.3	NV	0.0118 U	0.0123 U	0.008 U
Isopropylbenzene	3,500	57,000	27,000	750,000	NV	NV	96	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	9,900	NV	0.000834 U	0.000871 U	0.000566 U
Methyl tert-butyl ether	250	1,100	12,000	320,000	340	1,500	0.11	0.54	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	47	210	NV	0.000688 U	0.000717 U	0.000466 U
Methylene chloride	76	1,600	2,100	58,000	NV	NV	0.14	2.4	1,600	NV	NV	NV	2.6	22	NV	NV	1,000	8,500	57	1,000	NV	0.0492 U	0.0512 U	0.0333 U

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Forest Creek Soil Analytical Results
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Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	Burn Area	Burn Area (cont.)	Drum Area
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							BURNAREA-COMP-S	BURNAREA-COMP-S-DUP	DRUMAREA-COMP-S
Sample Type:																						Composite	Composite	Composite
Collection Date:											Birds		Mammals		Birds		Mammals		Res. Soil	Ind. Soil		12/18/2024	12/18/2024	12/17/2024
Collection Depth (ft bgs):											T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E				0-0.5	0-0.5	0-0.5
Naphthalene	5.3	23	580	16,000	6.4	83	0.077	0.34	1	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.6	NV	0.00959 U	0.01 U	0.0065 U	
n-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,900	58,000	NV	0.0103 U	0.0108 U	0.007 U	
n-Propylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,800	24,000	NV	0.00186 U	0.00195 U	0.00127 U	
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7,800	120,000	NV	0.00566 U	0.00591 U	0.00384 U	
Styrene	7,900	130,000	56,000	NV	NV	NV	170	800	3.2	1.2	NV	NV	NV	NV	NV	NV	NV	6,000	35,000	NV	0.00045 U	0.00047 U	0.000305 U	
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7,800	120,000	NV	0.00383 U	0.004 U	0.0026 U	
Tetrachloroethene (PCE)	220	1,000	1,800	50,000	NV	NV	0.46	1.9	10	NV	NV	NV	0.18	0.94	NV	NV	42	210	24	100	NV	0.00176 U	0.00184 U	0.00119 U
Toluene	5,800	88,000	28,000	770,000	NV	NV	84	490	200	NV	NV	NV	23	230	NV	NV	3,300	33,000	4,900	47,000	NV	0.00388 J	0.00307 J	0.00186 J
trans-1,2-Dichloroethene	1,600	23,000	7,100	200,000	NV	NV	7	51	NV	NV	NV	NV	NV	NV	NV	NV	NV	70	300	NV	0.00204 U	0.00213 U	0.00138 U	
trans-1,3-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00224 U	0.00233 U	0.00152 U
Trichloroethene (TCE)	6.7	51	130	3,700	15	96	0.013	0.087	NV	NV	NV	NV	42	420	NV	NV	11,000	110,000	0.94	6.0	NV	0.00115 U	0.0012 U	0.000779 U
Trichlorofluoromethane (Freon 11)	7,600	130,000	69,000	NV	NV	NV	61	280	NV	NV	NV	NV	52	350	NV	NV	62,000	420,000	23,000	350,000	NV	0.00162 U	0.00169 U	0.0011 U
Vinyl chloride	0.36	4.4	34	950	5.3	89	0.00057	0.01	NV	NV	NV	NV	0.12	1.2	NV	NV	28	280	0.059	1.7	NV	0.00228 U	0.00238 U	0.00154 U
Xylenes (total) ^(c)	1,400	25,000	20,000	560,000	5.3	89	23	100	100	NV	41	410	1.4	1.8	190	1,900	210	260	580	2,500	NV	0.00173 U	0.00181 U	0.0012 J
PAHs (mg/kg)																								
1-Methylnaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.18	0.77	NV	0.00643 U	0.00639 U	0.00554 U
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	4,800	60,000	NV	0.00668 U	0.00663 U	0.00575 U
2-Methylnaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	240	3,000	NV	0.00612 U	0.00608 U	0.00527 U
Acenaphthene	4,700	70,000	21,000	590,000	NV	NV	NV	NV	0.25	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,600	45,000	NV	0.003 U	0.00297 U	0.00258 U
Acenaphthylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0031 U	0.00307 U	0.00267 U
Anthracene	23,000	350,000	110,000	NV	NV	NV	NV	NV	6.8	NV	NV	NV	NV	NV	NV	NV	NV	NV	18,000	230,000	NV	0.0033 U	0.00327 U	0.00284 U
Benzo(a)anthracene	1.1	21	170	4800	NV	NV	1.6	NV	18	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.00248 U	0.00246 U	0.00213 U
Benzo(a)pyrene	0.11	2.1	17	490	NV	NV	4.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11	2.1	NV	0.00257 U	0.00255 U	0.00221 U
Benzo(b)fluoranthene	1.1	21	170	4900	NV	NV	NV	NV	18	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.00219 U	0.00218 U	0.00189 U
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00254 U	0.00252 U	0.00218 U
Benzo(k)fluoranthene	11	210	1,700	49,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	11	210	NV	0.00308 U	0.00306 U	0.00265 U
Chrysene	110	2,100	17,000	490,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	110	2,100	NV	0.00332 U	0.0033 U	0.00286 U
Dibenzo(a,h)anthracene	0.11	2.1	17	490	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11	2.1	NV	0.00247 U	0.00245 U	0.00212 U
Fluoranthene	2,400	30,000	10,000	280,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,400	30,000	NV	0.00325 U	0.00323 U	0.0028 U
Fluorene	3,100	47,000	14,000	390,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,400	30,000	NV	0.00294 U	0.00292 U	0.00253 U
Indeno(1,2,3-cd)pyrene	1.1	21	170	4,900	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.00259 U	0.00258 U	0.00223 U
Naphthalene	5.3	23	580	16,000	6.4	83	0.077	0.34	1	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.6	NV	0.00585 U	0.00618 J	0.00503 U
Phenanthrene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00331 U	0.00329 U	0.00285 U
Pyrene	1,800	23,000	7,500	210,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,800	23,000	NV	0.00287 U	0.00285 U	0.00247 U
cPAH TEQ ^{(d)(5)}	0.11	2.1	17	490	NV	NV	4.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00332 UT	0.0033 UT	0.00286 UT
HPAH ^(e)	NV	NV	NV	NV	NV	NV	NV	NV	NV	18	0.11	0.55	1.1	5.9	6.4	64	110	550	NV	NV	NV	0.00332 UT	0.0033 UT	0.00286 UT
LPAH ^(f)	NV	NV	NV	NV	NV	NV	NV	NV	NV	29	13	67	100	540	7,500	37,000	1,200	59,000	NV	NV	NV	0.00585 UT	0.0172 JT	0.00503 UT
Pesticides (mg/kg)																								
4,4'-DDD	2.2	12	9.7	270	NV	NV	1.1	2.6	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	9.6	NV	0.00989 U	0.00982 U	0.00851 U
4,4'-DDE	1.8	8.2	66	1,800	NV	NV	1.6	7.5	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	9.3	NV	0.00965 U	0.00958 U	0.0083 U
4,4'-DDT	1.9	8.5	66	1,800	NV	NV	12	70	4.1	NV	0.041	0.41	0.047	0.24	0.12	1.2	0.02	0.099	1.9	8.5	NV	0.011 U	0.0109 U	0.00945 U

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Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							BURNAREA-COMP-S	BURNAREA-COMP-S-DUP	DRUMAREA-COMP-S	
Sample Type:																						Composite	Composite	Composite	
Collection Date:											Birds		Mammals		Birds		Mammals		Res. Soil	Ind. Soil		12/18/2024	12/18/2024	12/17/2024	
Collection Depth (ft bgs):											T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E				0-0.5	0-0.5	0-0.5	
Aldrin	0.031	0.13	1.1	30	NV	NV	0.023	0.1	NV	NV	8.5E-05	0.0043	0.037	0.18	0.062	3.1	4.4	22	0.039	0.18	NV	0.00924 U	0.00918 U	0.00796 U	
alpha-BHC	0.086	0.36	3	83	NV	NV	0.0063	0.023	NV	NV	0.21	0.85	0.0096	0.096	120	470	0.88	8.8	0.086	0.36	NV	0.00913 U	0.00906 U	0.00786 U	
beta-BHC	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.30	1.3	NV	0.00903 U	0.00897 U	0.00777 U	
Chlordane	1.7	7.4	61	1,700	NV	NV	0.45	2.1	NV	NV	0.28	1.4	0.27	1.4	NV	NV	120	590	1.7	7.7	NV	0.142 U	0.141 U	0.122 U	
delta-BHC	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0038	0.049	NV	0.0091 U	0.00904 U	0.00784 U	
Dieldrin	0.034	0.14	1.2	33	NV	NV	0.01	0.03	10	NV	0.012	0.64	0.0045	0.009	0.056	3	0.0065	0.013	0.034	0.14	NV	0.00999 U	0.00992 U	0.0086 U	
Endosulfan I	380	4,900	1,600	45,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	470	7,000	NV	0.00866 U	0.0086 U	0.00745 U	
Endosulfan II	380	4,900	1,600	45,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	470	7,000	NV	0.00947 U	0.00941 U	0.00816 U	
Endosulfan sulfate	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	380	4,900	NV	0.0092 U	0.00914 U	0.00792 U	
Endrin	19	250	80	2,200	NV	NV	11	NV	0.0034	NV	0.0014	0.014	0.023	0.23	0.0068	0.068	2.1	21	19	250	NV	0.0107 U	0.0106 U	0.00921 U	
Endrin aldehyde	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00846 U	0.0084 U	0.00728 U	
Endrin ketone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00996 U	0.00989 U	0.00858 U	
Heptachlor	0.11	0.45	4	110	18	230	0.017	0.048	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.13	0.63	NV	0.00993 U	0.00986 U	0.00855 U	
Heptachlor epoxide	0.055	0.24	2	56	28	NV	0.0042	0.016	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.070	0.33	NV	0.00932 U	0.00925 U	0.00802 U	
Hexachlorobenzene	0.21	0.93	11	320	1	13	0.018	0.084	10	10	0.079	0.79	0.2	2	0.37	3.7	59	590	0.21	0.96	NV	0.00871 U	0.00865 U	0.0075 U	
Lindane	0.49	2.1	17	470	NV	NV	0.036	0.13	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.057	0.80	NV	0.00969 U	0.00962 U	0.00834 U	
Methoxychlor	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	18	92	5.1	10	87	8,800	300	600	320	4,100	NV	0.0116 U	0.0115 U	0.00995 U	
Toxaphene	0.49	2.1	17	470	NV	NV	0.36	0.93	NV	NV	4.1	21	5.9	30	19	190	430	2,100	0.49	2.1	NV	0.307 U	0.305 U	0.264 U	
DDx ⁽⁹⁾	NV	NV	NV	NV	NV	NV	NV	NV	4.1	NV	0.041	0.41	0.047	0.24	0.12	1.2	0.02	0.099	NV	NV	NV	0.011 UT	0.0109 UT	0.00945 UT	
Dioxin/Furan (pg/g)																									
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	150	1,500	1	7	1,500	15,000	1.6	11	NV	NV	NV	14.1	15.1 UK	199	
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	230	1.6	11	230	2,300	2.5	17	NV	NV	NV	5.00 UJK	5.00 U	20.7	
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	230	1.6	11	230	2,300	2.5	17	NV	NV	NV	5.00 U	5.00 U	5.00 U	
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.1	51	0.18	1.2	50	500	0.27	1.8	NV	NV	NV	5.00 U	5.00 UJ	5.00 U	
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	5.00 U	5.00 UJ	5.00 U	
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	19	190	0.13	0.89	190	1,900	0.2	1.4	NV	NV	NV	5.00 U	5.00 UJK	5.00 U	
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	5.00 U	5.00 U	5.00 U	
1,2,3,7,8,9-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.9	19	0.13	0.89	19	190	0.2	1.4	NV	NV	NV	5.00 U	5.00 UJK	5.00 UJK	
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3	30	0.21	1.4	30	300	0.32	2.2	NV	NV	NV	5.00 U	5.00 UJ	5.00 U	
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.59	5.9	0.042	0.28	5.9	59	0.064	0.43	NV	NV	NV	5.00 U	5.00 UJ	5.00 UJK	
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	4.1	41	0.97	6.5	40	400	1.5	9.8	NV	NV	NV	5.00 U	5.00 UJ	5.00 UJK	
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	5.00 U	5.00 U	5.00 U	
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.41	4.1	0.097	0.65	4	40	0.15	0.98	NV	NV	NV	5.00 U	5.00 U	5.00 U	
2,3,7,8-TCDD	4.7	16	170	4,800	10,000	130,000	6.8	31	NV	5,000,000	0.52	5.2	0.037	0.25	5.2	52	0.057	0.38	4.8	22	NV	1.00 U	1.00 UJ	1.00 U	
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.64	6.4	0.45	3	6.3	63	0.69	4.6	NV	NV	NV	1.00 U	1.00 UJ	1.05	
OCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	19,000	45	300	19,000	190,000	68	460	NV	NV	NV	41.9	44.3	1,180	
OCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,400	14,000	33	220	14,000	140,000	51	340	NV	NV	NV	10.0 UJK	10.0 U	33.9	
Total HpCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23.6	27.5 UK	365	
Total HpCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.00 UJK	5.00 U	55.2	
Total HxCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	100	470	NV	13.5 UK	11.1 UK	34.1 UK	
Total HxCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.00 U	5.00 U	15.1 UK	

Table 5-1
Forest Creek Soil Analytical Results
Oregon Department of Environment Quality



Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	Burn Area	Burn Area (cont.)	Drum Area								
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							BURNAREA-COMP-S	BURNAREA-COMP-S-DUP	DRUMAREA-COMP-S								
Sample Type:											Birds		Mammals		Birds		Mammals					Composite	Composite	Composite								
Collection Date:									Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts	T&E			T&E		T&E		T&E		Res. Soil	Ind. Soil	12/18/2024	12/18/2024	12/17/2024
Collection Depth (ft bgs):																			T&E	Non T&E		T&E	Non T&E	T&E	Non T&E	T&E	Non T&E			0-0.5	0-0.5	0-0.5
Total PeCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.00 U	5.00 U	5.00 UJK								
Total PeCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.00 U	5.00 U	11.6 UK								
Total TCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.00 U	1.00 U	1.00 UJK								
Total TCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.00 UJK	1.00 U	10.8 K								
Dioxin/Furan TEQ ^{(h)(6)}	4.7	16	170	4,800	10,000	130,000	6.8	31	NV	5,000,000	0.52	5.2	0.037	0.25	5.2	52	0.057	0.38	4.8	22	NV	5.83 T	5.77 T	8.27 T								

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Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							TIREPILE-COMPOS	
Sample Type:																						Composite	
Collection Date:											Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts		Birds	
Collection Depth (ft bgs):	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	0-0.5														
TPH (mg/kg)																							
Gasoline-range hydrocarbons	1,200	20,000	9,700	NV	5,900	69,000	31	130	120	120	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	NV	NV	NV	3.04 U	
Diesel-range hydrocarbons	1,100	14,000	4,600	NV	NV	NV	9,500	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	12.3	
Motor oil-range hydrocarbons	1,100 ^(a)	14,000 ^(a)	4,600 ^(a)	NV	NV	NV	9,500 ^(a)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	46.1	
Diesel+Oil ^(b)	1,100 ^(a)	14,000 ^(a)	4,600 ^(a)	NV	NV	NV	9,500 ^(a)	NV	260	260	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	NV	NV	NV	58	
Total Metals (mg/kg)																							
Antimony	NV	NV	NV	NV	NV	NV	NV	NV	11	78	NV	NV	0.27	2.7	NV	NV	4.9	49	31	470	0.59	0.799 U	
Arsenic	0.43	1.9	15	420	NV	NV	NV	NV	18	6.8	15	32	19	31	100	1,000	170	290	0.68	3.0	12	3.46	
Beryllium	160	2,300	700	19,000	NV	NV	NV	NV	2.5	40	NV	NV	21	42	NV	NV	90	110	160	2,300	1.4	0.0551 U	
Cadmium	78	1,100	350	9,700	NV	NV	NV	NV	32	140	0.29	1.6	0.27	4	1.3	7.7	84	1,700	7.1	100	0.52	0.597	
Chromium	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	73	34	1,600	170	560	180	10,000	NV	NV	890	186	
Copper	3,100	47,000	14,000	390,000	NV	NV	NV	NV	70	80	14	43	42	70	80	240	560	1,600	3,100	47,000	110	119	
Lead	400	800	800	800	NV	NV	30	30	120	1,700	11	23	56	170	83	160	460	1,600	200	800	36	28.6	
Nickel	1,500	22,000	7,000	190,000	NV	NV	NV	NV	38	280	20	81	10	21	110	440	130	580	1,400	17,000	630	207	
Mercury	23	350	110	2,900	NV	NV	NV	NV	34	0.05	0.013	0.13	1.7	17	0.058	0.58	26	130	7.1	30	0.17	0.0812	
Selenium	NV	NV	NV	NV	NV	NV	NV	NV	0.52	4.1	0.71	1.4	0.63	1	3.7	7.5	2.8	33	390	5,800	0.8	2.21 J	
Silver	390	5,800	1,800	49,000	NV	NV	NV	NV	560	NV	2.6	26	14	140	13	130	990	10,000	390	5,800	0.16	2.87	
Thallium	NV	NV	NV	NV	NV	NV	NV	NV	0.05	NV	4.5	45	0.42	4.2	48	480	5	50	0.78	12	0.31	1.81 J	
Zinc	NV	NV	NV	NV	NV	NV	NV	NV	160	120	46	120	79	980	220	590	3,100	30,000	23,000	350,000	140	289	
Chlorinated Herbicides (mg/kg)																							
2,4,5-T	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6,300	8,200	NV	0.0273 U	
2,4-D	630	8,200	2,700	74,000	NV	NV	2.3	16	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	700	9,600	NV	0.0297 U	
2,4-DB	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0215 U	
Dalapon	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	25,000	NV	0.0509 U	
Dicamba	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	25,000	NV	0.0261 U	
Dichlorprop	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0212 U	
Dinoseb	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	820	NV	0.0295 U	
MCPA	32	410	130	3,700	NV	NV	0.097	0.61	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	32	410	NV	2.15 U	
MCPP (Mecoprop)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	820	NV	2.35 U	
Silvex	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	510	6,600	NV	0.0216 U	
VOCs (mg/kg)																							
1,1,1,2-Tetrachloroethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.8	NV	0.00115 U	
1,1,1-Trichloroethane	53,000	870,000	470,000	NV	NV	NV	190	880	NV	NV	NV	NV	260	1,300	NV	NV	91,000	450,000	8,100	36,000	NV	0.00112 U	
1,1,2,2-Tetrachloroethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.60	2.7	NV	0.000844 U	
1,1,2-Trichloroethane	3.2	26	54	1,500	5.6	24	0.0063	0.029	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	5	NV	0.000725 U	
1,1-Dichloroethane	58	260	3,200	89,000	56	240	0.044	0.2	NV	NV	NV	NV	210	2,100	NV	NV	250,000	2,500,000	3.6	16	NV	0.000597 U	
1,1-Dichloroethene	1,800	29,000	13,000	370,000	NV	NV	6.7	32	NV	NV	NV	NV	11	60	NV	NV	320	1,600	4.8	20	NV	0.000735 U	
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.000982 U	
1,2,3-Trichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	930	NV	0.0089 U	
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0051	0.11	NV	0.00197 U	
1,2,3-Trimethylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV												

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Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							TIREPILE-COMP	
Sample Type:																						S	
Collection Date:											Birds		Mammals		Birds		Mammals		Res. Soil	Ind. Soil		Composite	
Collection Depth (ft bgs):											T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E				12/17/2024	
	Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts													0-0.5
1,2,4-Trichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.2	NV	NV	0.27	2.7	NV	NV	110	1,100	24	110	NV		0.00534 U
1,2,4-Trimethylbenzene	430	6,900	2,900	81,000	NV	NV	10	48	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	300	1,800	NV		0.00192 U
1,2-Dibromo-3-chloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0053	0.064	NV		0.00473 U
1,2-Dibromoethane	0.16	0.73	9	250	0.15	0.65	0.00012	0.00056	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.036	0.16	NV		0.000786 U
1,2-Dichlorobenzene	2,200	36,000	20,000	560,000	NV	NV	36	160	NV	NV	NV	NV	0.92	9.2	NV	NV	480	4,800	1,800	9,300	NV		0.000516 U
1,2-Dichloroethane	3.6	16	200	5,600	3.4	15	0.0028	0.013	NV	NV	0.85	1.6	27	270	22	44	8,400	84,000	0.46	2	NV		0.000787 U
1,2-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.5	11	NV		0.00172 U
1,3,5-Trimethylbenzene	430	6,900	2,900	81,000	NV	NV	11	53	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	270	1,500	NV		0.00243 U
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.74	7.4	NV	NV	380	3,800	NV	NV	NV		0.000728 U
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV		0.000608 U
1,4-Dichlorobenzene	14	64	1,300	36,000	8.1	36	0.057	0.25	NV	1.2	NV	NV	0.89	3.5	NV	NV	470	1,800	2.6	11	NV		0.00085 U
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV		0.00168 UJ
2-Butanone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	350	920	NV	NV	1,300,000	3,500,000	27,000	190,000	NV		0.0771 U
2-Chlorotoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV		0.00105 U
4-Chlorotoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV		0.000547 U
4-Isopropyltoluene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	170	1,100	NV		0.00489 J
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	9.7	97	NV	NV	18,000	180,000	33,000	140,000	NV		0.0258 J
Acetone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7.5	75	1.2	6.3	840	8,400	1,800	8,900	70,000	1,100,000	NV		0.0443 U
Acrylonitrile	0.86	4	40	1,100	1.3	5.8	0.00036	0.0017	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.25	1.1	NV		0.00438 U
Benzene	8.2	37	380	11,000	11	50	0.023	0.1	NV	NV	NV	NV	24	240	NV	NV	4,300	43,000	1.2	5.1	NV		0.000566 U
Bromobenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	290	1,800	NV		0.00109 U
Bromodichloromethane	3.4	15	230	6,300	2.4	11	0.002	0.0088	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.29	1.3	NV		0.00088 U
Bromoform	57	260	2,700	74,000	81	360	0.046	0.22	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	19	86	NV		0.00142 U
Bromomethane	46	750	370	10,000	170	700	0.083	0.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6.8	30	NV		0.00239 U
Carbon tetrachloride	7.5	34	320	8,900	15	65	0.013	0.058	NV	NV	NV	NV	2	9.8	NV	NV	3	15	0.65	2.9	NV		0.00109 U
Chlorobenzene	530	8,700	4,700	130,000	NV	NV	5.8	27	NV	2.4	NV	NV	43	430	NV	NV	25,000	250,000	280	1,300	NV		0.000425 J
Chloroethane	160,000	NV	NV	NV	NV	NV	310	1,300	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,600	23,000	NV		0.00207 U
Chloroform	5.8	26	410	11,000	3.9	17	0.0034	0.015	NV	NV	NV	NV	8	21	NV	NV	2,200	6,000	0.32	1.4	NV		0.00125 U
Chloromethane	1,400	25,000	25,000	700,000	NV	NV	2.2	9.1	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	110	460	NV		0.00528 U
cis-1,2-Dichloroethene	160	2,300	710	20,000	NV	NV	0.63	4.5	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	63	370	NV		0.000891 U
cis-1,3-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV		0.000919 U
Dibromochloromethane	3.7	17	210	5,800	3.3	14	0.0024	0.011	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	8.3	39	NV		0.000743 U
Dibromomethane	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	24	99	NV		0.000911 U
Dichlorodifluoromethane (Freon 12)	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	87	370	NV		0.00195 U
Diisopropyl ether	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,200	9,400	NV		0.000498 U
Ethylbenzene	34	150	1,700	49,000	36	160	0.22	0.9	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.8	25	NV		0.000895 U
Freon 113	400,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	6,700	28,000	NV		0.000916 U
Hexachlorobutadiene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.2	5.3	NV		0.00728 U
Isopropylbenzene	3,500	57,000	27,000	750,000	NV	NV	96	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	9,900	NV		0.000516 U
Methyl tert-butyl ether	250	1,100	12,000	320,000	340	1,500	0.11	0.54	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	47	210	NV		0.000425 U
Methylene chloride	76	1,600	2,100	58,000	NV	NV	0.14	2.4	1,600	NV	NV	NV	2.6	22	NV	NV	1,000	8,500	57	1,000	NV		0.0304 U

Table 5-1
Forest Creek Soil Analytical Results
Oregon Department of Environment Quality



Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	Tire Pile									
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							TIREPILE-COMPS									
Sample Type:																						Composite									
Collection Date:											Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts		Birds		Mammals		Birds		Mammals		Res. Soil	Ind. Soil
Collection Depth (ft bgs):																					T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	0-0.5		
Naphthalene	5.3	23	580	16,000	6.4	83	0.077	0.34	1	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.6	NV	0.00592 U								
n-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,900	58,000	NV	0.00637 U								
n-Propylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,800	24,000	NV	0.00115 U								
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7,800	120,000	NV	0.00349 U								
Styrene	7,900	130,000	56,000	NV	NV	NV	170	800	3.2	1.2	NV	NV	NV	NV	NV	NV	NV	NV	NV	6,000	35,000	NV	0.000304 J								
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	7,800	120,000	NV	0.00237 U								
Tetrachloroethene (PCE)	220	1,000	1,800	50,000	NV	NV	0.46	1.9	10	NV	NV	NV	0.18	0.94	NV	NV	42	210	24	100	NV	0.00109 U									
Toluene	5,800	88,000	28,000	770,000	NV	NV	84	490	200	NV	NV	NV	23	230	NV	NV	3,300	33,000	4,900	47,000	NV	0.00249 J									
trans-1,2-Dichloroethene	1,600	23,000	7,100	200,000	NV	NV	7	51	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	70	300	NV	0.00126 U								
trans-1,3-Dichloropropene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00139 U								
Trichloroethene (TCE)	6.7	51	130	3,700	15	96	0.013	0.087	NV	NV	NV	NV	42	420	NV	NV	11,000	110,000	0.94	6.0	NV	0.000709 U									
Trichlorofluoromethane (Freon 11)	7,600	130,000	69,000	NV	NV	NV	61	280	NV	NV	NV	NV	52	350	NV	NV	62,000	420,000	23,000	350,000	NV	0.001 U									
Vinyl chloride	0.36	4.4	34	950	5.3	89	0.00057	0.01	NV	NV	NV	NV	0.12	1.2	NV	NV	28	280	0.059	1.7	NV	0.00141 U									
Xylenes (total) ^(c)	1,400	25,000	20,000	560,000	5.3	89	23	100	100	NV	41	410	1.4	1.8	190	1,900	210	260	580	2,500	NV	0.00437 J									
PAHs (mg/kg)																															
1-Methylnaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.18	0.77	NV	0.00519 U								
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	4,800	60,000	NV	0.00539 U								
2-Methylnaphthalene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	240	3,000	NV	0.00494 U								
Acenaphthene	4,700	70,000	21,000	590,000	NV	NV	NV	NV	0.25	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3,600	45,000	NV	0.00242 U								
Acenaphthylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0025 U								
Anthracene	23,000	350,000	110,000	NV	NV	NV	NV	NV	6.8	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	18,000	230,000	NV	0.00266 U								
Benzo(a)anthracene	1.1	21	170	4800	NV	NV	1.6	NV	18	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.002 U								
Benzo(a)pyrene	0.11	2.1	17	490	NV	NV	4.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11	2.1	NV	0.00207 U								
Benzo(b)fluoranthene	1.1	21	170	4900	NV	NV	NV	NV	18	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.00177 U								
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00205 U								
Benzo(k)fluoranthene	11	210	1,700	49,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	11	210	NV	0.00249 U								
Chrysene	110	2,100	17,000	490,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	110	2,100	NV	0.00268 U								
Dibenzo(a,h)anthracene	0.11	2.1	17	490	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.11	2.1	NV	0.00199 U								
Fluoranthene	2,400	30,000	10,000	280,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,400	30,000	NV	0.00262 U								
Fluorene	3,100	47,000	14,000	390,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2,400	30,000	NV	0.00237 U								
Indeno(1,2,3-cd)pyrene	1.1	21	170	4,900	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.1	21	NV	0.00209 U								
Naphthalene	5.3	23	580	16,000	6.4	83	0.077	0.34	1	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	8.6	NV	0.00472 U								
Phenanthrene	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00267 U								
Pyrene	1,800	23,000	7,500	210,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,800	23,000	NV	0.00231 U								
cPAH TEQ ^{(d)(5)}	0.11	2.1	17	490	NV	NV	4.4	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00268 UT								
HPAH ^(e)	NV	NV	NV	NV	NV	NV	NV	NV	NV	18	0.11	0.55	1.1	5.9	6.4	64	110	550	NV	NV	NV	NV	0.00268 UT								
LPAH ^(f)	NV	NV	NV	NV	NV	NV	NV	NV	NV	29	13	67	100	540	7,500	37,000	1,200	59,000	NV	NV	NV	NV	0.00472 UT								
Pesticides (mg/kg)																															
4,4'-DDD	2.2	12	9.7	270	NV	NV	1.1	2.6	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	9.6	NV	0.00798 U								
4,4'-DDE	1.8	8.2	66	1,800	NV	NV	1.6	7.5	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.0	9.3	NV	0.00778 U								
4,4'-DDT	1.9	8.5	66	1,800	NV	NV	12	70	4.1	NV	0.041	0.41	0.047	0.24	0.12	1.2	0.02	0.099	1.9	8.5	NV	NV	0.00886 U								

Table 5-1
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Oregon Department of Environment Quality



Location:	RBC, Soil, Soil Ingestion, Dermal Contact, and Inhalation ⁽¹⁾				RBC, Soil, Volatilization to Outdoor Air ⁽¹⁾		RBC, Soil, Leaching to Groundwater ⁽¹⁾		Eco Risk-Based Concentrations ⁽²⁾										RSL ⁽³⁾		Background Metals, Klamath Mountains ⁽⁴⁾	Tire Pile										
Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							TIREPILE-COMPS										
Sample Type:																						Composite										
Collection Date:											Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts		Birds		Mammals		Birds		Mammals		Res. Soil	Ind. Soil	12/17/2024
Collection Depth (ft bgs):																						T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E			0-0.5
Aldrin	0.031	0.13	1.1	30	NV	NV	0.023	0.1	NV	NV	8.5E-05	0.0043	0.037	0.18	0.062	3.1	4.4	22	0.039	0.18	NV	0.00746 U										
alpha-BHC	0.086	0.36	3	83	NV	NV	0.0063	0.023	NV	NV	0.21	0.85	0.0096	0.096	120	470	0.88	8.8	0.086	0.36	NV	0.00736 U										
beta-BHC	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.30	1.3	NV	0.00728 U										
Chlordane	1.7	7.4	61	1,700	NV	NV	0.45	2.1	NV	NV	0.28	1.4	0.27	1.4	NV	NV	120	590	1.7	7.7	NV	0.114 U										
delta-BHC	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.0038	0.049	NV	0.00734 U										
Dieldrin	0.034	0.14	1.2	33	NV	NV	0.01	0.03	10	NV	0.012	0.64	0.0045	0.009	0.056	3	0.0065	0.013	0.034	0.14	NV	0.00806 U										
Endosulfan I	380	4,900	1,600	45,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	470	7,000	NV	0.00698 U										
Endosulfan II	380	4,900	1,600	45,000	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	470	7,000	NV	0.00764 U										
Endosulfan sulfate	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	380	4,900	NV	0.00742 U										
Endrin	19	250	80	2,200	NV	NV	11	NV	0.0034	NV	0.0014	0.014	0.023	0.23	0.0068	0.068	2.1	21	19	250	NV	0.00862 U										
Endrin aldehyde	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00682 U										
Endrin ketone	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.00803 U										
Heptachlor	0.11	0.45	4	110	18	230	0.017	0.048	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.13	0.63	NV	0.00801 U										
Heptachlor epoxide	0.055	0.24	2	56	28	NV	0.0042	0.016	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.070	0.33	NV	0.00751 U										
Hexachlorobenzene	0.21	0.93	11	320	1	13	0.018	0.084	10	10	0.079	0.79	0.2	2	0.37	3.7	59	590	0.21	0.96	NV	0.00703 U										
Lindane	0.49	2.1	17	470	NV	NV	0.036	0.13	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.057	0.80	NV	0.00782 U										
Methoxychlor	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	18	92	5.1	10	87	8,800	300	600	320	4,100	NV	0.00932 U										
Toxaphene	0.49	2.1	17	470	NV	NV	0.36	0.93	NV	NV	4.1	21	5.9	30	19	190	430	2,100	0.49	2.1	NV	0.247 U										
DDx ^(g)	NV	NV	NV	NV	NV	NV	NV	NV	4.1	NV	0.041	0.41	0.047	0.24	0.12	1.2	0.02	0.099	NV	NV	NV	0.00886 UT										
Dioxin/Furan (pg/g)																																
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	150	1,500	1	7	1,500	15,000	1.6	11	NV	NV	NV	251										
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	230	1.6	11	230	2,300	2.5	17	NV	NV	NV	429										
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	23	230	1.6	11	230	2,300	2.5	17	NV	NV	NV	20.7										
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	5.1	51	0.18	1.2	50	500	0.27	1.8	NV	NV	NV	7.19										
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	59.9										
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	19	190	0.13	0.89	190	1,900	0.2	1.4	NV	NV	NV	13.3										
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	44.1										
1,2,3,7,8,9-HxCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1.9	19	0.13	0.89	19	190	0.2	1.4	NV	NV	NV	10.8										
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	3	30	0.21	1.4	30	300	0.32	2.2	NV	NV	NV	5.00 U										
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.59	5.9	0.042	0.28	5.9	59	0.064	0.43	NV	NV	NV	5.31										
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	4.1	41	0.97	6.5	40	400	1.5	9.8	NV	NV	NV	19.2										
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	2.3	23	0.16	1.1	23	230	0.25	1.7	NV	NV	NV	53.5										
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.41	4.1	0.097	0.65	4	40	0.15	0.98	NV	NV	NV	33.5										
2,3,7,8-TCDD	4.7	16	170	4,800	10,000	130,000	6.8	31	NV	5,000,000	0.52	5.2	0.037	0.25	5.2	52	0.057	0.38	4.8	22	NV	1.45										
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	0.64	6.4	0.45	3	6.3	63	0.69	4.6	NV	NV	NV	14.3										
OCDD	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,900	19,000	45	300	19,000	190,000	68	460	NV	NV	NV	1,320										
OCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	1,400	14,000	33	220	14,000	140,000	51	340	NV	NV	NV	244										
Total HpCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	473										
Total HpCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	595										
Total HxCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	100	470	NV	141 K										
Total HxCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	397										

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Oregon Department of Environment Quality



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Sample Name:									Direct Toxicity		Ground Feeding				Top Consumers							TIREPILE-COMPS
Sample Type:																						Composite
Collection Date:																						12/17/2024
Collection Depth (ft bgs):	Res.	Occ.	Con. Worker	Exc. Worker	Res.	Occ.	Res.	Occ.	Plants	Inverts	Birds		Mammals		Birds		Mammals		Res. Soil	Ind. Soil		0-0.5
											T&E	Non T&E	T&E	Non T&E	T&E	Non T&E	T&E	Non T&E				
Total PeCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	60 K
Total PeCDFs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	265 K
Total TCDDs	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	34 K
Total TCDF	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	208 K
Dioxin/Furan TEQ ^{(h)(6)}	4.7	16	170	4,800	10,000	130,000	6.8	31	NV	5,000,000	0.52	5.2	0.037	0.25	5.2	52	0.057	0.38	4.8	22	NV	45.4 T

Table 5-1
Soil Analytical Results
Oregon Department of Environment Forest Creek

Notes	
Data summation rules are as follows: non-detect results are multiplied by one-half when used for sums or TEQ calculations. When all results are non-detect, the highest reporting limit is provided as the sum or TEQ.	
Shading (color key below) indicates values that exceed RBCs; non-detects (U, UJ, UJK, UK) were not compared with screening criteria. When multiple criteria are exceeded, results are shaded based on the highest value. When multiple criteria of the same value are exceeded, the result is shaded based on the criterion presented to the left.	
Metals results screened to RBCs and RSLs only if results are above Oregon DEQ Background Metals values (if available). Background metals values are shown for reference only and are not shaded for exceedances.	
RBC, Soil, Ingestion, Dermal Contact, and Inhalation, Residential	Eco RBC, Soil, Ground-Feeding Threatened and Endangered Mammals
RBC, Soil, Ingestion, Dermal Contact, and Inhalation, Occupational	Eco RBC, Soil, Ground-Feeding Non-Threatened and Endangered Mammals
RBC, Soil, Leaching to Groundwater, Residential	Eco RBC, Soil, Top Consumers Threatened and Endangered Birds
RBC, Soil, Leaching to Groundwater, Occupational	Eco RBC, Soil, Top Consumer Non-Threatened and Endangered Birds
Eco RBC, Soil, Direct Toxicity, Plants	Eco RBC, Soil, Top Consumers Threatened and Endangered Mammals
Eco RBC, Soil, Direct Toxicity, Inverts	Eco RBC, Soil, Top Consumer Non-Threatened and Endangered Mammals
Eco RBC, Soil, Ground-Feeding Threatened and Endangered Birds	RSL, Residential, Soil
Eco RBC, Soil, Ground-Feeding Non-Threatened and Endangered Birds	RSL, Industrial, Soil
Bold = result was detected above method detection limit.	
Con. = construction.	
cPAH = carcinogenic polycyclic aromatic hydrocarbon.	
EPA = U.S. Environmental Protection Agency.	
Exc. = excavation.	
ft bgs = feet below ground surface.	
HPAH = high-molecular-weight polycyclic aromatic hydrocarbon.	
Ind. = industrial.	
J = result is estimated.	
J+ = result is estimated, but the result may be biased high.	
K = result is an estimated maximum potential concentration.	
LPAH = low-molecular-weight polycyclic aromatic hydrocarbon.	
mg/kg = milligrams per kilogram.	
NV = no value.	
Occ. = occupational.	
^(a) Value is for generic diesel/heating oil, since generic residual-range hydrocarbon or diesel+oil values are not available.	
^(b) Diesel+Oil is the sum of diesel- and residual-range hydrocarbons. Non-detect results are summed at one-half the detection limit. When both results are non-detect the highest detection limit is shown.	
^(c) Total xylenes are reported by the laboratory.	
^(d) cPAH TEQ calculated as the sum of each cPAH multiplied by the corresponding TEF with non-detect results also multiplied by one-half. When all cPAHs are non-detect, the highest detection limit is shown.	
^(e) HPAH is the sum of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, and pyrene.	
^(f) LPAH is the sum of acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene.	
^(g) Total DDx is the sum of detected 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT results.	
^(h) Dioxin/furan TEQ calculated as the sum of each congener concentration multiplied by the corresponding mammalian TEF value. Non-detect values are multiplied by one-half.	
References	
⁽¹⁾ DEQ. 2023. Table: <i>Risk-Based Concentrations for Individual Chemicals</i> . Oregon Department of Environmental Quality, Environmental Cleanup Program. August.	
⁽²⁾ DEQ. 2020. <i>Conducting Ecological Risk Assessments</i> . Table 1a: Risk Based Concentrations for Plants, Invertebrates, and Wildlife Exposed to Soil. Oregon Department of Environmental Quality, Land Quality Division. September.	
⁽³⁾ EPA. 2024. <i>Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023</i> . U.S. Environmental Protection Agency. November.	
⁽⁴⁾ DEQ. 2013. <i>Development of Oregon Background Metals Concentrations in Soil</i> . Oregon Department of Environmental Quality, Land Quality Division Cleanup Program, Portland, Oregon. March.	
⁽⁵⁾ EPA. 1993. <i>Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons</i> . 600/R-93/089. U.S. Environmental Protection Agency. July.	
⁽⁶⁾ Van den Berg, M. et al. 2006. "The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds." <i>Toxicological Sciences</i> , 93(2): 223–241. [doi:10.1093/toxsci/kfl055]	

Appendix A

OWRD Documentation



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WELL I.D. LABEL#	135591	
START CARD #	1045852	
ORIGINAL LOG #		

(1) LAND OWNER Owner Well I.D. _____
 First Name JESSE Last Name CARDOZA
 Company _____
 Address 539 MUSKRAT CIRCLE
 City WHITETHORNE State CA Zip 95589

(2) TYPE OF WORK ☒ New Well ☐ Deepening ☐ Conversion
☐ Alteration (complete 2a & 10) ☐ Abandonment (complete 5a)

	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
Casing:									
	Material		From	To	Amt	sacks/lbs			
Seal:									

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud
☐ Reverse Rotary ☐ Other _____

☐ Industrial/ Commercial ☐ Livestock ☐ Dewatering
☐ Thermal ☐ Injection ☐ Other _____

Depth of Completed Well			200.00 ft.				
BORE HOLE			SEAL			sacks/	
Dia	From	To	Material	From	To	Amt	lbs
10	0	18	Bentonite Chips	0	18	23	S
6	18	200	Calculated			8.22	
			Calculated				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☒ Other DRY POURED

Backfill placed from _____ ft. to _____ ft. Material _____

Filter pack from _____ ft. to _____ ft. Material _____ Size _____

Explosives used: ☐ Yes Type _____ Amount _____

Proposed Amount	Actual Amount

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
		6	☒	2	38	.250				
		4	☐	2	200	SCH40				
			☐							
			☐							
			☐							
			☐							

Shoe ☐ Inside ☒ Outside ☐ Other Location of shoe(s) 38

Temp casing ☐ Yes Dia From + To

[illegible]

☐ Pump
 ☐ Bailer
 ☒ Air
 ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)
5		198	1

Temperature 56 °F Lab analysis ☐ Yes By _____

Water quality concerns? ☐ Yes (describe below) TDS amount 194 ppm

From	To	Description	Amount	Units

County JOSEPHINE Twp 38.00 S N/S Range 7.00 W E/W WM
Sec 34 NW 1/4 of the NW 1/4 Tax Lot 118
Tax Map Number _____ Lot _____
Lat _____° _____' _____" or 42.22472000 DMS or DD
Long _____° _____' _____" or -123.52037000 DMS or DD
☐ Street address of well ☒ Nearest address
FOREST CREEK RD. TL 118 SELMA, OR 97538

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Pre-Alteration			☐	
Completed Well	12/4/2019		☐	14
Flowing Artesian?	☐	Dry Hole?	☐	

WATER BEARING ZONES					Depth water was first found	18.00
SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
12/4/2019	18	44	3.5			14
12/4/2019	87	88	1.5			14

[illegible]

Date Started 12/3/2019 Completed 12/4/2019

I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

License Number 1945 Date 12/9/2019

Signed JUSTIN SPLIETHOF (E-filed)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

License Number 1835 Date 12/12/2019

Signed KEVIN GILL (E-filed)

Contact Info (optional) CLOUSER DRILLING INC.

Jose
10971

APR 7 1982

State Well No.

385/2W-3460

WATER RESOURCES DEPT State Permit No

SALE OREGON

DUPLICATE

Name MR. EDWARD E. WALKER
Address 140 BRIAR LANE
City SELMA State OR.

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 12.

Rotary Air	☒	Driven	☐	Domestic	☒	Industrial	☐	Municipal	☐
Rotary Mud	☐	Dug	☐	Irrigation	☐	Test Well	☐	Other	☐
	☐	Bored	☐	Thermal:		Withdrawal	☐	Reinjection	☐

..... 6. " Diam. from 0 ft. to 80 ft. Gauge 250
..... " Diam. from ft. to ft. Gauge

....." Diam. from ft. to ft. Gauge

60 perforations from 60 ft. to 80 ft.

Diam. Slot Size Set from ft. to f

Temperature of water _____ Depth artesian flow encountered f

Gravel placed from ft. to ft.

County JOSEPHINE Driller's well number 11231
SW ¼ NW ¼ Section 34 T. 38 R. 7 W.M.
 Tax Lot # 112 Lot Blk Subdivision
 Address at well location: SAME

Depth at which water was first found 66' ft.
 Static level 1.2 ft. below land surface. Date Nov. 13, 81
 Artesian pressure _____ lbs. per square inch. Date _____

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

[illegible]

Drilling Machine Operator's Certification:

[Signed] Lehen Humer Date Nov. 30, 1981
(Drilling Machine Operator)

Drilling Machine Operator's License No. 773

Name LEROY CLOUSER DRILLING
(Person, firm or corporation) (Type or print)

Address P.O. Box 235 Selma 97538

[Signed] LeRoy Hamm

Contractor's License No. 1700 Date November 30, 1981

SP*12658-690

STATE OF OREGON

COUNTY OF JOSEPHINE

CERTIFICATE OF WATER RIGHT

This Is to Certify, That L. J. BUELL

of Selma, State of Oregon, has a right to the use of
the waters of Thompson Creek, tributary of Deer Creek,
for the purpose of irrigation

and that said right has been confirmed by decree of the Circuit Court of the State of Oregon for
Josephine County, and the said decree entered of record at Salem, in the Order
Record of the STATE ENGINEER, in Volume 13, at page 70; that the priority
of the right thereby confirmed dates from 1905;

that the amount of water to which such right is entitled, for the purposes aforesaid, is limited to an
amount actually beneficially used for said purposes, and shall not exceed one cubic foot per
second for each 50 acres of land irrigated during the irrigation season from
April 1 to November 1 of each year.

A description of the lands irrigated under such right, and to which the water is appurtenant (or,
if for other purposes, the place where such water is put to beneficial use), is as follows:

5.9 acres in NE $\frac{1}{4}$ SE $\frac{1}{4}$
10.1 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$
Section 28,
T. 38 S., R. 7 W., W. M.

And said right shall be subject to all other conditions and limitations
contained in said decree.

The right to the use of the water for irrigation purposes is restricted to the lands or place of use
herein described.

WITNESS the signature of the State Engineer,

affixed this 1st day

of September, 1940

CHAS. E. STRICKLIN

State Engineer.

Recorded in State Record of Water Right Certificates, Volume 12, page 13838.

Appendix B

Photograph Log



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Photographs

Project Name: Forest Creek Site Assessment
Project Number: M0785.12.003
Location: Selma, Oregon

Photo No. 1.

Description

View of Haven Creek,
looking west.



Photo No. 2.

Description

View of Thompson
Creek, looking west.
Both creeks had steep
banks and rocky stream
beds.





Photographs

Project Name: Forest Creek Site Assessment
Project Number: M0785.12.003
Location: Selma, Oregon

Photo No. 3.

Description

View of composite soil sample DRUMAREA-COMP-S, looking northeast. Note the chain-link fence and vehicle trench present along the eastern portion of the property along Forest Creek Road.



Photo No. 4.

Description

View of typical increment sample hole. Samples were collected 0 to 6-inches deep.





Photographs

Project Name: Forest Creek Site Assessment
Project Number: M0785.12.003
Location: Selma, Oregon

Photo No. 5.

Description

View of sample location
flag placement in
Decision Unit 1.



Photo No. 6.

Description

View of Haven Creek,
looking east.





Photographs

Project Name: Forest Creek Site Assessment
Project Number: M0785.12.003
Location: Selma, Oregon

Photo No. 7.

Description

Typical view of forested areas of the Site.



Photo No. 8.

Description

Typical view of forested areas of the Site.





Photographs

Project Name: Forest Creek Site Assessment
Project Number: M0785.12.003
Location: Selma, Oregon

Photo No. 9.

Description

Typical view of the former removal areas on the Site, looking east.



Photo No. 10.

Description

Typical view of the former removal areas on the Site, looking southeast.



Appendix C

Standard Operating Procedures



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Standard Operating Procedure

Decontamination of Field Equipment

SOP Number: 1

Date: 03/09/2021

Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the decontamination procedure for field equipment that may come in contact with contaminated media and that Maul Foster & Alongi, Inc. (MFA) staff may reuse at multiple sample locations or sites. Decontamination is performed to reduce the potential for cross-contamination of samples that will be collected with multiuse equipment and that will undergo physical or chemical analyses. Other equipment that is multiuse—not used specifically for sample collection (e.g., water level meter, pump used for well development)—also requires decontamination. Finally, decontamination is necessary to minimize the potential for MFA staff's exposure to chemicals.

Typically, decontamination is not necessary for field equipment that is disposable and intended to be used only once (e.g., disposable bailer). Additionally, this SOP does not apply to equipment used by subcontractors, such as drilling equipment. However, MFA staff should confirm that subcontractors are implementing appropriate decontamination procedures to minimize the potential for cross-contamination of samples or MFA staff's exposure to chemicals.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Nonphosphate detergent solution (e.g., Alconox, Liquinox)
- Distilled and potable water
- Personal protective equipment (as specified in the site-specific health and safety plan)
- Buckets to contain rinsate, brushes, paper towels

Depending on the site conditions and the types of contaminants that may be present, the use of other decontamination materials, such as deionized water, methanol, hexane, or isopropyl alcohol, may be necessary. The need for other materials should be determined prior to fieldwork. The decontamination procedures using other materials should be described in a site-specific sampling and analysis plan (SAP).

Methodology

When the site-specific SAP specifies additional or different requirements for decontamination, it takes precedence over this SOP. In the absence of a SAP, the following procedures shall be used.

General Sampling Procedure:

1. Rinse the equipment with potable water to remove visible soil, petroleum sheen, or contamination.

2. Scrub the equipment with a brush and solution of distilled water and nonphosphate detergent.
3. Rinse the equipment with distilled water.
4. Allow equipment to air dry, or dry it with paper towels.
5. At all times, ensure that the decontaminated equipment is stored so as to prevent it from becoming contaminated while not in use. Depending on the size of the equipment, it can be wrapped with new aluminum foil or placed in a new plastic bag.

Rinsate Storage:

All fluids resulting from equipment decontamination shall initially be contained in a bucket and then transferred to a Department of Transportation-approved container (e.g., 55-gallon drum) stored on site at a location that does not interfere with on-site activities (e.g., vehicle traffic, pedestrian areas). Place a label on each container and include the following information:

- The date on which fluids were placed in the container
- Contents (e.g., “water from equipment decontamination”)
- Contact information, including MFA staff or client phone number

Note that labels on containers exposed to sunlight or precipitation are prone to fading. Use a waterproof, indelible ink pen (e.g., Sharpie®) whenever possible. In the field notebook, keep a detailed inventory of all containers, including the number of containers, the approximate quantity of liquids generated, and a description of the source of the fluids. Provide this information to the MFA project manager. For future reference, take photographs of (1) each drum label, (2) the drum(s), and (3) the drum storage vicinity on site.

Note that some clients and site owners have specific requirements for labeling and storage of containers. The requirements should be determined in advance of the fieldwork.



Standard Operating Procedure

Field Screening for VOCs in Soil

SOP Number: 3

Date: 03/09/2021

Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the use of a photoionization detector (PID) to field screen soil for evidence of organic vapors. The PID measures the organic vapor concentration in parts per million, is not compound-specific.

Never rely on a stand-alone PID reading to identify organic chemical contamination in soil. Always collect multiple PID readings (e.g., at multiple depths along the length of a soil core), since it is the relative difference in concentration between multiple readings (e.g., a sudden increase in concentration at a certain depth interval) that is the typical indicator of contamination. Additionally, PID readings should always be accompanied by observation of the soil samples for other indicators of contamination, such as soil staining or chemical odors, so that these multiple lines of evidence can be used together to identify potential organic chemical contamination in the field.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- PID with calibration gas
- Ziploc®-type bags
- Field forms or notebook for documenting PID readings

Methodology

When the project-specific sampling and analysis plan (SAP) specifies additional or different requirements for organic vapor field screening, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

The electron volt (eV) rating for the PID lamp (e.g., 9.8, 10.6, 11.7) must be greater than the ionization potential (in eV) of a compound in order for the PID to detect the compound. A lamp of at least 9.8 eV should be used for petroleum hydrocarbons. A lamp of at least 10.6 eV should be used for typical chlorinated alkenes. If the project health and safety plan does not specify the lamp size, verify the compatibility of the lamp size with the anticipated compounds expected to be present in soil prior to the field activities, and confirm with the project manager.

General Sampling Procedure (Heading 3 No Number Style):

Calibration:

- The PID should be calibrated daily (or more frequently, as needed).
- Calibrate the PID according to the manufacturer's instructions.

- Document the calibration activities and results in the field notebook.

Measuring organic vapor content:

- Place a representative volume (generally, a “handful”) of freshly exposed soil into a Ziploc-type bag.
- Seal the bag and gently knead the bag to loosen the soil.
- Let the bag set for several minutes to allow organic vapors, if present, to volatilize from the soil into the headspace of the bag.
- Partially open the bag so that the tip of the PID intake tube can be inserted into the bag but is not in contact with the soil, then close the bag seal around the intake tube.
- Record the PID measurement and document results in the field notes or boring log.

Static Sheen Test Procedure and Observations:

Sheen Test Procedure:

- Following the PID screen discussed above, add enough water to cover the soil in the container.
- Observe the water for signs of discoloration/sheen and characterize per the table below.

When static sheen testing is required or when making observations of a water surface the following table presents descriptions to be used (consistent with Department of Ecology Guidance)¹.

No Sheen (NS)	No visible sheen on the water surface
Slight Sheen (SS)	Light, colorless, dull sheen; spread is irregular, not rapid. Natural organic oils or iron bacteria in the soil may produce a slight sheen.
Moderate Sheen (MS)	Pronounced sheen over limited area; probably has some color/iridescence; spread is irregular, may be rapid; sheen does not spread over entire water surface.
Heavy Sheen (HS)	Heavy sheen with pronounced color/iridescence; spread is rapid; the entire water surface is covered with sheen.
Biogenic Film (BF)	False positive results may be generated by the presence of decaying organic matter and iron bacteria, which can produce a rainbow-like sheen similar to an oil sheen. These sheens, unlike oil sheens, can typically be broken up creating platy or blocky fragments when agitated or disturbed. Biogenic films can also be foamy.

¹ Department of Ecology. 2016. Guidance for remediation of petroleum contaminated sites. June.



Standard Operating Procedure

Surface and Subsurface Soil Sampling Using Hand Tools

SOP Number: 4

Date: 09/13/2023

Revision Number: 0.2

Scope and Application

This standard operating procedure (SOP) describes the use of hand tools for obtaining surface and subsurface soil samples for physical and/or chemical analysis.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the Health and Safety Plan)
- Tools appropriate for the conditions that may be encountered (e.g., spoon, trowel, shovel, hand auger); tools constructed of stainless steel are preferred.
- Stainless steel bowls
- Tape measure with increments in feet and tenths of a foot.
- Laboratory-supplied sample containers
- Laboratory chain-of-custody form and cooler with ice.
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures).
- Field forms or notebook for documenting the sampling procedures.

Methodology

When the project-specific sampling and analysis plan (SAP) specifies additional or other requirements for soil sampling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

General Sampling Procedure:

- Don gloves as specified in the Health and Safety Plan; replace gloves with new gloves after each sample is collected.
- Clear the ground surface of brush, root mat, grass, leaves, and other debris.
- Use the selected hand tool to remove soil to the targeted sample depth. Use a measuring tape to verify that the sample depth is correct and record the depth in the field notebook or boring log.
- Describe and document the soil lithology in accordance with SOP 2.
- Use the selected hand tool to collect soil and homogenize in a decontaminated stainless-steel bowl or a dedicated Ziploc® bag and then transfer the sample to the sample container using hand tools.

- Before sample collection, and to the extent possible, use the selected hand tool to remove organic debris, anthropogenic material (e.g., brick, metal, glass), and gravels larger than 4 millimeters, unless a project-specific SAP directs otherwise.
- When sampling for gasoline-range total petroleum hydrocarbons (gasoline) or volatile organic compounds (VOCs), a subsample will be obtained from a discrete portion of the collected sample. To minimize the potential loss of volatiles during sampling, the subsample shall not be composited or homogenized. The sample container for gasoline and/or VOC analysis will be filled first if additional containers are necessary for other analysis. Specific procedures for collecting samples for gasoline and/or VOC analysis using the U.S. Environmental Protection Agency Method 5035 are specified in SOP 5.
- The sampling device and field equipment will be decontaminated between sample locations in accordance with SOP 1. Alternatively, new, disposable equipment can be used to collect each sample to preclude the need for equipment decontamination.

Backfilling Sample Locations:

Backfill in accordance with federal and state regulations (e.g., Oregon bentonite requirements per OAR 690-240-0035). Otherwise, manual excavations can be backfilled with excess soil remaining after sample collection, unless the project-specific SAP requires a different backfill procedure.



Standard Operating Procedure

EPA Method 5035 Soil Sampling

SOP Number: 5

Date: 9/25/2024

Revision Number: 0.2

Scope and Application

This standard operating procedure (SOP) describes the methods for obtaining soil samples for chemical analysis for gasoline-range petroleum hydrocarbons (gasoline) and volatile organic compounds (VOCs) by U.S. Environmental Protection Agency Method 5035A. Please see note in general sampling procedure regarding container labeling.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Sampling equipment (e.g., Terra Core Sampler™ or similar sampler capable of collecting a 5-gram soil sample).
- Laboratory-supplied sample containers:
 - Preweighed and labeled 40-milliliter volatile organic analysis (VOA) vials, including preservative (typically methanol)
 - Two-ounce jar for percent total solids/moisture (if required, confirm with the laboratory)
- Laboratory chain-of-custody form and cooler with ice.
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures).
- Field forms or notebook for documenting the sampling procedures.

Methodology

When the site-specific sampling and analysis plan (SAP) specifies additional or different requirements for soil sampling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Laboratory Analytical Considerations:

- VOCs must be analyzed within 14 days of sample collection.
- Samples must be maintained at less than $4^{\circ} \pm 2^{\circ}\text{C}$.
- Discrete VOC samples may be composited at the laboratory.

General Procedure:

- When using the Terra Core Sampler, seat the plunger in the handle.
- Collect the sample by pushing the sampler into the soil until the soil has filled the sampler.
- Remove the sampler and confirm that the soil in it is flush with the mouth of the sampler.

- Wipe all debris from the outside of the sampler. Remove any excess collected soil that extends beyond the mouth of the sampler.
- Rotate the plunger handle 90 degrees until it is aligned with the slots in the body of the sampler. Place the mouth of the sampler into the sample container and extrude the sample into the sample container by pushing the plunger down. Hold the sample at an angle when extruding to minimize splashing of the preservative.
- Immediately remove any soil or debris from the threads of the vial and place the lid on the vial.
- Gently swirl the vial (do not shake) to allow the preservative to uniformly penetrate and wet the soil.
- Repeat process for each additional sample container.
- If required by the laboratory, fill a 2-ounce container to capacity for percent total solids determination.
- **Please note that the tare weight is recorded on the vial or is digitally recorded for that specific container using a bar code. Do not obscure the laboratory-provided tare weight or bar code. Do not place any labels, stickers, tape, etc., on the pre-weighed sample vials.**



Standard Operating Procedure

Underground Utility Locates

SOP Number: 18

Date: 03/09/2021

Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the practices for locating underground utilities. Refer to the MFA health and safety plan (HASP) for additional information regarding communication procedures to be followed when an inadvertent utility strike occurs, as well as regarding methods for mitigating hazards during a utility strike.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the HASP)
- Marking materials (e.g., marking paint, stakes, flags)
- Field documentation materials

Methodology

When the project-specific sampling and analysis plan (SAP) specifies additional or different requirements for underground utility locates, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Before Conducting Utility Locates:

- Ensure that the locate will be conducted reasonably soon before the excavation work begins, e.g., within 48 hours. There may be project-specific conditions, e.g., weather and/or ground features that could cause markings to fade, which would require scheduling of the excavation work sooner than 48 hours after the locate.
- Clearly define the boundary of the work and the locations of all proposed excavations. Prepare a map of the project area showing the excavation locations.
- Interview site managers/property owners and obtain plans or drawings, if available, showing on-site utilities.
- For project work that will not take place in the public right-of-way, ensure that the public rights-of-way nearest to the project are identified and communicated during the one-call notification.
- Identify the township and range of the project area. This information can be easily attained by a quick email to MFA's GIS Exchange.
- If feasible, conduct a site visit to identify site conditions that could cause fading or disruption of marking paint. Such conditions could include gravel or ground sensitive to erosion and high traffic.
- Check the weather forecast to assess the potential for snow or rain to make marking utilities difficult or cause the markings to fade.

One-Call Utility Notification:

- If possible, initiate the one-call utility notification at least one week before the proposed work begins.
- Include a map or GPS coordinates when submitting the notification.
- Before conducting any excavation activities, confirm with each public utility that the utility locate has been completed.
- On remote or complicated sites, consider meeting public locators on site.
- Document the one-call ticket number and results in the project files.
- Provide the one-call ticket number to subcontractors who will be doing the excavations.

Private Utility Locate:

- Conduct the private utility locate only after confirmation that the public utility locate has been completed and all public utilities have been marked and the results reviewed by MFA staff who will be overseeing the excavations.
- Meet the private locator on site and participate in the entire private utility locate. Be engaged in the process, ask questions, and take time to walk the site thoroughly with the locator.
- Bring a copy of the one-call utility ticket and results of the one-call utility locator to check against the utility markings on the ground.
- If possible, have a site/property representative knowledgeable of on-site utilities participate in the private utility locate.
- If paint alone may not suffice to ensure clear marking of utilities, add vertical markers such as stakes or flags.
- Visually assess the area of the proposed excavation(s) to identify features potentially indicative of buried utilities. Have the private utility locator examine each feature identified below to assess the presence of buried utilities.
 - Examine adjacent public rights-of-way where public utilities have been marked for evidence of utilities that may extend onto the project site.
 - Identify nearby light poles, telephone poles, electrical utility poles, or other overhead utility poles with wires or conductors that run from the overhead utility, down the pole, and into the ground.
 - Identify the location of gas meters, water meters, or other aboveground junction boxes for evidence of utilities extending from these features into the ground.
 - Examine asphalt and concrete ground surfaces for discontinuities in the surface indicative of utility installations. Discontinuities may include recent patches of asphalt or concrete inlaid within older concrete or asphalt surfaces.
 - Identify manholes and catch basins indicative of buried storm or sanitary sewer pipes. Open manholes to examine the orientation of associated pipes to assess whether the utilities may be present near proposed excavations.
 - Identify tank ports and vent pipes.

- Identify irrigation systems and associated features such as valve boxes and controllers.
- Identify any other signs indicating the presence of buried utilities.
- Be wary of utility marks that suddenly begin or dead end.

Preparing to Perform Subsurface Activities after a Locate:

- Ensure that the markings are still visible when the work begins.
- Adjust locations, as needed, to avoid identified utilities, or use alternative methods such as nonmechanical excavation means (i.e., manual excavation or air-knifing) to a minimum depth of 5 feet.

Table
APWA UNIFORM COLOR CODE

	WHITE—Proposed Excavation
	PINK—Temporary Survey Markings
	RED—Electric Power Lines, Cables, Conduit and Lighting Cables
	YELLOW—Gas, Oil, Steam, Petroleum or Gaseous Materials
	ORANGE—Communication, Alarm or Signal Lines, Cables or Conduit
	BLUE—Potable Water
	PURPLE—Reclaimed Water, Irrigation and Slurry Lines
	GREEN—Sewers and Drain Lines
Source: Uniform Color Codes, ANSI Standard Z535.1. American Public Works Association. Revised 1999.	

Appendix D

Level 1 Ecological Scoping Checklist



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GUIDANCE FOR ECOLOGICAL RISK ASSESSMENT
LEVEL I - SCOPING

ATTACHMENT 1
Ecological Scoping Checklist

Site Name	Forest Creek
Date of Site Visit	December 16-20, 2024
Site Location	113 Forest Creek Road, Selma, Oregon
Site Visit Conducted by	Connor Anderson of Maul Foster and Alongi, Inc.

Part ❶

CONTAMINANTS OF INTEREST Types, Classes, Or Specific Hazardous Substances ‡ Known Or Suspected	Onsite	Adjacent to or in locality of the facility †
Petroleum hydrocarbons	Yes	Yes
Volatile organic compounds	Yes	Yes
Total priority pollutant metals	Yes	Yes
Pesticides and herbicides	Yes	Yes
Polycyclic aromatic hydrocarbons	Yes	Yes
Dioxins and furans	Yes	Yes

‡ As defined by OAR 340-122-115(30)

† As defined by OAR 340-122-115(34)

Part ❷

OBSERVED IMPACTS ASSOCIATED WITH THE SITE	Finding
Onsite vegetation (None, Limited, Extensive)	E
Vegetation in the locality of the site (None, Limited, Extensive)	E
Onsite wildlife such as macroinvertebrates, reptiles, amphibians, birds, mammals, other (None, Limited, Extensive)	L
Wildlife such as macroinvertebrates, reptiles, amphibians, birds, mammals, other in the locality of the site (None, Limited, Extensive)	L
Other readily observable impacts (None, Discuss below)	D
Discussion:	
The site is a former residence, with a mixture of cleared gravel areas, heavily wooded land, and two creeks with established vegetation. On site vegetation is comprised mostly of tree cover, grasses and shrubby cover. Nearby area outside of the property is characterized by rural residential structures and extensive wooded land. Wildlife observed on site is limited to birds, small mammals, and fish. It is possible that there are other species of ecological relevance present, however no observations of other species were noted during the site visits.	

ATTACHMENT 1
Ecological Scoping Checklist (cont'd)

Part ❸

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS / HABITAT	Finding

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GUIDANCE FOR ECOLOGICAL RISK ASSESSMENT
LEVEL I - SCOPING

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS / HABITAT	Finding
Terrestrial - Wooded	
Percentage of site that is wooded	50%
Dominant vegetation type (E vergreen, D eciduous, M ixed)	M
Prominent tree size at breast height, i.e., four feet (<6", 6" to 12", >12")	>12"
Evidence / observation of wildlife (M acroinvertebrates, R eptiles, A mphibians, B irds, M ammals, O ther)	B, M
Terrestrial - Scrub/Shrub/Grasses	
Percentage of site that is scrub/shrub	7%
Dominant vegetation type (S crub, S hrub, G rasses, O ther)	G
Prominent height of vegetation (<2', 2' to 5', >5')	<2'
Density of vegetation (D ense, P atchy, S pase)	P
Evidence / observation of wildlife (M acroinvertebrates, R eptiles, A mphibians, B irds, M ammals, O ther)	B, M
Terrestrial - Ruderal	
Percentage of site that is ruderal	40%
Dominant vegetation type (L andscaped, A griculture, B are ground)	B
Prominent height of vegetation (0', >0' to <2', 2' to 5', >5')	>0' to <2'
Density of vegetation (D ense, P atchy, S pase)	S
Evidence / observation of wildlife (M acroinvertebrates, R eptiles, A mphibians, B irds, M ammals, O ther)	None
Aquatic - Non-flowing (lentic)	
Percentage of site that is covered by lakes or ponds	0
Type of water bodies (L akes, P onds, V ernal pools, I mpoundments, L agoon, R eservoir, C anal)	NA
Size (acres), average depth (feet), trophic status of water bodies	NA
Source water (R iver, S team, G roundwater, I ndustrial discharge, S urface water runoff)	NA
Water discharge point (N one, R iver, S team, G roundwater, W etlands impoundment)	NA
Nature of bottom (M uddy, R ocky, S and, C oncrete, O ther)	NA
Vegetation present (S ubmerged, E mergent, F loating)	NA
Obvious wetlands present (Y es / N o)	NA
Evidence / observation of wildlife (M acroinvertebrates, R eptiles, A mphibians, B irds, M ammals, O ther)	NA
Aquatic - Flowing (lotic)	
Percentage of site that is covered by rivers, streams (brooks, creeks), intermittent streams, dry wash, arroyo, ditches, or channel waterway	3%
Type of water bodies (R ivers, S streams, I ntermittent S streams, D ry wash, A rroyo, D itches, C hannel waterway)	S
Size (acres), average depth (feet), approximate flow rate (cfs) of water bodies	Unknown
Bank environment (cover: V egetated, B are / slope: S teep, G radual / height (in feet))	V/S/10'
Source water (R iver, S team, G roundwater, I ndustrial discharge, S urface water runoff)	S, G, Su
Tidal influence (Y es / N o)	No
Water discharge point (N one, R iver, S team, G roundwater, W etlands impoundment)	S
Nature of bottom (M uddy, R ocky, S and, C oncrete, O ther)	R
Vegetation present (S ubmerged, E mergent, F loating)	E
Obvious wetlands present (Y es / N o)	No
Evidence / observation of wildlife (M acroinvertebrates, R eptiles, A mphibians, B irds,	

*See part 4

* **P:** Photographic documentation of these features is highly recommended.

[illegible]

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GUIDANCE FOR ECOLOGICAL RISK ASSESSMENT
LEVEL I - SCOPING

ATTACHMENT 2
Evaluation of Receptor-Pathway Interactions

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Are hazardous substances present or potentially present in surface waters? AND Are ecologically important species or habitats present? AND Could hazardous substances reach these receptors via surface water?			X
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in surface waters. • Ability of hazardous substances to migrate to surface waters. • Terrestrial organisms may be dermally exposed to water-borne contaminants as a result of wading or swimming in contaminated waters. Aquatic receptors may be exposed through osmotic exchange, respiration or ventilation of surface waters. • Contaminants may be taken-up by terrestrial plants whose roots are in contact with surface waters. • Terrestrial receptors may ingest water-borne contaminants if contaminated surface waters are used as a drinking water source.			
Are hazardous substances present or potentially present in groundwater? AND Are ecologically important species or habitats present? AND Could hazardous substances reach these receptors via groundwater?			X
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in groundwater. • Ability of hazardous substances to migrate to groundwater. • Potential for hazardous substances to migrate via groundwater and discharge into habitats and/or surface waters. • Contaminants may be taken-up by terrestrial and rooted aquatic plants whose roots are in contact with groundwater present within the root zone (~1m depth). • Terrestrial wildlife receptors generally will not contact groundwater unless it is discharged to the surface.			

“Y” = yes; “N” = No, “U” = Unknown (counts as a “Y”)

Oregon Department of Environmental Quality
GUIDANCE FOR ECOLOGICAL RISK ASSESSMENT
LEVEL I - SCOPING

ATTACHMENT 2
Evaluation of Receptor-Pathway Interactions (cont'd)

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Are hazardous substances present or potentially present in sediments? AND Are ecologically important species or habitats present? AND Could hazardous substances reach these receptors via contact with sediments?			X
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in sediment. • Ability of hazardous substances to leach or erode from surface soils and be carried into sediment via surface runoff. • Potential for contaminated groundwater to upwell through, and deposit contaminants in, sediments. • If sediments are present in an area that is only periodically inundated with water, terrestrial species may be dermally exposed during dry periods. Aquatic receptors may be directly exposed to sediments or may be exposed through osmotic exchange, respiration or ventilation of sediment pore waters. • Terrestrial plants may be exposed to sediment in an area that is only periodically inundated with water. • If sediments are present in an area that is only periodically inundated with water, terrestrial species may have direct access to sediments for the purposes of incidental ingestion. Aquatic receptors may regularly or incidentally ingest sediment while foraging.			
Are hazardous substances present or potentially present in prey or food items of ecologically important receptors? AND Are ecologically important species or habitats present? AND Could hazardous substances reach these receptors via consumption of food items?			X
When answering the above questions, consider the following: • Higher trophic level terrestrial and aquatic consumers and predators may be exposed through consumption of contaminated food sources. • In general, organic contaminants with $\log K_{ow} > 3.5$ may accumulate in terrestrial mammals and those with a $\log K_{ow} > 5$ may accumulate in aquatic vertebrates.			

“Y” = yes; “N” = No, “U” = Unknown (counts as a “Y”)

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GUIDANCE FOR ECOLOGICAL RISK ASSESSMENT
LEVEL I - SCOPING

ATTACHMENT 2
Evaluation of Receptor-Pathway Interactions (cont'd)

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Are hazardous substances present or potentially present in surficial soils? AND Are ecologically important species or habitats present? AND Could hazardous substances reach these receptors via incidental ingestion of or dermal contact with surficial soils?			X
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in surficial (~1m depth) soils. • Ability of hazardous substances to migrate to surficial soils. • Significant exposure via dermal contact would generally be limited to organic contaminants which are lipophilic and can cross epidermal barriers. • Exposure of terrestrial plants to contaminants present in particulates deposited on leaf and stem surfaces by rain striking contaminated soils (i.e., rain splash). • Contaminants in bulk soil may partition into soil solution, making them available to roots. • Incidental ingestion of contaminated soil could occur while animals grub for food resident in the soil, feed on plant matter covered with contaminated soil or while grooming themselves clean of soil.			
Are hazardous substances present or potentially present in soils? AND Are ecologically important species or habitats present? AND Could hazardous substances reach these receptors via vapors or fugitive dust carried in surface air or confined in burrows?			X
When answering the above questions, consider the following: • Volatility of the hazardous substance (volatile chemicals generally have Henry's Law constant $> 10^{-5}$ atm-m³/mol and molecular weight < 200 g/mol). • Exposure via inhalation is most important to organisms that burrow in contaminated soils, given the limited amounts of air present to dilute vapors and an absence of air movement to disperse gases. • Exposure via inhalation of fugitive dust is particularly applicable to ground-dwelling species that could be exposed to dust disturbed by their foraging or burrowing activities or by wind movement. • Foliar uptake of organic vapors would be limited to those contaminants with relatively high vapor pressures. • Exposure of terrestrial plants to contaminants present in particulates deposited on leaf and stem surfaces.			

“Y” = yes; “N” = No, “U” = Unknown (counts as a “Y”)



Photograph 1 - Former removal area.



Photograph 2 - Haven Creek, looking east.



Photograph 3 - Both on site creeks have vegetated banks, rocky bottoms, and swift moving water.



Photograph 4 - The majority of the site is forested land with mixed varieties of evergreen and deciduous trees.



Photograph 5 - Large portions of the site are cleared, where structures, refuse, and debris have been removed during prior cleanup actions.



Photograph 6 - Large portions of the site are cleared, where structures, refuse, and debris have been removed during prior cleanup actions.



February 26, 2025

Wetlands

 Estuarine and Marine Deepwater	 Freshwater Emergent Wetland	 Lake
 Estuarine and Marine Wetland	 Freshwater Forested/Shrub Wetland	 Other
	 Freshwater Pond	 Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix E

Analytical Laboratory Reports and Data Validation Memorandum



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Data Validation Memorandum

Project No. M0785.12.003 | February 5, 2025 | Oregon Department of Environmental Quality

Maul Foster & Alongi, Inc. (MFA), conducted an independent Stage 2A review of the quality of analytical results for soil and associated quality control samples collected in December 2024, at the Forest Creek Road Dump site located at 113 Forest Creek Road in Selma, Oregon.

Pace Analytical National (Pace-N) and Eurofins Environmental Testing (Eurofins) performed the analyses. MFA reviewed Pace-N report numbers L1812652, L1812675, L1812653, L1812779, L1812686, L1812777, L1812692, and L1812727. EPA Method 1613B analysis was subcontracted to Eurofins. The Eurofins lab reports were processed through Pace-N's Laboratory Information Management System and were given a Pace-N laboratory report number. MFA reviewed Eurofins report numbers L1812670, L1813317, L1813314, L1813321, L1813318, L1813320, L1813319, and L1812728. The analyses performed and the samples analyzed are listed in the following tables.

Analysis	Reference
Diesel- and oil-range hydrocarbons	NWTPH-Dx NWTPH-Dx-NO SGT
Dioxins and furans	EPA 1613B
Gasoline-range hydrocarbons	NWTPH-Gx
Herbicides	EPA 8151A
Semivolatile organic compounds	EPA 8270E-SIM
Total metals	EPA 6020B/7471B EPA 6010D/7470A
Total solids	SM 2540 G-2011 ASTM D2216
Pesticides	EPA 8081B
Volatile organic compounds ^(a)	EPA 8260D

Notes

ASTM = ASTM International.

EPA = U.S. Environmental Protection Agency.

NWTPH = Northwest Total Petroleum Hydrocarbons.

SGT = silica gel treatment.

SM = Standard Methods for the Examination of Water and Wastewater.

^(a)Benzene, ethylbenzene, toluene, and xylenes are reported for the Trip Blanks.

Samples Analyzed	
Report L1812652/L1812670	
DRUMAREA-COMP-S	BURNAREA-COMP-S-DUP
TIREPILE-COMP-S	TRIP BLANK ^(a)
BURNAREA-COMP-S	--
Report L1812675/L1813317	Report L1812686/L1813318
DU1-ISM	DU2-ISM
TRIP BLANK ^(a)	TRIP BLANK ^(a)
Report L1812653/L1813314	Report L1812777/L1813320
DU1-ISM-DUP	DU3-ISM
TRIP BLANK ^(a)	TRIP BLANK ^(a)
Report L1812779/L1813221	Report L1812692/L1813319

Samples Analyzed	
DU1-ISM-TRIP	DU4-ISM
TRIP BLANK ^(a)	TRIP BLANK ^(a)
Report L1812727/L1812728	
Equipment Blank	Trip Blank ^(a)

^(a)The trip blanks were not included in the Eurofins reports.

Data Validation Procedures

Analytical results were evaluated according to applicable sections of U.S. Environmental Protection Agency (EPA) guidelines for data review (EPA 2020a, 2020b) and appropriate laboratory- and method-specific guidelines (EPA 1986, Eurofins 2023, Pace-N, 2024).

Data validation procedures were modified, as appropriate, to accommodate quality control requirements for methods that EPA data review guidelines do not specifically address (e.g., Northwest Total Petroleum Hydrocarbons [NWTPH]-Dx).

SM 2540 G-2011 and ASTM D 2216 percent solids results reported by the laboratory for dry-weight correction were reviewed for completeness but were not included in Stage 2A data validation. Both Eurofins and Pace-N analyzed for percent solids and these results were compared by the reviewer. The ASTM D2216 sample results from L1812670 were analyzed outside of hold time, but the sample results matched the corresponding SM 2540 G-2011 sample results from L1812652, thus qualifications were not necessary.

Based on the data quality assurance/quality control review described herein, the data, with the appropriate final data qualifiers assigned, are considered acceptable for their intended use. Final data qualifiers represent qualifiers originating from the laboratory and accepted by the reviewer, and data qualifiers assigned by the reviewer during validation.

Final data qualifiers:

- J = result is estimated.
- K = result is an estimated maximum potential concentration.
- U = result is non-detect at the method detection limit (MDL) or method reporting limit (MRL).
- UJ = result is non-detect with an estimated MDL.
- UK = result is non-detect and an estimated maximum potential concentration.
- UJK = result is non-detect, an estimated value, and an estimated maximum potential concentration.

Dioxins and Furans

Second Column Confirmation

Positive identification of 2,3,7,8-TCDF cannot be achieved using typical EPA Method 1613B columns; therefore, analysis using a second column is required to confirm and quantify any detections above the MRL. The TCDF results were confirmed by secondary analysis and primary analysis was not reported.

Estimated Maximum Potential Concentration Results

In accordance with EPA Region 10 guidance for data validation of polychlorinated dibenzodioxins and polychlorinated dibenzofurans (PCDDs/PCDFs) (EPA 2014) and EPA national functional guidelines for high-resolution Superfund methods data review (EPA 2020a), the reviewer qualified EPA Method 1613B results because of laboratory EMPC detections. The reviewer accepted some qualifications from the laboratory without additional qualifications.

EPA Method 1613B results reported by Eurofins as EMPCs that were also associated with method blank detections requiring qualification are discussed in the method blank section of this validation report and are not discussed in the EMPC qualification tables below.

Where Eurofins flagged congener results below MRLs as EMPCs, the reviewer qualified the results at the reported concentration with UJK, as non-detect, an estimated value, and an EMPC.

Where Eurofins flagged congener results above MRLs as EMPCs, the reviewer qualified the results at the reported concentration with UK, as non-detect and an EMPC.

Where Eurofins flagged detected total homolog results below MRLs as EMPCs, and all associated congeners were either EMPCs or non-detect, the reviewer qualified the total homolog result at the reported concentration with UJK, as non-detect, an estimated value, and an EMPC.

Where Eurofins flagged detected total homolog results above MRLs as EMPCs, and all associated congeners were either EMPCs or non-detect, the reviewer qualified the total homolog result at the reported concentration with UK, as non-detect and an EMPC.

Where Eurofins flagged total homolog results above or below MRLs as EMPCs and one or more associated congeners were detected without an EMPC flag, the reviewer accepted laboratory qualifiers and did not apply additional qualification. Final qualification for these results is either JK, as an estimated value and an EMPC or K as an EMPC.

Final data qualifiers for EPA Method 1613B EMPC results are as follows:

Report	Sample	Analyte	Original Result (pg/g)	Qualified Result (pg/g)
L1812670	DRUMAREA-COMP-S	1,2,3,7,8-PeCDD	5.00 UK	5.00 UJK
		1,2,3,7,8-PeCDF	5.00 UK	5.00 UJK
		1,2,3,7,8,9-HxCDD	5.00 UK	5.00 UJK
		Total TCDD	1.00 UK	1.00 UJK
		Total TCDF	10.8 K	10.8 K
		Total PeCDD	5.00 UK	5.00 UJK
		Total PeCDF	11.6 K	11.6 UK
		Total HxCDD	34.1 K	34.1 UK
		Total HxCDF	15.1 K	15.1 UK
	TIREPILE-COMP-S	Total TCDD	34.0 K	34.0 K
		Total TCDF	208 K	208 K
		Total PeCDD	60.0 K	60.0 K
		Total PeCDF	265 K	265 K
		Total HxCDD	141 K	141 K
	BURNAREA-COMP-S	1,2,3,4,6,7,8-HpCDF	5.00 UK	5.00 UJK
		OCDF	10.0 UK	10.0 UJK

Report	Sample	Analyte	Original Result (pg/g)	Qualified Result (pg/g)
L1812670	BURNAREA-COMP-S	Total TCDF	1.00 UK	1.00 UJK
		Total HxCDD	13.5 K	13.5 UK
		Total HpCDF	5.00 UK	5.00 UJK
	BURNAREA-COMP-S-DUP	1,2,3,6,7,8-HxCDD	5.00 UK	5.00 UJK
		1,2,3,7,8,9-HxCDD	5.00 UK	5.00 UJK
		1,2,3,4,6,7,8-HpCDD	15.1 K	15.1 UK
		Total HxCDD	11.1 K	11.1 UK
		Total HpCDD	27.5 K	27.5 UK
L1813317	DU1-ISM	2,3,7,8-TCDD	1.00 UK	1.00 UJK
		Total TCDD	10.1 K	10.1 UK
		Total TCDF	67.7 K	67.7 K
		Total PeCDD	18.5 K	18.5 UK
		Total PeCDF	72.9 K	72.9 K
		Total HxCDD	50.1 K	50.1 K
		Total HxCDF	84.3 K	84.3 K
L1813314	DU1-ISM-DUP	1,2,3,4,6,7,8-HpCDF	52.9 K	52.9 UK
		Total TCDD	8.82 K	8.82 K
		Total TCDF	54.5 K	54.5 K
		Total PeCDF	52.3 K	52.3 K
		Total HpCDF	97.6 K	97.6 K
L1813321	DU1-ISM-TRIP	Total TCDD	6.20 K	6.20 UK
		Total HxCDF	78.2 K	78.2 K
L1813318	DU2-ISM	2,3,7,8-TCDD	1.95 K	1.95 UK
		1,2,3,4,7,8-HxCDD	6.78 K	6.78 UK
		Total TCDD	138 K	138 UK
		Total PeCDD	146 K	146 K
		Total PeCDF	351 K	351 K
		Total HxCDD	244 K	244 UK
		Total HxCDF	376 K	376 K
L1813320	DU3-ISM	2,3,7,8-TCDD	1.00 UK	1.00 UJK
		1,2,3,6,7,8-HxCDF	9.32 K	9.32 UK
		Total TCDD	29.0 K	29.0 UK
		Total HxCDF	84.9 K	84.9 UK
		Total HpCDF	71.4 K	71.4 K
L1813319	DU4-ISM	Total TCDF	7.33 K	7.33 UJK

Notes

JK = result is estimated and an estimated maximum potential concentration.

K = result is an estimated maximum potential concentration.

pg/g = picograms per gram.

UJK = result is non-detect, an estimated value, and an estimated maximum potential concentration.

UK = result is non-detect and an estimated maximum potential concentration.

General Qualifications

According to reports L1812652, L1812675, L1812653, L1812779, L1812686, L1812777, L1812692, and L1812727, Pace-N noted what the NWTPH-Dx chromatogram resembled specific

fuel patterns. The results were as oil-range or diesel-range hydrocarbons instead of specific fuel products; thus, qualification was not required.

Sample Conditions

Sample Custody

Sample custody was appropriately documented on the chain-of-custody (COC) form accompanying the reports. The reviewer confirmed that the gap in custody on the COC forms accompanying all reports are due to shipment via a third-party service.

Holding Times

Extractions and analyses were performed within the recommended holding times.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

Incremental sampling methodology (ISM) samples were collected and named according to decision units (DUs). Pace-N processed and composited ISM samples prior to analysis consistent with industry standard procedures for reports L1812675, L1812653, L1812779, L1812686, L1812777, L1812692, L1812727, L1813317, L1813314, L1813321, L1813318, L1813320, L1813319, and L1812728. The reviewer confirmed that NWTPH-Gx and EPA Method 8260D analyses were performed on the sample container without ISM processing.

Reporting Limits

Pace-N evaluated results to MDLs and Eurofins evaluated results to MRLs. Samples that required dilutions because of high analyte concentrations, matrix interferences, and/or dilutions necessary for preparation and/or analysis were reported with raised MDLs and MRLs.

Pace-N qualified results between the MDL and the MRL with J, as estimated.

Blank Results

Method Blanks

Laboratory method blanks are used to evaluate whether laboratory contamination was introduced during sample preparation and analysis. Laboratory method blank analyses were performed at the required frequencies, in accordance with laboratory- and method-specific requirements.

According to report L1812652, the NWTPH-Gx batch WG2426165 laboratory method blank had a gasoline range-hydrocarbons detection between the MDL and MRL, at a concentration of 1.80 milligram per kilogram (mg/kg). The associated sample results had detections less than five times the concentration detected in the blank and have been qualified, as shown in the following table.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812652	DRUMAREA-COMP-S	Gasoline-range hydrocarbons	3.28 J	3.33 U
	TIREPILE-COMP-S		2.51 J	3.04 U
	BURNAREA-COMP-S		2.59 J	4.92 U
	BURNAREA-COMP-S-DUP		4.97 J	5.12 U

Notes

J = result is estimated.
mg/kg = milligrams per kilogram.
U = result is non-detect at the method reporting limit.

According to report L1812652, the EPA Method 8260D batch WG2425137 laboratory method blank had a methylene chloride detection between the MDL and MRL, at a concentration of 0.0107 mg/kg. Methylene chloride is a common laboratory detection, thus the associated sample results that had detections less than ten times the concentration detected in the blank and have been qualified, as shown in the following table.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812652	DRUMAREA-COMP-S	Methylene chloride	0.0157 J	0.0333 U
	TIREPILE-COMP-S		0.0168 J	0.0304 U
	BURNAREA-COMP-S		0.0258 J	0.0492 U
	BURNAREA-COMP-S-DUP		0.0250 J	0.0512 U

Notes

J = result is estimated.
mg/kg = milligrams per kilogram.
U = result is non-detect at the method reporting limit.

According to report L1812670, the EPA Method 1613B batch 826876 laboratory method blank had multiple results flagged as not detect and an EMPC. No qualifications were necessary due to the results being non-detect.

According to reports L1812653, L1812779, L1812777, and L1812692 the NWTPH-Gx batch WG2426606 laboratory method blank had a gasoline range-hydrocarbons detection between the MDL and MRL, at a concentration of 1.26 mg/kg. The associated sample results had detections less than five times the concentration detected in the blank and have been qualified, as shown in the following table.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812653	DU1-ISM-DUP	Gasoline-range hydrocarbons	1.89 J	4.03 UJ ^(a)
L1812779	DU1-ISM-TRIP		2.26 J	4.10 UJ ^(a)
L1812777	DU3-ISM		2.87 J	3.95 U
L1812692	DU4-ISM		4.35	4.35 J+

Notes

J = result is estimated.
J+ = result is estimated, but the result may be biased high.
mg/kg = milligrams per kilogram.
U = result is non-detect at the method reporting limit.
^(a)Result is also qualified in the Incremental Sampling Methodology Results Section.

According to reports L1812779 and L1812686, the EPA Method 8260D batch WG2425137 laboratory method blank had a methylene chloride detection between the MDL and MRL, at a concentration of 0.0107 mg/kg. The associated sample results were non-detect; thus, qualifications were not necessary.

According to report L1812686, the NWTPH-Gx batch WG2426165 laboratory method blank had a gasoline range-hydrocarbon detection between the MDL and MRL, at a concentration of 1.80 mg/kg. The associated sample result was qualified, as shown in the following table.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812686	DU2-ISM	Gasoline-range hydrocarbons	6.91	6.91 J+

Notes

J+ = result is estimated, but the result may be biased high.
mg/kg = milligrams per kilogram.

According to report L1812727, the EPA Method 6010D batch WG2426131 laboratory method blank had a cadmium detection between the MDL and MRL, at a concentration of 0.618 ug/L. The associated sample result was qualified, as shown in the table below.

Report	Sample	Analyte	Original Result (ug/L)	Qualified Result (ug/L)
L1812727	EQUIPMENT BLANK	Cadmium	0.983 J	2.00 U

Notes

J = result is estimated.
U = result is non-detect at the method reporting limit.
ug/L = micrograms per liter.

According to report L1812727, the NWTPH-Dx batch WG2426192 laboratory method blank gasoline-range hydrocarbon detection between the MDL and MRL, at a concentration of 45.4 ug/L. The associated sample result was non-detect; thus, qualifications were not necessary.

All remaining laboratory method blank results were non-detect to MDLs or MRLs.

Equipment Rinsate Blanks

Equipment rinsate blanks are used to evaluate the adequacy of the field equipment decontamination process when decontaminated sampling equipment is used to collect samples.

One equipment blank was submitted with reports L1812727 and L1812728. The equipment rinsate blank had multiple detections and are listed below.

Report	Analytical Method	Analyte	Equipment Rinsate Blank Result (ug/L)
L1812727	EPA 6010D	Cadmium	0.983 J
		Nickel	2.54 J
	EPA 8260D	Benzene	0.122 J
		Toluene	0.299 J
		Total xylene	0.227 J
	NWTPH-Dx	Diesel-range hydrocarbons	78.1 J

Notes

EPA = U.S. Environmental Protection Agency.
J = result is estimated.
NWTPH = Northwest Total Petroleum Hydrocarbons.
ug/L = micrograms per liter.

All associated sample results are greater than ten times the concentrations detected in the blank; thus, qualifications were not necessary.

The remaining equipment rinsate results were non-detect to the MRLs or MDLs.

Trip Blanks

Trip blanks are used to evaluate whether volatile organic compound contamination was introduced during shipping and field handling procedures.

Trip blanks were submitted with all sample delivery groups for benzene, toluene, ethylbenzene, and total xylenes analysis by EPA Method 8260D. The trip blanks were not dated, and the laboratory used the sample date and time from the associated sample.

The trip blank associated with report L1812777 had a benzene detection between the MDL and MRL, at a concentration of 0.197 micrograms per liter. The associated sample result was greater than ten times the concentration detected in the blank; thus, qualifications were not necessary.

The remaining trip blanks were non-detect to MDLs for all remaining target analytes.

Laboratory Control Sample and Laboratory Control Sample Duplicate Results

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) results are used to evaluate laboratory precision and accuracy. All LCS and LCSD were prepared and analyzed at the required frequency, in accordance with laboratory- and method-specific requirements.

According to report L1812652, the EPA Method 8260D batch WG2425137 LCSD results for 2-chlorotoluene and 4-chlorotoluene were above the upper percent recovery acceptance limit of 124 percent, at 126 percent and 128 percent, respectively. The associated sample results were non-detect; thus, qualifications were not necessary.

According to reports L1812675, L1812653, L1812779, and L1812777, the EPA Method 8151A batch WG2426593 LCS result for dichloroprop was above the upper percent recovery acceptance limit of 129 percent, at 146 percent. Additionally, the dichloroprop, 2,4-D, and 2,4,5-T results were flagged due to the RPD between primary and confirmation analysis exceeding 40 percent. The MS and MSD analyses were performed on a non-project related sample and had many RPD exceedances between the primary and confirmation analysis. The associated sample results were qualified, as shown in the following table.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812675	DU1-ISM	Dichloroprop	0.0196 U	0.0196 UJ
L1812653	DU1-ISM-DUP		0.0196 U	0.0196 UJ
L1812779	DU1-ISM-TRIP		0.0195 U	0.0195 UJ
L1812777	DU3-ISM		0.0194 U	0.0194 UJ
L1812675	DU1-ISM	2,4-D	0.0275 U	0.0275 UJ
L1812653	DU1-ISM-DUP		0.0275 U	0.0275 UJ
L1812779	DU1-ISM-TRIP		0.0274 U	0.0274 UJ
L1812777	DU3-ISM		0.0272 U	0.0272 UJ
L1812675	DU1-ISM	2,4,5-T	0.0253 U	0.0253 UJ
L1812653	DU1-ISM-DUP		0.0253 U	0.0253 UJ
L1812779	DU1-ISM-TRIP		0.0252 U	0.0252 UJ
L1812777	DU3-ISM		0.0250 U	0.0250 UJ

Notes

mg/kg = milligrams per kilogram.

U = result is non-detect at the method reporting limit.

UJ = result is non-detect with an estimated reporting limit.

According to reports L1812653 and L1812777, the EPA Method 8260D batch WG2426184 LCS results for chloromethane and 1,1-dichloroethene were above the upper percent recovery acceptance limits, at 145 percent and 132 percent, respectively. The associated sample results were non-detect; thus, qualifications were not necessary.

According to reports L1812779, L1812686 and L1812692, the EPA Method 8260D batch WG2425137 LCS results for 2-chlorotoluene and 4-chlorotoluene were above the upper percent recovery acceptance limit of 124 percent, at 126 percent and 128 percent, respectively. The associated sample results were non-detect; thus, qualifications were not necessary.

According to report L1812686, the EPA Method 8151A batch WG2425581 LCS result for 2,4-DB and dichloroprop were flagged due to the RPD between the primary and confirmation analysis exceeding 40 percent. The MS and MSD analyses were performed on a non-project related sample and had many RPD exceedances between the primary and confirmation analysis. The associated sample results were qualified, as shown in the following table.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812686	DU2-ISM	2,4-D	0.0282 U	0.0282 UJ
		Dichloroprop	0.0201 U	0.0201 UJ

Notes

mg/kg = milligrams per kilogram.

U = result is non-detect at the method reporting limit.

UJ = result is non-detect with an estimated reporting limit.

According to report L1812692, the EPA Method 8151A batch WG2427260 LCS result for 2,4-DB was flagged due to the RPD between the primary and confirmation analysis exceeding 40 percent. The associated sample results were qualified, as shown in the following table.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812692	DU4-ISM	2,4-D	0.0276 U	0.0276 UJ

Notes

mg/kg = milligrams per kilogram.

U = result is non-detect at the method reporting limit.

UJ = result is non-detect with an estimated reporting limit.

According to report L1812727, the EPA Method 8151A batch WG2425575 LCS result for dichloroprop exceeded the upper percent recovery acceptance limit of 127 percent, at 138 percent. Additionally, the RPD between the LCS and LCSD exceeded the RPD limit of 20 percent, at 27.9 percent for Dalapon. The associated sample result was non-detect, thus, qualification was not necessary.

All remaining LCS and LCSD results were within acceptance limits for percent recovery and relative percent difference (RPD).

Laboratory Duplicate Results

Laboratory duplicate results are used to evaluate laboratory precision and sample homogeneity. All laboratory duplicate samples were prepared and analyzed at the required frequency, in accordance with laboratory- and method-specific requirements.

Eurofins used LCS and LCSD results to evaluate laboratory precision and laboratory duplicate results were not reported.

Laboratory duplicate results greater than five times the MRL were evaluated using laboratory RPD control limits. A secondary criterion was used when laboratory duplicate results were non-detect or less than five times the MRL. Results meet the secondary criterion if the absolute difference of the laboratory duplicate sample result and the parent sample result, or the MRL for non-detects, is equal to or less than the MRL value of the parent sample.

All laboratory duplicate results met the acceptance criteria.

Matrix Spike and Matrix Spike Duplicate Results

Matrix spike (MS) and matrix spike duplicate (MSD) results are used to evaluate laboratory precision, accuracy, and the effect of the sample matrix on sample preparation and target analyte recovery. All MS and MSD samples were prepared and analyzed at the required frequency, in accordance with laboratory- and method-specific requirements.

Eurofins used LCS and LCSDs to evaluate laboratory precision and MS and MSD results were not reported.

When MS and MSD were prepared from samples with high concentrations of target analytes, associated MS and/or MSD percent recovery and/or RPD control limit exceedances did not require qualification because spike concentrations could not be accurately quantified. High concentrations of target analytes are defined as four times the spike amount for all analyses.

When MS and MSD were prepared with samples from unrelated projects, the MS and/or MSD percent recovery and/or RPD control limit exceedances did not require qualification because these sample matrices were not representative of project sample matrices.

According to report L1812652, the NWT PH-Dx batch WG2425643 MSD prepared with sample DRUMAREA-COMP-S had a diesel-range hydrocarbons result below the lower percent recovery acceptance limit of 50 percent, at 34.9 percent. The laboratory noted that this sample resembled the laboratory standard for motor oil. The associated sample result was qualified, as shown in the following table.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812652	DRUMAREA-COMP-S	Diesel-range hydrocarbons	56.1	56.1 J

Notes

J = result is estimated.

mg/kg = milligrams per kilogram.

All remaining MS and MSD results were within acceptance limits for percent recovery and RPD.

Surrogate Results

Surrogate results are used to evaluate laboratory performance of target organic compounds for individual samples.

When surrogate results were outside percent recovery acceptance limits because of dilutions necessary to quantify high concentrations of target analytes, qualification by the reviewer was not required because surrogate concentrations could not be accurately quantified.

When batch quality control samples had surrogate percent recovery exceedances, qualification by the reviewer was not required when batch quality control target analyte results were within percent recovery acceptance limits.

All surrogate results were within percent recovery acceptance limits.

Labeled Analog Results

EPA Method 1613B samples were spiked with carbon-13 labeled standards to quantify the relative response of analytes in each sample, and with a chlorine-37 labeled cleanup standard to measure the efficiency of the cleanup process.

According to report L1812670, the EPA Method 1613B carbon-13 labeled standards 13C-2,3,7,8-TCDD, 13C-2,3,7,8-TCDF, 13C-1,2,3,7,8-PeCDD, 13C-1,2,3,7,8-PeCDF, 13C-1,2,3,4,7,8-HxCDD, 13C-1,2,3,4,7,8-HxCDF, and 13C-1,2,3,7,8,9-HxCDF were below their respective lower percent acceptance limits, ranging from 21 percent to 27 percent, for sample BURNAREA-COMP-S-DUP. The associated sample results were qualified, as shown in the following table.

Report	Sample	Analyte	Original Result (pg/g)	Qualified Result (pg/g)
L1812670	BURNAREA-COMP-S-DUP	2,3,7,8-TCDD	1.00 U	1.00 UJ
		2,3,7,8-TCDF	1.00 U	1.00 UJ
		1,2,3,7,8-PeCDD	5.00 U	5.00 UJ
		1,2,3,7,8-PeCDF	5.00 U	5.00 UJ
		1,2,3,4,7,8-HxCDD	5.00 U	5.00 UJ
		1,2,3,4,7,8-HxCDF	5.00 U	5.00 UJ
		1,2,3,7,8,9-HxCDF	5.00 U	5.00 UJ

Notes

pg/g = picograms per gram.

U = result is non-detect at the method reporting limit.

UJ = result is non-detect with an estimated reporting limit.

All remaining carbon-13 labeled standard recoveries were within acceptance limits.

Continuing Calibration Verification Results

Continuing calibration verification (CCV) results are used to demonstrate instrument precision and accuracy through the end of the sample batch. The laboratory did not report CCV results, but appropriately flagged results associated with CCV exceedances. Surrogate or batch quality control results flagged by the laboratory based on CCV exceedances but meeting percent recovery and/or RPD acceptance criteria required no action from the reviewer.

Pace-N flagged some EPA Method 8260D results as estimated due to an associated CCV results that responded low. Pace-N noted that the method sensitivity checks were acceptable. The reviewer qualified associated flagged sample results as shown in the following table. Results qualified by the laboratory for a result between the MDL and the MRL did not require additional qualification and are noted below.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812652	DRUMAREA-COMP-S	2,2-Dichloropropane	0.00184 U	0.00184 UJ
	TIREPILE-COMP-S		0.00168 U	0.00168 UJ
	BURNAREA-COMP-S		0.00271 U	0.00271 UJ
	BURNAREA-COMP-S-DUP		0.00283 U	0.00283 UJ
L1812675	DU1-ISM	Bromomethane	0.00292 U	0.00292 UJ
L1812653	DU1-ISM-DUP	Bromoform	0.00189 U	0.00189 UJ
		Chlorodibromomethane	0.000986 U	0.000986 UJ
		1,2-Dibromo-3-Chloropropane	0.00628 U	0.00628 UJ
		Naphthalene	0.00786 U	0.00786 UJ
		Tetrachloroethene	0.00144 U	0.00144 UJ
		Toluene	0.00209 J	0.00209 J ^(a)
		1,2,3-Trichlorobenzene	0.0118 U	0.0118 UJ
L1812779	DU1-ISM-TRIP	2,2-Dichloropropane	0.00226 U	0.00226 UJ
L1812686	DU2-ISM	2,2-Dichloropropane	0.00227 U	0.00227 UJ
L1812777	DU3-ISM	Bromoform	0.00185 U	0.00185 UJ
		Chlorodibromomethane	0.000966 U	0.000966 UJ
		1,2-Dibromo-3-Chloropropane	0.00616 U	0.00616 UJ
		Naphthalene	0.00770 U	0.00770 UJ
		Tetrachloroethene	0.00141 U	0.00141 UJ
		Toluene	0.00489 J	0.00489 J ^(a)
		1,2,3-Trichlorobenzene	0.0116 U	0.0116 UJ
L1812692	DU4-ISM	2,2-Dichloropropane	0.00237 U	0.00237 UJ

Notes

J = result is estimated.

mg/kg = milligrams per kilogram.

U = result is non-detect at the method detection limit.

UJ = result is non-detect with an estimated method detection limit.

^(a)Laboratory qualification was accepted by the reviewer

Pace-N flagged the EPA Method 8260D bromomethane result as estimated due to an associated CCV results that responded low. Pace-N noted that the method sensitivity checks were acceptable. The reviewer qualified associated flagged sample results as shown in the following table.

Report	Sample	Analyte	Original Result (ug/L)	Qualified Result (ug/L)
L1812727	EQUIPMENT RINSATE	Bromomethane	0.605 U	0.605 UJ

Notes

U = result is non-detect at the method detection limit.

UJ = result is non-detect with an estimated method detection limit.

ug/L = micrograms per liter.

All remaining results associated with CCV exceedances did not require qualification by the reviewer.

Incremental Sampling Methodology Results

One ISM sample was collected in triplicate, and the replicate set included samples DU1-ISM, DU1-ISM-DUP, and DU1-ISM-TRIP.

Triplicate sets were compared to acceptance criteria of 35 percent relative standard deviation (RSD) for analytes with one or more detected results (DEQ 2020). When all analytical results in a replicate set were non-detect or detected below MRLs, RSD was not evaluated. Where one result in a replicate set was non-detect, RSD was evaluated using the value of the MDL.

Triplicate ISM results that exceeded the RSD criterion were qualified by the reviewer as shown in the table below.

Report	Sample	Analyte	RSD (%)	Original Result (mg/kg)	Qualified Result (mg/kg)
L1812675	DU1-ISM	Gasoline range hydrocarbons	73.3	8.77	8.77 J
L1812653	DU1-ISM-DUP			1.89 J	4.03 UJ ^(a)
L1812779	DU1-ISM-TRIP			2.26 J	4.10 UJ ^(a)
L1812675	DU1-ISM	Styrene	39.5	0.00037 J	0.00037 J ^(b)
L1812653	DU1-ISM-DUP			0.000806 J	0.000806 J ^(b)
L1812779	DU1-ISM-TRIP			0.000376 U	0.000376 UJ
L1812675	DU1-ISM	Trichlorofluoromethane	60.6	0.00437	0.00437 J
L1812653	DU1-ISM-DUP			0.00133 U	0.00133 UJ
L1812779	DU1-ISM-TRIP			0.00136 U	0.00136 UJ
L1812675	DU1-ISM	4-Methyl-2-pentanone	45.8	0.00903 J	0.00903 J ^(b)
L1812653	DU1-ISM-DUP			0.00367 U	0.00367 UJ
L1812779	DU1-ISM-TRIP			0.00374 U	0.00374 UJ
L1812675	DU1-ISM	4-Isopropyltoluene	98.5	0.0724	0.0724 J
L1812653	DU1-ISM-DUP			0.00556 J	0.00556 J ^(b)
L1812779	DU1-ISM-TRIP			0.0131	0.0131 J
L1812675	DU1-ISM	Acetone	53.9	0.169	0.169 J
L1812653	DU1-ISM-DUP			0.0588 U	0.0588 UJ
L1812779	DU1-ISM-TRIP			0.0599 U	0.0599 UJ
L1813317	DU1-ISM	Total PeCDD	67.0	0.0000185	0.0000185 J
L1813314	DU1-ISM-DUP			0.000005 U	0.000005 UJ
L1813221	DU1-ISM-TRIP			0.000005 U	0.000005 UJ

Notes

% = percent.

J = result is estimated.

mg/kg = milligrams per kilogram.

U = result is non-detect at the method reporting limit or method detection limit.

UJ = result is non-detect with an estimated detection limit.

^(a)Result is qualified in the Method Blank Section. The RSD between the samples with the results at the MRL still exceeds the 35 percent criteria. Final qualification is based on the Method Blank detection.

^(b)Laboratory qualification was accepted by the reviewer.

Field Duplicate Results

Field duplicate results are used to evaluate field precision and sample homogeneity. The following field duplicate and parent sample pair was submitted for analysis:

Reports	Parent Sample	Field Duplicate Sample
L1812652/L1812670	BURNAREA-COMP-S	BURNAREA-COMP-S-DUP

MFA uses acceptance criteria of 100 percent RPD for results that are less than five times the MRL or 50 percent RPD for results that are greater than five times the MRL. RPD was not evaluated when both results in the sample pair were non-detect.

All field duplicate results met the RPD acceptance criteria.

Data Package

The data packages were reviewed for transcription errors, omissions, and anomalies.

None were found.

References

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Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812652
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
Project Manager

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Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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

SAMPLE SUMMARY

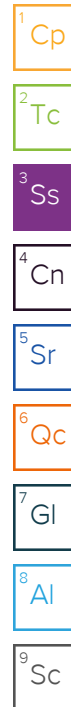
DRUMAREA-COMP-S L1812652-01 Solid

Collected by
Connor Anderson

Collected date/time
12/17/24 15:15

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2424761	1	12/26/24 09:15	12/26/24 09:24	CMB	Mt. Juliet, TN
Mercury by Method 7471B	WG2425648	1	12/29/24 16:02	12/31/24 16:11	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2425632	1	12/28/24 07:26	12/28/24 19:42	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426165	27	12/17/24 15:15	12/29/24 21:07	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425137	1.08	12/17/24 15:15	12/27/24 18:48	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2425643	1	12/27/24 07:56	12/27/24 16:12	KDB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2425572	1	12/29/24 14:31	12/31/24 18:34	BMC	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2425978	1	12/30/24 07:40	12/30/24 17:30	LJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2425253	1	12/27/24 05:47	12/28/24 08:58	MBE	Mt. Juliet, TN



TIREPILE-COMP-S L1812652-02 Solid

Collected by
Connor Anderson

Collected date/time
12/17/24 16:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2424762	1	12/26/24 08:16	12/26/24 08:25	CMB	Mt. Juliet, TN
Mercury by Method 7471B	WG2425648	1	12/29/24 16:02	12/31/24 16:14	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2425632	1	12/28/24 07:26	12/28/24 19:44	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426165	26.3	12/17/24 16:00	12/29/24 21:29	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425137	1.05	12/17/24 16:00	12/27/24 19:07	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2425643	1	12/27/24 07:56	12/27/24 17:38	SGB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2425572	1	12/29/24 14:31	12/31/24 18:45	BMC	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2425978	1	12/30/24 07:40	12/30/24 17:40	LJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2425253	1	12/27/24 05:47	12/28/24 09:16	MBE	Mt. Juliet, TN

BURNAREA-COMP-S L1812652-03 Solid

Collected by
Connor Anderson

Collected date/time
12/18/24 13:55

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2424762	1	12/26/24 08:16	12/26/24 08:25	CMB	Mt. Juliet, TN
Mercury by Method 7471B	WG2425648	1	12/29/24 16:02	12/31/24 16:16	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2425632	1	12/28/24 07:26	12/28/24 19:49	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426165	34.3	12/18/24 13:55	12/29/24 21:52	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425137	1.37	12/18/24 13:55	12/27/24 19:26	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2425643	1	12/27/24 07:56	12/27/24 16:49	SGB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2425572	1	12/29/24 14:31	12/31/24 18:57	BMC	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2425978	1	12/30/24 07:40	12/30/24 17:50	LJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2425253	1	12/27/24 05:47	12/28/24 09:33	MBE	Mt. Juliet, TN

BURNAREA-COMP-S-DUP L1812652-04 Solid

Collected by
Connor Anderson

Collected date/time
12/18/24 13:55

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2424762	1	12/26/24 08:16	12/26/24 08:25	CMB	Mt. Juliet, TN
Mercury by Method 7471B	WG2425648	1	12/29/24 16:02	12/31/24 16:19	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2425632	1	12/28/24 07:26	12/28/24 19:50	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426165	36	12/18/24 13:55	12/29/24 22:15	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425137	1.44	12/18/24 13:55	12/27/24 19:45	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2425643	1	12/27/24 07:56	12/27/24 19:29	KKS	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2425572	1	12/29/24 14:31	12/31/24 19:08	BMC	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2425978	1	12/30/24 07:40	12/30/24 17:59	LJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2425253	1	12/27/24 05:47	12/28/24 09:51	MBE	Mt. Juliet, TN

SAMPLE SUMMARY

TRIP BLANK L1812652-05 GW

Collected by
Connor Anderson

Collected date/time
12/17/24 00:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425235	1	12/27/24 09:33	12/27/24 09:33	DYW	Mt. Juliet, TN

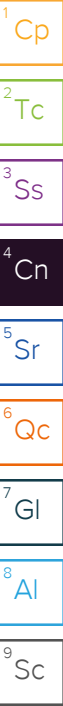
¹Cp ${}^2\text{Tc}$ ${}^3S_s$ ${}^4\text{Cn}$ ${}^5\text{Sr}$ ⁶Qc ${}^7\text{Gf}$ ${}^8\text{Al}$ ${}^9\text{Sc}$

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.



Brian Ford
Project Manager



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.0		1	12/26/2024 09:24	WG2424761

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0545		0.0254	0.0494	1	12/31/2024 16:11	WG2425648

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.853	2.47	1	12/28/2024 19:42	WG2425632
Arsenic	3.41		1.03	2.47	1	12/28/2024 19:42	WG2425632
Beryllium	0.101	J	0.0589	0.247	1	12/28/2024 19:42	WG2425632
Cadmium	3.79		0.0806	0.617	1	12/28/2024 19:42	WG2425632
Chromium	121		0.264	1.23	1	12/28/2024 19:42	WG2425632
Copper	91.7		0.441	2.47	1	12/28/2024 19:42	WG2425632
Lead	28.1		0.402	0.617	1	12/28/2024 19:42	WG2425632
Nickel	213		0.247	2.47	1	12/28/2024 19:42	WG2425632
Selenium	1.97	J	1.32	2.47	1	12/28/2024 19:42	WG2425632
Silver	1.83		0.157	1.23	1	12/28/2024 19:42	WG2425632
Thallium	1.86	J	0.639	2.47	1	12/28/2024 19:42	WG2425632
Zinc	118		1.20	6.17	1	12/28/2024 19:42	WG2425632

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	3.28	B J	1.13	3.33	27	12/29/2024 21:07	WG2426165
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120		12/29/2024 21:07	WG2426165

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0486	0.0666	1.08	12/27/2024 18:48	WG2425137
Acrylonitrile	U		0.00481	0.0167	1.08	12/27/2024 18:48	WG2425137
Benzene	U		0.000622	0.00133	1.08	12/27/2024 18:48	WG2425137
Bromobenzene	U		0.00120	0.0167	1.08	12/27/2024 18:48	WG2425137
Bromodichloromethane	U		0.000966	0.00333	1.08	12/27/2024 18:48	WG2425137
Bromoform	U		0.00155	0.0333	1.08	12/27/2024 18:48	WG2425137
Bromomethane	U		0.00263	0.0167	1.08	12/27/2024 18:48	WG2425137
n-Butylbenzene	U		0.00700	0.0167	1.08	12/27/2024 18:48	WG2425137
sec-Butylbenzene	U		0.00384	0.0167	1.08	12/27/2024 18:48	WG2425137
tert-Butylbenzene	U		0.00260	0.00666	1.08	12/27/2024 18:48	WG2425137
Carbon tetrachloride	U		0.00120	0.00666	1.08	12/27/2024 18:48	WG2425137
Chlorobenzene	U		0.000280	0.00333	1.08	12/27/2024 18:48	WG2425137
Chlorodibromomethane	U		0.000816	0.00333	1.08	12/27/2024 18:48	WG2425137
Chloroethane	U		0.00227	0.00666	1.08	12/27/2024 18:48	WG2425137
Chloroform	U		0.00137	0.00333	1.08	12/27/2024 18:48	WG2425137
Chloromethane	U		0.00580	0.0167	1.08	12/27/2024 18:48	WG2425137
2-Chlorotoluene	U	J4	0.00115	0.00333	1.08	12/27/2024 18:48	WG2425137
4-Chlorotoluene	U	J4	0.000600	0.00666	1.08	12/27/2024 18:48	WG2425137
1,2-Dibromo-3-Chloropropane	U		0.00519	0.0333	1.08	12/27/2024 18:48	WG2425137
1,2-Dibromoethane	U		0.000864	0.00333	1.08	12/27/2024 18:48	WG2425137
Dibromomethane	U		0.00100	0.00666	1.08	12/27/2024 18:48	WG2425137
1,2-Dichlorobenzene	U		0.000566	0.00666	1.08	12/27/2024 18:48	WG2425137

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

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
1,3-Dichlorobenzene	U		0.000800	0.00666	1.08	12/27/2024 18:48	WG2425137
1,4-Dichlorobenzene	U		0.000933	0.00666	1.08	12/27/2024 18:48	WG2425137
Dichlorodifluoromethane	U		0.00215	0.00666	1.08	12/27/2024 18:48	WG2425137
1,1-Dichloroethane	U		0.000654	0.00333	1.08	12/27/2024 18:48	WG2425137
1,2-Dichloroethane	U		0.000865	0.00333	1.08	12/27/2024 18:48	WG2425137
1,1-Dichloroethene	U		0.000807	0.00333	1.08	12/27/2024 18:48	WG2425137
cis-1,2-Dichloroethene	U		0.000979	0.00333	1.08	12/27/2024 18:48	WG2425137
trans-1,2-Dichloroethene	U		0.00138	0.00666	1.08	12/27/2024 18:48	WG2425137
1,2-Dichloropropane	U		0.00189	0.00666	1.08	12/27/2024 18:48	WG2425137
1,1-Dichloropropene	U		0.00108	0.00333	1.08	12/27/2024 18:48	WG2425137
1,3-Dichloropropane	U		0.000668	0.00666	1.08	12/27/2024 18:48	WG2425137
cis-1,3-Dichloropropene	U		0.00101	0.00333	1.08	12/27/2024 18:48	WG2425137
trans-1,3-Dichloropropene	U		0.00152	0.00666	1.08	12/27/2024 18:48	WG2425137
2,2-Dichloropropane	U	C3	0.00184	0.00333	1.08	12/27/2024 18:48	WG2425137
Di-isopropyl ether	U		0.000547	0.00133	1.08	12/27/2024 18:48	WG2425137
Ethylbenzene	U		0.000982	0.00333	1.08	12/27/2024 18:48	WG2425137
Hexachloro-1,3-butadiene	U		0.00800	0.0333	1.08	12/27/2024 18:48	WG2425137
Isopropylbenzene	U		0.000566	0.00333	1.08	12/27/2024 18:48	WG2425137
p-Isopropyltoluene	U		0.00339	0.00666	1.08	12/27/2024 18:48	WG2425137
2-Butanone (MEK)	U		0.0846	0.133	1.08	12/27/2024 18:48	WG2425137
Methylene Chloride	0.0157	B J	0.00885	0.0333	1.08	12/27/2024 18:48	WG2425137
4-Methyl-2-pentanone (MIBK)	U		0.00304	0.0333	1.08	12/27/2024 18:48	WG2425137
Methyl tert-butyl ether	U		0.000466	0.00133	1.08	12/27/2024 18:48	WG2425137
Naphthalene	U		0.00650	0.0167	1.08	12/27/2024 18:48	WG2425137
n-Propylbenzene	U		0.00127	0.00666	1.08	12/27/2024 18:48	WG2425137
Styrene	U		0.000305	0.0167	1.08	12/27/2024 18:48	WG2425137
1,1,1,2-Tetrachloroethane	U		0.00126	0.00333	1.08	12/27/2024 18:48	WG2425137
1,1,2,2-Tetrachloroethane	U		0.000927	0.00333	1.08	12/27/2024 18:48	WG2425137
1,1,2-Trichlorotrifluoroethane	U		0.00100	0.00333	1.08	12/27/2024 18:48	WG2425137
Tetrachloroethene	U		0.00119	0.00333	1.08	12/27/2024 18:48	WG2425137
Toluene	0.00186	J	0.00173	0.00666	1.08	12/27/2024 18:48	WG2425137
1,2,3-Trichlorobenzene	U		0.00977	0.0167	1.08	12/27/2024 18:48	WG2425137
1,2,4-Trichlorobenzene	U		0.00586	0.0167	1.08	12/27/2024 18:48	WG2425137
1,1,1-Trichloroethane	U		0.00123	0.00333	1.08	12/27/2024 18:48	WG2425137
1,1,2-Trichloroethane	U		0.000796	0.00333	1.08	12/27/2024 18:48	WG2425137
Trichloroethene	U		0.000779	0.00133	1.08	12/27/2024 18:48	WG2425137
Trichlorofluoromethane	U		0.00110	0.00333	1.08	12/27/2024 18:48	WG2425137
1,2,3-Trichloropropane	U		0.00216	0.0167	1.08	12/27/2024 18:48	WG2425137
1,2,4-Trimethylbenzene	U		0.00211	0.00666	1.08	12/27/2024 18:48	WG2425137
1,2,3-Trimethylbenzene	U		0.00211	0.00666	1.08	12/27/2024 18:48	WG2425137
1,3,5-Trimethylbenzene	U		0.00267	0.00666	1.08	12/27/2024 18:48	WG2425137
Vinyl chloride	U		0.00154	0.00333	1.08	12/27/2024 18:48	WG2425137
Xylenes, Total	0.00120	J	0.00117	0.00866	1.08	12/27/2024 18:48	WG2425137
(S) Toluene-d8	108			75.0-131		12/27/2024 18:48	WG2425137
(S) 4-Bromofluorobenzene	96.0			67.0-138		12/27/2024 18:48	WG2425137
(S) 1,2-Dichloroethane-d4	94.1			70.0-130		12/27/2024 18:48	WG2425137

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	56.1	J6	1.64	4.94	1	12/27/2024 16:12	WG2425643
Residual Range Organics (RRO)	173		4.11	12.3	1	12/27/2024 16:12	WG2425643
(S) o-Terphenyl	76.7			18.0-148		12/27/2024 16:12	WG2425643

Sample Narrative:

L1812652-01 WG2425643: Sample resembles laboratory standard for Motor Oil.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.0317	0.0864	1	12/31/2024 18:34	WG2425572
Dalapon	U		0.0543	0.0864	1	12/31/2024 18:34	WG2425572
2,4-DB	U		0.0230	0.0864	1	12/31/2024 18:34	WG2425572
Dicamba	U		0.0279	0.0864	1	12/31/2024 18:34	WG2425572
Dichloroprop	U		0.0226	0.0864	1	12/31/2024 18:34	WG2425572
Dinoseb	U		0.0315	0.0864	1	12/31/2024 18:34	WG2425572
MCPA	U		2.30	8.02	1	12/31/2024 18:34	WG2425572
MCPP	U		2.50	8.02	1	12/31/2024 18:34	WG2425572
2,4,5-T	U		0.0291	0.0864	1	12/31/2024 18:34	WG2425572
2,4,5-TP (Silvex)	U		0.0231	0.0864	1	12/31/2024 18:34	WG2425572
(S) 2,4-Dichlorophenyl Acetic Acid	64.6			22.0-132		12/31/2024 18:34	WG2425572

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00796	0.0247	1	12/30/2024 17:30	WG2425978
Alpha BHC	U		0.00786	0.0247	1	12/30/2024 17:30	WG2425978
Beta BHC	U		0.00777	0.0247	1	12/30/2024 17:30	WG2425978
Delta BHC	U		0.00784	0.0247	1	12/30/2024 17:30	WG2425978
Gamma BHC	U		0.00834	0.0247	1	12/30/2024 17:30	WG2425978
Chlordane	U		0.122	0.370	1	12/30/2024 17:30	WG2425978
4,4-DDD	U		0.00851	0.0247	1	12/30/2024 17:30	WG2425978
4,4-DDE	U		0.00830	0.0247	1	12/30/2024 17:30	WG2425978
4,4-DDT	U		0.00945	0.0247	1	12/30/2024 17:30	WG2425978
Dieldrin	U		0.00860	0.0247	1	12/30/2024 17:30	WG2425978
Endosulfan I	U		0.00745	0.0247	1	12/30/2024 17:30	WG2425978
Endosulfan II	U		0.00816	0.0247	1	12/30/2024 17:30	WG2425978
Endosulfan sulfate	U		0.00792	0.0247	1	12/30/2024 17:30	WG2425978
Endrin	U		0.00921	0.0247	1	12/30/2024 17:30	WG2425978
Endrin aldehyde	U		0.00728	0.0247	1	12/30/2024 17:30	WG2425978
Endrin ketone	U		0.00858	0.0247	1	12/30/2024 17:30	WG2425978
Hexachlorobenzene	U		0.00750	0.0247	1	12/30/2024 17:30	WG2425978
Heptachlor	U		0.00855	0.0247	1	12/30/2024 17:30	WG2425978
Heptachlor epoxide	U		0.00802	0.0247	1	12/30/2024 17:30	WG2425978
Methoxychlor	U		0.00995	0.0247	1	12/30/2024 17:30	WG2425978
Toxaphene	U		0.264	0.494	1	12/30/2024 17:30	WG2425978
(S) Decachlorobiphenyl	53.1			10.0-135		12/30/2024 17:30	WG2425978
(S) Tetrachloro-m-xylene	54.2			10.0-139		12/30/2024 17:30	WG2425978

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		0.00284	0.00740	1	12/28/2024 08:58	WG2425253
Acenaphthene	U		0.00258	0.00740	1	12/28/2024 08:58	WG2425253
Acenaphthylene	U		0.00267	0.00740	1	12/28/2024 08:58	WG2425253
Benzo(a)anthracene	U		0.00213	0.00740	1	12/28/2024 08:58	WG2425253
Benzo(a)pyrene	U		0.00221	0.00740	1	12/28/2024 08:58	WG2425253
Benzo(b)fluoranthene	U		0.00189	0.00740	1	12/28/2024 08:58	WG2425253
Benzo(g,h,i)perylene	U		0.00218	0.00740	1	12/28/2024 08:58	WG2425253
Benzo(k)fluoranthene	U		0.00265	0.00740	1	12/28/2024 08:58	WG2425253
Chrysene	U		0.00286	0.00740	1	12/28/2024 08:58	WG2425253
Dibenz(a,h)anthracene	U		0.00212	0.00740	1	12/28/2024 08:58	WG2425253
Fluoranthene	U		0.00280	0.00740	1	12/28/2024 08:58	WG2425253
Fluorene	U		0.00253	0.00740	1	12/28/2024 08:58	WG2425253
Indeno(1,2,3-cd)pyrene	U		0.00223	0.00740	1	12/28/2024 08:58	WG2425253

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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
Naphthalene	U		0.00503	0.0247	1	12/28/2024 08:58	WG2425253
Phenanthrene	U		0.00285	0.00740	1	12/28/2024 08:58	WG2425253
Pyrene	U		0.00247	0.00740	1	12/28/2024 08:58	WG2425253
1-Methylnaphthalene	U		0.00554	0.0247	1	12/28/2024 08:58	WG2425253
2-Methylnaphthalene	U		0.00527	0.0247	1	12/28/2024 08:58	WG2425253
2-Chloronaphthalene	U		0.00575	0.0247	1	12/28/2024 08:58	WG2425253
(S) p-Terphenyl-d14	109			23.0-120		12/28/2024 08:58	WG2425253
(S) Nitrobenzene-d5	91.1			14.0-149		12/28/2024 08:58	WG2425253
(S) 2-Fluorobiphenyl	100			34.0-125		12/28/2024 08:58	WG2425253

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.5		1	12/26/2024 08:25	WG2424762

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0812		0.0238	0.0462	1	12/31/2024 16:14	WG2425648

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.799	2.31	1	12/28/2024 19:44	WG2425632
Arsenic	3.46		0.968	2.31	1	12/28/2024 19:44	WG2425632
Beryllium	U		0.0551	0.231	1	12/28/2024 19:44	WG2425632
Cadmium	0.597		0.0755	0.578	1	12/28/2024 19:44	WG2425632
Chromium	186		0.247	1.16	1	12/28/2024 19:44	WG2425632
Copper	119		0.413	2.31	1	12/28/2024 19:44	WG2425632
Lead	28.6		0.377	0.578	1	12/28/2024 19:44	WG2425632
Nickel	207		0.231	2.31	1	12/28/2024 19:44	WG2425632
Selenium	2.21	J	1.24	2.31	1	12/28/2024 19:44	WG2425632
Silver	2.87		0.147	1.16	1	12/28/2024 19:44	WG2425632
Thallium	1.81	J	0.599	2.31	1	12/28/2024 19:44	WG2425632
Zinc	289		1.13	5.78	1	12/28/2024 19:44	WG2425632

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	2.51	B J	1.03	3.04	26.3	12/29/2024 21:29	WG2426165
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120		12/29/2024 21:29	WG2426165

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0443	0.0607	1.05	12/27/2024 19:07	WG2425137
Acrylonitrile	U		0.00438	0.0151	1.05	12/27/2024 19:07	WG2425137
Benzene	U		0.000566	0.00121	1.05	12/27/2024 19:07	WG2425137
Bromobenzene	U		0.00109	0.0151	1.05	12/27/2024 19:07	WG2425137
Bromodichloromethane	U		0.000880	0.00304	1.05	12/27/2024 19:07	WG2425137
Bromoform	U		0.00142	0.0304	1.05	12/27/2024 19:07	WG2425137
Bromomethane	U		0.00239	0.0151	1.05	12/27/2024 19:07	WG2425137
n-Butylbenzene	U		0.00637	0.0151	1.05	12/27/2024 19:07	WG2425137
sec-Butylbenzene	U		0.00349	0.0151	1.05	12/27/2024 19:07	WG2425137
tert-Butylbenzene	U		0.00237	0.00607	1.05	12/27/2024 19:07	WG2425137
Carbon tetrachloride	U		0.00109	0.00607	1.05	12/27/2024 19:07	WG2425137
Chlorobenzene	0.000425	J	0.000256	0.00304	1.05	12/27/2024 19:07	WG2425137
Chlorodibromomethane	U		0.000743	0.00304	1.05	12/27/2024 19:07	WG2425137
Chloroethane	U		0.00207	0.00607	1.05	12/27/2024 19:07	WG2425137
Chloroform	U		0.00125	0.00304	1.05	12/27/2024 19:07	WG2425137
Chloromethane	U		0.00528	0.0151	1.05	12/27/2024 19:07	WG2425137
2-Chlorotoluene	U	J4	0.00105	0.00304	1.05	12/27/2024 19:07	WG2425137
4-Chlorotoluene	U	J4	0.000547	0.00607	1.05	12/27/2024 19:07	WG2425137
1,2-Dibromo-3-Chloropropane	U		0.00473	0.0304	1.05	12/27/2024 19:07	WG2425137
1,2-Dibromoethane	U		0.000786	0.00304	1.05	12/27/2024 19:07	WG2425137
Dibromomethane	U		0.000911	0.00607	1.05	12/27/2024 19:07	WG2425137
1,2-Dichlorobenzene	U		0.000516	0.00607	1.05	12/27/2024 19:07	WG2425137

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

TIREPILE-COMP-S

Collected date/time: 12/17/24 16:00

SAMPLE RESULTS - 02

L1812652

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
1,3-Dichlorobenzene	U		0.000728	0.00607	1.05	12/27/2024 19:07	WG2425137
1,4-Dichlorobenzene	U		0.000850	0.00607	1.05	12/27/2024 19:07	WG2425137
Dichlorodifluoromethane	U		0.00195	0.00607	1.05	12/27/2024 19:07	WG2425137
1,1-Dichloroethane	U		0.000597	0.00304	1.05	12/27/2024 19:07	WG2425137
1,2-Dichloroethane	U		0.000787	0.00304	1.05	12/27/2024 19:07	WG2425137
1,1-Dichloroethene	U		0.000735	0.00304	1.05	12/27/2024 19:07	WG2425137
cis-1,2-Dichloroethene	U		0.000891	0.00304	1.05	12/27/2024 19:07	WG2425137
trans-1,2-Dichloroethene	U		0.00126	0.00607	1.05	12/27/2024 19:07	WG2425137
1,2-Dichloropropane	U		0.00172	0.00607	1.05	12/27/2024 19:07	WG2425137
1,1-Dichloropropene	U		0.000982	0.00304	1.05	12/27/2024 19:07	WG2425137
1,3-Dichloropropane	U		0.000608	0.00607	1.05	12/27/2024 19:07	WG2425137
cis-1,3-Dichloropropene	U		0.000919	0.00304	1.05	12/27/2024 19:07	WG2425137
trans-1,3-Dichloropropene	U		0.00139	0.00607	1.05	12/27/2024 19:07	WG2425137
2,2-Dichloropropane	U	C3	0.00168	0.00304	1.05	12/27/2024 19:07	WG2425137
Di-isopropyl ether	U		0.000498	0.00121	1.05	12/27/2024 19:07	WG2425137
Ethylbenzene	U		0.000895	0.00304	1.05	12/27/2024 19:07	WG2425137
Hexachloro-1,3-butadiene	U		0.00728	0.0304	1.05	12/27/2024 19:07	WG2425137
Isopropylbenzene	U		0.000516	0.00304	1.05	12/27/2024 19:07	WG2425137
p-Isopropyltoluene	0.00489	IJ	0.00310	0.00607	1.05	12/27/2024 19:07	WG2425137
2-Butanone (MEK)	U		0.0771	0.121	1.05	12/27/2024 19:07	WG2425137
Methylene Chloride	0.0168	B J	0.00806	0.0304	1.05	12/27/2024 19:07	WG2425137
4-Methyl-2-pentanone (MIBK)	0.0258	IJ	0.00276	0.0304	1.05	12/27/2024 19:07	WG2425137
Methyl tert-butyl ether	U		0.000425	0.00121	1.05	12/27/2024 19:07	WG2425137
Naphthalene	U		0.00592	0.0151	1.05	12/27/2024 19:07	WG2425137
n-Propylbenzene	U		0.00115	0.00607	1.05	12/27/2024 19:07	WG2425137
Styrene	0.000304	IJ	0.000277	0.0151	1.05	12/27/2024 19:07	WG2425137
1,1,1,2-Tetrachloroethane	U		0.00115	0.00304	1.05	12/27/2024 19:07	WG2425137
1,1,2,2-Tetrachloroethane	U		0.000844	0.00304	1.05	12/27/2024 19:07	WG2425137
1,1,2-Trichlorotrifluoroethane	U		0.000916	0.00304	1.05	12/27/2024 19:07	WG2425137
Tetrachloroethene	U		0.00109	0.00304	1.05	12/27/2024 19:07	WG2425137
Toluene	0.00249	IJ	0.00157	0.00607	1.05	12/27/2024 19:07	WG2425137
1,2,3-Trichlorobenzene	U		0.00890	0.0151	1.05	12/27/2024 19:07	WG2425137
1,2,4-Trichlorobenzene	U		0.00534	0.0151	1.05	12/27/2024 19:07	WG2425137
1,1,1-Trichloroethane	U		0.00112	0.00304	1.05	12/27/2024 19:07	WG2425137
1,1,2-Trichloroethane	U		0.000725	0.00304	1.05	12/27/2024 19:07	WG2425137
Trichloroethene	U		0.000709	0.00121	1.05	12/27/2024 19:07	WG2425137
Trichlorofluoromethane	U		0.00100	0.00304	1.05	12/27/2024 19:07	WG2425137
1,2,3-Trichloropropane	U		0.00197	0.0151	1.05	12/27/2024 19:07	WG2425137
1,2,4-Trimethylbenzene	U		0.00192	0.00607	1.05	12/27/2024 19:07	WG2425137
1,2,3-Trimethylbenzene	U		0.00192	0.00607	1.05	12/27/2024 19:07	WG2425137
1,3,5-Trimethylbenzene	U		0.00243	0.00607	1.05	12/27/2024 19:07	WG2425137
Vinyl chloride	U		0.00141	0.00304	1.05	12/27/2024 19:07	WG2425137
Xylenes, Total	0.00437	IJ	0.00107	0.00790	1.05	12/27/2024 19:07	WG2425137
(S) Toluene-d8	106			75.0-131		12/27/2024 19:07	WG2425137
(S) 4-Bromofluorobenzene	93.9			67.0-138		12/27/2024 19:07	WG2425137
(S) 1,2-Dichloroethane-d4	98.9			70.0-130		12/27/2024 19:07	WG2425137

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	12.3		1.54	4.62	1	12/27/2024 17:38	WG2425643
Residual Range Organics (RRO)	46.1		3.85	11.6	1	12/27/2024 17:38	WG2425643
(S) o-Terphenyl	71.5			18.0-148		12/27/2024 17:38	WG2425643

Sample Narrative:

L1812652-02 WG2425643: Sample resembles laboratory standard for Hydraulic Oil.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.0297	0.0809	1	12/31/2024 18:45	WG2425572
Dalapon	U		0.0509	0.0809	1	12/31/2024 18:45	WG2425572
2,4-DB	U		0.0215	0.0809	1	12/31/2024 18:45	WG2425572
Dicamba	U		0.0261	0.0809	1	12/31/2024 18:45	WG2425572
Dichloroprop	U		0.0212	0.0809	1	12/31/2024 18:45	WG2425572
Dinoseb	U		0.0295	0.0809	1	12/31/2024 18:45	WG2425572
MCPA	U		2.15	7.51	1	12/31/2024 18:45	WG2425572
MCPP	U		2.35	7.51	1	12/31/2024 18:45	WG2425572
2,4,5-T	U		0.0273	0.0809	1	12/31/2024 18:45	WG2425572
2,4,5-TP (Silvex)	U		0.0216	0.0809	1	12/31/2024 18:45	WG2425572
(S) 2,4-Dichlorophenyl Acetic Acid	63.3			22.0-132		12/31/2024 18:45	WG2425572

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00746	0.0231	1	12/30/2024 17:40	WG2425978
Alpha BHC	U		0.00736	0.0231	1	12/30/2024 17:40	WG2425978
Beta BHC	U		0.00728	0.0231	1	12/30/2024 17:40	WG2425978
Delta BHC	U		0.00734	0.0231	1	12/30/2024 17:40	WG2425978
Gamma BHC	U		0.00782	0.0231	1	12/30/2024 17:40	WG2425978
Chlordane	U		0.114	0.347	1	12/30/2024 17:40	WG2425978
4,4-DDD	U		0.00798	0.0231	1	12/30/2024 17:40	WG2425978
4,4-DDE	U		0.00778	0.0231	1	12/30/2024 17:40	WG2425978
4,4-DDT	U		0.00886	0.0231	1	12/30/2024 17:40	WG2425978
Dieldrin	U		0.00806	0.0231	1	12/30/2024 17:40	WG2425978
Endosulfan I	U		0.00698	0.0231	1	12/30/2024 17:40	WG2425978
Endosulfan II	U		0.00764	0.0231	1	12/30/2024 17:40	WG2425978
Endosulfan sulfate	U		0.00742	0.0231	1	12/30/2024 17:40	WG2425978
Endrin	U		0.00862	0.0231	1	12/30/2024 17:40	WG2425978
Endrin aldehyde	U		0.00682	0.0231	1	12/30/2024 17:40	WG2425978
Endrin ketone	U		0.00803	0.0231	1	12/30/2024 17:40	WG2425978
Hexachlorobenzene	U		0.00703	0.0231	1	12/30/2024 17:40	WG2425978
Heptachlor	U		0.00801	0.0231	1	12/30/2024 17:40	WG2425978
Heptachlor epoxide	U		0.00751	0.0231	1	12/30/2024 17:40	WG2425978
Methoxychlor	U		0.00932	0.0231	1	12/30/2024 17:40	WG2425978
Toxaphene	U		0.247	0.462	1	12/30/2024 17:40	WG2425978
(S) Decachlorobiphenyl	49.9			10.0-135		12/30/2024 17:40	WG2425978
(S) Tetrachloro-m-xylene	52.4			10.0-139		12/30/2024 17:40	WG2425978

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		0.00266	0.00694	1	12/28/2024 09:16	WG2425253
Acenaphthene	U		0.00242	0.00694	1	12/28/2024 09:16	WG2425253
Acenaphthylene	U		0.00250	0.00694	1	12/28/2024 09:16	WG2425253
Benzo(a)anthracene	U		0.00200	0.00694	1	12/28/2024 09:16	WG2425253
Benzo(a)pyrene	U		0.00207	0.00694	1	12/28/2024 09:16	WG2425253
Benzo(b)fluoranthene	U		0.00177	0.00694	1	12/28/2024 09:16	WG2425253
Benzo(g,h,i)perylene	U		0.00205	0.00694	1	12/28/2024 09:16	WG2425253
Benzo(k)fluoranthene	U		0.00249	0.00694	1	12/28/2024 09:16	WG2425253
Chrysene	U		0.00268	0.00694	1	12/28/2024 09:16	WG2425253
Dibenz(a,h)anthracene	U		0.00199	0.00694	1	12/28/2024 09:16	WG2425253
Fluoranthene	U		0.00262	0.00694	1	12/28/2024 09:16	WG2425253
Fluorene	U		0.00237	0.00694	1	12/28/2024 09:16	WG2425253
Indeno(1,2,3-cd)pyrene	U		0.00209	0.00694	1	12/28/2024 09:16	WG2425253

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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
Naphthalene	U		0.00472	0.0231	1	12/28/2024 09:16	WG2425253
Phenanthrene	U		0.00267	0.00694	1	12/28/2024 09:16	WG2425253
Pyrene	U		0.00231	0.00694	1	12/28/2024 09:16	WG2425253
1-Methylnaphthalene	U		0.00519	0.0231	1	12/28/2024 09:16	WG2425253
2-Methylnaphthalene	U		0.00494	0.0231	1	12/28/2024 09:16	WG2425253
2-Chloronaphthalene	U		0.00539	0.0231	1	12/28/2024 09:16	WG2425253
(S) p-Terphenyl-d14	107			23.0-120		12/28/2024 09:16	WG2425253
(S) Nitrobenzene-d5	95.0			14.0-149		12/28/2024 09:16	WG2425253
(S) 2-Fluorobiphenyl	99.6			34.0-125		12/28/2024 09:16	WG2425253

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	69.8		1	12/26/2024 08:25	WG2424762

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0295	0.0573	1	12/31/2024 16:16	WG2425648

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.990	2.87	1	12/28/2024 19:49	WG2425632
Arsenic	2.67	J	1.20	2.87	1	12/28/2024 19:49	WG2425632
Beryllium	0.463		0.0684	0.287	1	12/28/2024 19:49	WG2425632
Cadmium	U		0.0936	0.717	1	12/28/2024 19:49	WG2425632
Chromium	74.5		0.307	1.43	1	12/28/2024 19:49	WG2425632
Copper	44.0		0.512	2.87	1	12/28/2024 19:49	WG2425632
Lead	16.2		0.467	0.717	1	12/28/2024 19:49	WG2425632
Nickel	56.7		0.287	2.87	1	12/28/2024 19:49	WG2425632
Selenium	2.12	J	1.53	2.87	1	12/28/2024 19:49	WG2425632
Silver	1.53		0.182	1.43	1	12/28/2024 19:49	WG2425632
Thallium	1.45	J	0.742	2.87	1	12/28/2024 19:49	WG2425632
Zinc	162		1.40	7.17	1	12/28/2024 19:49	WG2425632

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	2.59	B J	1.66	4.92	34.3	12/29/2024 21:52	WG2426165
(S) a,a,a-Trifluorotoluene(FID)	93.3			77.0-120		12/29/2024 21:52	WG2426165

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0717	0.0982	1.37	12/27/2024 19:26	WG2425137
Acrylonitrile	U		0.00709	0.0245	1.37	12/27/2024 19:26	WG2425137
Benzene	U		0.000917	0.00196	1.37	12/27/2024 19:26	WG2425137
Bromobenzene	U		0.00176	0.0245	1.37	12/27/2024 19:26	WG2425137
Bromodichloromethane	U		0.00142	0.00492	1.37	12/27/2024 19:26	WG2425137
Bromoform	U		0.00229	0.0492	1.37	12/27/2024 19:26	WG2425137
Bromomethane	U		0.00387	0.0245	1.37	12/27/2024 19:26	WG2425137
n-Butylbenzene	U		0.0103	0.0245	1.37	12/27/2024 19:26	WG2425137
sec-Butylbenzene	U		0.00566	0.0245	1.37	12/27/2024 19:26	WG2425137
tert-Butylbenzene	U		0.00383	0.00982	1.37	12/27/2024 19:26	WG2425137
Carbon tetrachloride	U		0.00176	0.00982	1.37	12/27/2024 19:26	WG2425137
Chlorobenzene	U		0.000413	0.00492	1.37	12/27/2024 19:26	WG2425137
Chlorodibromomethane	U		0.00120	0.00492	1.37	12/27/2024 19:26	WG2425137
Chloroethane	U		0.00334	0.00982	1.37	12/27/2024 19:26	WG2425137
Chloroform	U		0.00202	0.00492	1.37	12/27/2024 19:26	WG2425137
Chloromethane	U		0.00854	0.0245	1.37	12/27/2024 19:26	WG2425137
2-Chlorotoluene	U	J4	0.00171	0.00492	1.37	12/27/2024 19:26	WG2425137
4-Chlorotoluene	U	J4	0.000884	0.00982	1.37	12/27/2024 19:26	WG2425137
1,2-Dibromo-3-Chloropropane	U		0.00765	0.0492	1.37	12/27/2024 19:26	WG2425137
1,2-Dibromoethane	U		0.00127	0.00492	1.37	12/27/2024 19:26	WG2425137
Dibromomethane	U		0.00148	0.00982	1.37	12/27/2024 19:26	WG2425137
1,2-Dichlorobenzene	U		0.000834	0.00982	1.37	12/27/2024 19:26	WG2425137

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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
1,3-Dichlorobenzene	U		0.00118	0.00982	1.37	12/27/2024 19:26	WG2425137
1,4-Dichlorobenzene	U		0.00137	0.00982	1.37	12/27/2024 19:26	WG2425137
Dichlorodifluoromethane	U		0.00317	0.00982	1.37	12/27/2024 19:26	WG2425137
1,1-Dichloroethane	U		0.000965	0.00492	1.37	12/27/2024 19:26	WG2425137
1,2-Dichloroethane	U		0.00127	0.00492	1.37	12/27/2024 19:26	WG2425137
1,1-Dichloroethene	U		0.00119	0.00492	1.37	12/27/2024 19:26	WG2425137
cis-1,2-Dichloroethene	U		0.00145	0.00492	1.37	12/27/2024 19:26	WG2425137
trans-1,2-Dichloroethene	U		0.00204	0.00982	1.37	12/27/2024 19:26	WG2425137
1,2-Dichloropropane	U		0.00279	0.00982	1.37	12/27/2024 19:26	WG2425137
1,1-Dichloropropene	U		0.00159	0.00492	1.37	12/27/2024 19:26	WG2425137
1,3-Dichloropropane	U		0.000983	0.00982	1.37	12/27/2024 19:26	WG2425137
cis-1,3-Dichloropropene	U		0.00149	0.00492	1.37	12/27/2024 19:26	WG2425137
trans-1,3-Dichloropropene	U		0.00224	0.00982	1.37	12/27/2024 19:26	WG2425137
2,2-Dichloropropane	U	C3	0.00271	0.00492	1.37	12/27/2024 19:26	WG2425137
Di-isopropyl ether	U		0.000805	0.00196	1.37	12/27/2024 19:26	WG2425137
Ethylbenzene	U		0.00145	0.00492	1.37	12/27/2024 19:26	WG2425137
Hexachloro-1,3-butadiene	U		0.0118	0.0492	1.37	12/27/2024 19:26	WG2425137
Isopropylbenzene	U		0.000834	0.00492	1.37	12/27/2024 19:26	WG2425137
p-Isopropyltoluene	0.00737	IJ	0.00500	0.00982	1.37	12/27/2024 19:26	WG2425137
2-Butanone (MEK)	U		0.125	0.196	1.37	12/27/2024 19:26	WG2425137
Methylene Chloride	0.0258	BJ	0.0130	0.0492	1.37	12/27/2024 19:26	WG2425137
4-Methyl-2-pentanone (MIBK)	U		0.00447	0.0492	1.37	12/27/2024 19:26	WG2425137
Methyl tert-butyl ether	U		0.000688	0.00196	1.37	12/27/2024 19:26	WG2425137
Naphthalene	U		0.00959	0.0245	1.37	12/27/2024 19:26	WG2425137
n-Propylbenzene	U		0.00186	0.00982	1.37	12/27/2024 19:26	WG2425137
Styrene	U		0.000450	0.0245	1.37	12/27/2024 19:26	WG2425137
1,1,1,2-Tetrachloroethane	U		0.00186	0.00492	1.37	12/27/2024 19:26	WG2425137
1,1,2,2-Tetrachloroethane	U		0.00136	0.00492	1.37	12/27/2024 19:26	WG2425137
1,1,2-Trichlorotrifluoroethane	U		0.00148	0.00492	1.37	12/27/2024 19:26	WG2425137
Tetrachloroethene	U		0.00176	0.00492	1.37	12/27/2024 19:26	WG2425137
Toluene	0.00388	IJ	0.00255	0.00982	1.37	12/27/2024 19:26	WG2425137
1,2,3-Trichlorobenzene	U		0.0143	0.0245	1.37	12/27/2024 19:26	WG2425137
1,2,4-Trichlorobenzene	U		0.00864	0.0245	1.37	12/27/2024 19:26	WG2425137
1,1,1-Trichloroethane	U		0.00181	0.00492	1.37	12/27/2024 19:26	WG2425137
1,1,2-Trichloroethane	U		0.00117	0.00492	1.37	12/27/2024 19:26	WG2425137
Trichloroethene	U		0.00115	0.00196	1.37	12/27/2024 19:26	WG2425137
Trichlorofluoromethane	U		0.00162	0.00492	1.37	12/27/2024 19:26	WG2425137
1,2,3-Trichloropropane	U		0.00318	0.0245	1.37	12/27/2024 19:26	WG2425137
1,2,4-Trimethylbenzene	U		0.00310	0.00982	1.37	12/27/2024 19:26	WG2425137
1,2,3-Trimethylbenzene	U		0.00310	0.00982	1.37	12/27/2024 19:26	WG2425137
1,3,5-Trimethylbenzene	U		0.00393	0.00982	1.37	12/27/2024 19:26	WG2425137
Vinyl chloride	U		0.00228	0.00492	1.37	12/27/2024 19:26	WG2425137
Xylenes, Total	U		0.00173	0.0128	1.37	12/27/2024 19:26	WG2425137
(S) Toluene-d8	106			75.0-131		12/27/2024 19:26	WG2425137
(S) 4-Bromofluorobenzene	93.1			67.0-138		12/27/2024 19:26	WG2425137
(S) 1,2-Dichloroethane-d4	96.6			70.0-130		12/27/2024 19:26	WG2425137

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	41.0		1.91	5.73	1	12/27/2024 16:49	WG2425643
Residual Range Organics (RRO)	82.5		4.77	14.3	1	12/27/2024 16:49	WG2425643
(S) o-Terphenyl	125			18.0-148		12/27/2024 16:49	WG2425643

Sample Narrative:

L1812652-03 WG2425643: Sample resembles laboratory standard for Hydraulic Oil.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.0368	0.100	1	12/31/2024 18:57	WG2425572
Dalapon	U		0.0631	0.100	1	12/31/2024 18:57	WG2425572
2,4-DB	U		0.0267	0.100	1	12/31/2024 18:57	WG2425572
Dicamba	U		0.0324	0.100	1	12/31/2024 18:57	WG2425572
Dichloroprop	U		0.0262	0.100	1	12/31/2024 18:57	WG2425572
Dinoseb	U		0.0365	0.100	1	12/31/2024 18:57	WG2425572
MCPA	U		2.67	9.32	1	12/31/2024 18:57	WG2425572
MCPP	U		2.91	9.32	1	12/31/2024 18:57	WG2425572
2,4,5-T	U		0.0338	0.100	1	12/31/2024 18:57	WG2425572
2,4,5-TP (Silvex)	U		0.0268	0.100	1	12/31/2024 18:57	WG2425572
(S) 2,4-Dichlorophenyl Acetic Acid	50.6			22.0-132		12/31/2024 18:57	WG2425572

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00924	0.0287	1	12/30/2024 17:50	WG2425978
Alpha BHC	U		0.00913	0.0287	1	12/30/2024 17:50	WG2425978
Beta BHC	U		0.00903	0.0287	1	12/30/2024 17:50	WG2425978
Delta BHC	U		0.00910	0.0287	1	12/30/2024 17:50	WG2425978
Gamma BHC	U		0.00969	0.0287	1	12/30/2024 17:50	WG2425978
Chlordane	U		0.142	0.430	1	12/30/2024 17:50	WG2425978
4,4-DDD	U		0.00989	0.0287	1	12/30/2024 17:50	WG2425978
4,4-DDE	U		0.00965	0.0287	1	12/30/2024 17:50	WG2425978
4,4-DDT	U		0.0110	0.0287	1	12/30/2024 17:50	WG2425978
Dieldrin	U		0.00999	0.0287	1	12/30/2024 17:50	WG2425978
Endosulfan I	U		0.00866	0.0287	1	12/30/2024 17:50	WG2425978
Endosulfan II	U		0.00947	0.0287	1	12/30/2024 17:50	WG2425978
Endosulfan sulfate	U		0.00920	0.0287	1	12/30/2024 17:50	WG2425978
Endrin	U		0.0107	0.0287	1	12/30/2024 17:50	WG2425978
Endrin aldehyde	U		0.00846	0.0287	1	12/30/2024 17:50	WG2425978
Endrin ketone	U		0.00996	0.0287	1	12/30/2024 17:50	WG2425978
Hexachlorobenzene	U		0.00871	0.0287	1	12/30/2024 17:50	WG2425978
Heptachlor	U		0.00993	0.0287	1	12/30/2024 17:50	WG2425978
Heptachlor epoxide	U		0.00932	0.0287	1	12/30/2024 17:50	WG2425978
Methoxychlor	U		0.0116	0.0287	1	12/30/2024 17:50	WG2425978
Toxaphene	U		0.307	0.573	1	12/30/2024 17:50	WG2425978
(S) Decachlorobiphenyl	49.0			10.0-135		12/30/2024 17:50	WG2425978
(S) Tetrachloro-m-xylene	49.9			10.0-139		12/30/2024 17:50	WG2425978

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		0.00330	0.00860	1	12/28/2024 09:33	WG2425253
Acenaphthene	U		0.00300	0.00860	1	12/28/2024 09:33	WG2425253
Acenaphthylene	U		0.00310	0.00860	1	12/28/2024 09:33	WG2425253
Benzo(a)anthracene	U		0.00248	0.00860	1	12/28/2024 09:33	WG2425253
Benzo(a)pyrene	U		0.00257	0.00860	1	12/28/2024 09:33	WG2425253
Benzo(b)fluoranthene	U		0.00219	0.00860	1	12/28/2024 09:33	WG2425253
Benzo(g,h,i)perylene	U		0.00254	0.00860	1	12/28/2024 09:33	WG2425253
Benzo(k)fluoranthene	U		0.00308	0.00860	1	12/28/2024 09:33	WG2425253
Chrysene	U		0.00332	0.00860	1	12/28/2024 09:33	WG2425253
Dibenz(a,h)anthracene	U		0.00247	0.00860	1	12/28/2024 09:33	WG2425253
Fluoranthene	U		0.00325	0.00860	1	12/28/2024 09:33	WG2425253
Fluorene	U		0.00294	0.00860	1	12/28/2024 09:33	WG2425253
Indeno(1,2,3-cd)pyrene	U		0.00259	0.00860	1	12/28/2024 09:33	WG2425253

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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
Naphthalene	U		0.00585	0.0287	1	12/28/2024 09:33	WG2425253
Phenanthrene	U		0.00331	0.00860	1	12/28/2024 09:33	WG2425253
Pyrene	U		0.00287	0.00860	1	12/28/2024 09:33	WG2425253
1-Methylnaphthalene	U		0.00643	0.0287	1	12/28/2024 09:33	WG2425253
2-Methylnaphthalene	U		0.00612	0.0287	1	12/28/2024 09:33	WG2425253
2-Chloronaphthalene	U		0.00668	0.0287	1	12/28/2024 09:33	WG2425253
(S) p-Terphenyl-d14	97.3			23.0-120		12/28/2024 09:33	WG2425253
(S) Nitrobenzene-d5	80.4			14.0-149		12/28/2024 09:33	WG2425253
(S) 2-Fluorobiphenyl	85.8			34.0-125		12/28/2024 09:33	WG2425253

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	70.3		1	12/26/2024 08:25	WG2424762

1
Cp

2
Tc

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0293	0.0569	1	12/31/2024 16:19	WG2425648

3
Ss

4
Cn

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	1.28	<u>J</u>	0.983	2.85	1	12/28/2024 19:50	WG2425632
Arsenic	3.54		1.19	2.85	1	12/28/2024 19:50	WG2425632
Beryllium	0.644		0.0679	0.285	1	12/28/2024 19:50	WG2425632
Cadmium	U		0.0929	0.712	1	12/28/2024 19:50	WG2425632
Chromium	88.7		0.305	1.42	1	12/28/2024 19:50	WG2425632
Copper	46.5		0.508	2.85	1	12/28/2024 19:50	WG2425632
Lead	18.8		0.464	0.712	1	12/28/2024 19:50	WG2425632
Nickel	68.9		0.285	2.85	1	12/28/2024 19:50	WG2425632
Selenium	3.02		1.52	2.85	1	12/28/2024 19:50	WG2425632
Silver	2.19		0.181	1.42	1	12/28/2024 19:50	WG2425632
Thallium	2.44	<u>J</u>	0.737	2.85	1	12/28/2024 19:50	WG2425632
Zinc	194		1.39	7.12	1	12/28/2024 19:50	WG2425632

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	4.97	<u>B J</u>	1.74	5.12	36	12/29/2024 22:15	WG2426165
(S) a,a,a-Trifluorotoluene(FID)	92.9			77.0-120		12/29/2024 22:15	WG2426165

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0749	0.102	1.44	12/27/2024 19:45	WG2425137
Acrylonitrile	U		0.00740	0.0256	1.44	12/27/2024 19:45	WG2425137
Benzene	U		0.000956	0.00205	1.44	12/27/2024 19:45	WG2425137
Bromobenzene	U		0.00185	0.0256	1.44	12/27/2024 19:45	WG2425137
Bromodichloromethane	U		0.00148	0.00512	1.44	12/27/2024 19:45	WG2425137
Bromoform	U		0.00239	0.0512	1.44	12/27/2024 19:45	WG2425137
Bromomethane	U		0.00404	0.0256	1.44	12/27/2024 19:45	WG2425137
n-Butylbenzene	U		0.0108	0.0256	1.44	12/27/2024 19:45	WG2425137
sec-Butylbenzene	U		0.00591	0.0256	1.44	12/27/2024 19:45	WG2425137
tert-Butylbenzene	U		0.00400	0.0102	1.44	12/27/2024 19:45	WG2425137
Carbon tetrachloride	U		0.00184	0.0102	1.44	12/27/2024 19:45	WG2425137
Chlorobenzene	U		0.000430	0.00512	1.44	12/27/2024 19:45	WG2425137
Chlorodibromomethane	U		0.00125	0.00512	1.44	12/27/2024 19:45	WG2425137
Chloroethane	U		0.00349	0.0102	1.44	12/27/2024 19:45	WG2425137
Chloroform	U		0.00211	0.00512	1.44	12/27/2024 19:45	WG2425137
Chloromethane	U		0.00891	0.0256	1.44	12/27/2024 19:45	WG2425137
2-Chlorotoluene	U	<u>J4</u>	0.00178	0.00512	1.44	12/27/2024 19:45	WG2425137
4-Chlorotoluene	U	<u>J4</u>	0.000922	0.0102	1.44	12/27/2024 19:45	WG2425137
1,2-Dibromo-3-Chloropropane	U		0.00800	0.0512	1.44	12/27/2024 19:45	WG2425137
1,2-Dibromoethane	U		0.00133	0.00512	1.44	12/27/2024 19:45	WG2425137
Dibromomethane	U		0.00154	0.0102	1.44	12/27/2024 19:45	WG2425137
1,2-Dichlorobenzene	U		0.000871	0.0102	1.44	12/27/2024 19:45	WG2425137

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
1,3-Dichlorobenzene	U		0.00123	0.0102	1.44	12/27/2024 19:45	WG2425137
1,4-Dichlorobenzene	U		0.00144	0.0102	1.44	12/27/2024 19:45	WG2425137
Dichlorodifluoromethane	U		0.00330	0.0102	1.44	12/27/2024 19:45	WG2425137
1,1-Dichloroethane	U		0.00101	0.00512	1.44	12/27/2024 19:45	WG2425137
1,2-Dichloroethane	U		0.00133	0.00512	1.44	12/27/2024 19:45	WG2425137
1,1-Dichloroethene	U		0.00124	0.00512	1.44	12/27/2024 19:45	WG2425137
cis-1,2-Dichloroethene	U		0.00151	0.00512	1.44	12/27/2024 19:45	WG2425137
trans-1,2-Dichloroethene	U		0.00213	0.0102	1.44	12/27/2024 19:45	WG2425137
1,2-Dichloropropane	U		0.00290	0.0102	1.44	12/27/2024 19:45	WG2425137
1,1-Dichloropropene	U		0.00165	0.00512	1.44	12/27/2024 19:45	WG2425137
1,3-Dichloropropane	U		0.00103	0.0102	1.44	12/27/2024 19:45	WG2425137
cis-1,3-Dichloropropene	U		0.00155	0.00512	1.44	12/27/2024 19:45	WG2425137
trans-1,3-Dichloropropene	U		0.00233	0.0102	1.44	12/27/2024 19:45	WG2425137
2,2-Dichloropropane	U	C3	0.00283	0.00512	1.44	12/27/2024 19:45	WG2425137
Di-isopropyl ether	U		0.000840	0.00205	1.44	12/27/2024 19:45	WG2425137
Ethylbenzene	U		0.00151	0.00512	1.44	12/27/2024 19:45	WG2425137
Hexachloro-1,3-butadiene	U		0.0123	0.0512	1.44	12/27/2024 19:45	WG2425137
Isopropylbenzene	U		0.000871	0.00512	1.44	12/27/2024 19:45	WG2425137
p-Isopropyltoluene	0.00768	IJ	0.00522	0.0102	1.44	12/27/2024 19:45	WG2425137
2-Butanone (MEK)	U		0.130	0.205	1.44	12/27/2024 19:45	WG2425137
Methylene Chloride	0.0250	B J	0.0136	0.0512	1.44	12/27/2024 19:45	WG2425137
4-Methyl-2-pentanone (MIBK)	U		0.00467	0.0512	1.44	12/27/2024 19:45	WG2425137
Methyl tert-butyl ether	U		0.000717	0.00205	1.44	12/27/2024 19:45	WG2425137
Naphthalene	U		0.0100	0.0256	1.44	12/27/2024 19:45	WG2425137
n-Propylbenzene	U		0.00195	0.0102	1.44	12/27/2024 19:45	WG2425137
Styrene	U		0.000470	0.0256	1.44	12/27/2024 19:45	WG2425137
1,1,1,2-Tetrachloroethane	U		0.00195	0.00512	1.44	12/27/2024 19:45	WG2425137
1,1,2,2-Tetrachloroethane	U		0.00142	0.00512	1.44	12/27/2024 19:45	WG2425137
1,1,2-Trichlorotrifluoroethane	U		0.00155	0.00512	1.44	12/27/2024 19:45	WG2425137
Tetrachloroethene	U		0.00184	0.00512	1.44	12/27/2024 19:45	WG2425137
Toluene	0.00307	IJ	0.00266	0.0102	1.44	12/27/2024 19:45	WG2425137
1,2,3-Trichlorobenzene	U		0.0151	0.0256	1.44	12/27/2024 19:45	WG2425137
1,2,4-Trichlorobenzene	U		0.00902	0.0256	1.44	12/27/2024 19:45	WG2425137
1,1,1-Trichloroethane	U		0.00189	0.00512	1.44	12/27/2024 19:45	WG2425137
1,1,2-Trichloroethane	U		0.00122	0.00512	1.44	12/27/2024 19:45	WG2425137
Trichloroethene	U		0.00120	0.00205	1.44	12/27/2024 19:45	WG2425137
Trichlorofluoromethane	U		0.00169	0.00512	1.44	12/27/2024 19:45	WG2425137
1,2,3-Trichloropropane	U		0.00332	0.0256	1.44	12/27/2024 19:45	WG2425137
1,2,4-Trimethylbenzene	U		0.00324	0.0102	1.44	12/27/2024 19:45	WG2425137
1,2,3-Trimethylbenzene	U		0.00324	0.0102	1.44	12/27/2024 19:45	WG2425137
1,3,5-Trimethylbenzene	U		0.00410	0.0102	1.44	12/27/2024 19:45	WG2425137
Vinyl chloride	U		0.00238	0.00512	1.44	12/27/2024 19:45	WG2425137
Xylenes, Total	U		0.00181	0.0133	1.44	12/27/2024 19:45	WG2425137
(S) Toluene-d8	107			75.0-131		12/27/2024 19:45	WG2425137
(S) 4-Bromofluorobenzene	92.4			67.0-138		12/27/2024 19:45	WG2425137
(S) 1,2-Dichloroethane-d4	93.6			70.0-130		12/27/2024 19:45	WG2425137

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	51.9		1.89	5.69	1	12/27/2024 19:29	WG2425643
Residual Range Organics (RRO)	83.0		4.74	14.2	1	12/27/2024 19:29	WG2425643
(S) o-Terphenyl	98.2			18.0-148		12/27/2024 19:29	WG2425643

Sample Narrative:

L1812652-04 WG2425643: Sample does not resemble laboratory standards.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.0366	0.0996	1	12/31/2024 19:08	WG2425572
Dalapon	U		0.0626	0.0996	1	12/31/2024 19:08	WG2425572
2,4-DB	U		0.0265	0.0996	1	12/31/2024 19:08	WG2425572
Dicamba	U		0.0322	0.0996	1	12/31/2024 19:08	WG2425572
Dichloroprop	U		0.0260	0.0996	1	12/31/2024 19:08	WG2425572
Dinoseb	U		0.0363	0.0996	1	12/31/2024 19:08	WG2425572
MCPA	U		2.65	9.25	1	12/31/2024 19:08	WG2425572
MCPP	U		2.89	9.25	1	12/31/2024 19:08	WG2425572
2,4,5-T	U		0.0336	0.0996	1	12/31/2024 19:08	WG2425572
2,4,5-TP (Silvex)	U		0.0266	0.0996	1	12/31/2024 19:08	WG2425572
(S) 2,4-Dichlorophenyl Acetic Acid	40.2			22.0-132		12/31/2024 19:08	WG2425572

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00918	0.0285	1	12/30/2024 17:59	WG2425978
Alpha BHC	U		0.00906	0.0285	1	12/30/2024 17:59	WG2425978
Beta BHC	U		0.00897	0.0285	1	12/30/2024 17:59	WG2425978
Delta BHC	U		0.00904	0.0285	1	12/30/2024 17:59	WG2425978
Gamma BHC	U		0.00962	0.0285	1	12/30/2024 17:59	WG2425978
Chlordane	U		0.141	0.427	1	12/30/2024 17:59	WG2425978
4,4-DDD	U		0.00982	0.0285	1	12/30/2024 17:59	WG2425978
4,4-DDE	U		0.00958	0.0285	1	12/30/2024 17:59	WG2425978
4,4-DDT	U		0.0109	0.0285	1	12/30/2024 17:59	WG2425978
Dieldrin	U		0.00992	0.0285	1	12/30/2024 17:59	WG2425978
Endosulfan I	U		0.00860	0.0285	1	12/30/2024 17:59	WG2425978
Endosulfan II	U		0.00941	0.0285	1	12/30/2024 17:59	WG2425978
Endosulfan sulfate	U		0.00914	0.0285	1	12/30/2024 17:59	WG2425978
Endrin	U		0.0106	0.0285	1	12/30/2024 17:59	WG2425978
Endrin aldehyde	U		0.00840	0.0285	1	12/30/2024 17:59	WG2425978
Endrin ketone	U		0.00989	0.0285	1	12/30/2024 17:59	WG2425978
Hexachlorobenzene	U		0.00865	0.0285	1	12/30/2024 17:59	WG2425978
Heptachlor	U		0.00986	0.0285	1	12/30/2024 17:59	WG2425978
Heptachlor epoxide	U		0.00925	0.0285	1	12/30/2024 17:59	WG2425978
Methoxychlor	U		0.0115	0.0285	1	12/30/2024 17:59	WG2425978
Toxaphene	U		0.305	0.569	1	12/30/2024 17:59	WG2425978
(S) Decachlorobiphenyl	56.8			10.0-135		12/30/2024 17:59	WG2425978
(S) Tetrachloro-m-xylene	55.0			10.0-139		12/30/2024 17:59	WG2425978

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		0.00327	0.00854	1	12/28/2024 09:51	WG2425253
Acenaphthene	U		0.00297	0.00854	1	12/28/2024 09:51	WG2425253
Acenaphthylene	U		0.00307	0.00854	1	12/28/2024 09:51	WG2425253
Benzo(a)anthracene	U		0.00246	0.00854	1	12/28/2024 09:51	WG2425253
Benzo(a)pyrene	U		0.00255	0.00854	1	12/28/2024 09:51	WG2425253
Benzo(b)fluoranthene	U		0.00218	0.00854	1	12/28/2024 09:51	WG2425253
Benzo(g,h,i)perylene	U		0.00252	0.00854	1	12/28/2024 09:51	WG2425253
Benzo(k)fluoranthene	U		0.00306	0.00854	1	12/28/2024 09:51	WG2425253
Chrysene	U		0.00330	0.00854	1	12/28/2024 09:51	WG2425253
Dibenz(a,h)anthracene	U		0.00245	0.00854	1	12/28/2024 09:51	WG2425253
Fluoranthene	U		0.00323	0.00854	1	12/28/2024 09:51	WG2425253
Fluorene	U		0.00292	0.00854	1	12/28/2024 09:51	WG2425253
Indeno(1,2,3-cd)pyrene	U		0.00258	0.00854	1	12/28/2024 09:51	WG2425253

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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
Naphthalene	0.00618	J	0.00581	0.0285	1	12/28/2024 09:51	WG2425253
Phenanthrene	U		0.00329	0.00854	1	12/28/2024 09:51	WG2425253
Pyrene	U		0.00285	0.00854	1	12/28/2024 09:51	WG2425253
1-Methylnaphthalene	U		0.00639	0.0285	1	12/28/2024 09:51	WG2425253
2-Methylnaphthalene	U		0.00608	0.0285	1	12/28/2024 09:51	WG2425253
2-Chloronaphthalene	U		0.00663	0.0285	1	12/28/2024 09:51	WG2425253
(S) p-Terphenyl-d14	99.5			23.0-120		12/28/2024 09:51	WG2425253
(S) Nitrobenzene-d5	86.6			14.0-149		12/28/2024 09:51	WG2425253
(S) 2-Fluorobiphenyl	91.9			34.0-125		12/28/2024 09:51	WG2425253

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	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	12/27/2024 09:33	WG2425235
Toluene	U		0.278	1.00	1	12/27/2024 09:33	WG2425235
Ethylbenzene	U		0.137	1.00	1	12/27/2024 09:33	WG2425235
Total Xylenes	U		0.174	3.00	1	12/27/2024 09:33	WG2425235
(S) Toluene-d8	108			80.0-120		12/27/2024 09:33	WG2425235
(S) 4-Bromofluorobenzene	101			77.0-126		12/27/2024 09:33	WG2425235
(S) 1,2-Dichloroethane-d4	108			70.0-130		12/27/2024 09:33	WG2425235

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4162032-1 12/26/24 09:24

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00200			

1Cp

2Tc

3Ss

L1812633-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1812633-06 12/26/24 09:24 • (DUP) R4162032-3 12/26/24 09:24

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	33.7	30.6	1	9.69		10

4Cn

5Sr

6Qc

Laboratory Control Sample (LCS)

(LCS) R4162032-2 12/26/24 09:24

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162014-1 12/26/24 08:25

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1812646-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1812646-02 12/26/24 08:25 • (DUP) R4162014-3 12/26/24 08:25

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	83.0	81.7	1	1.50		10

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R4162014-2 12/26/24 08:25

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

⁹Sc

Method Blank (MB)

(MB) R4163528-1 12/31/24 15:44

	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) R4163528-2 12/31/24 15:47

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.441	88.2	80.0-120	

L1812691-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812691-01 12/31/24 15:55 • (MS) R4163528-4 12/31/24 16:00 • (MSD) R4163528-5 12/31/24 16:03

	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	0.666	U	0.644	0.664	96.7	99.6	1	75.0-125			3.01	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162637-1 12/28/24 19:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.691	2.00
Arsenic	U		0.837	2.00
Beryllium	U		0.0477	0.200
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Copper	U		0.357	2.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Selenium	U		1.07	2.00
Silver	U		0.127	1.00
Thallium	U		0.518	2.00
Zinc	U		0.974	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4162637-2 12/28/24 19:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	85.5	85.5	80.0-120	
Arsenic	100	89.9	89.9	80.0-120	
Beryllium	100	92.5	92.5	80.0-120	
Cadmium	100	88.9	88.9	80.0-120	
Chromium	100	94.0	94.0	80.0-120	
Copper	100	95.6	95.6	80.0-120	
Lead	100	88.5	88.5	80.0-120	
Nickel	100	85.7	85.7	80.0-120	
Selenium	100	87.0	87.0	80.0-120	
Silver	20.0	16.9	84.4	80.0-120	
Thallium	100	94.0	94.0	80.0-120	
Zinc	100	90.8	90.8	80.0-120	

L1812684-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812684-07 12/28/24 19:32 • (MS) R4162637-5 12/28/24 19:37 • (MSD) R4162637-6 12/28/24 19:39

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 %
Antimony	100	U	76.4	82.0	76.4	82.0	1	75.0-125			7.10	20
Arsenic	100	1.08	83.1	86.7	82.0	85.6	1	75.0-125			4.15	20

L1812684-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812684-07 12/28/24 19:32 • (MS) R4162637-5 12/28/24 19:37 • (MSD) R4162637-6 12/28/24 19:39

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 %
Beryllium	100	1.03	85.9	90.0	84.9	88.9	1	75.0-125			4.64	20
Cadmium	100	0.0731	81.6	85.8	81.5	85.7	1	75.0-125			5.03	20
Chromium	100	602	568	789	0.000	187	1	75.0-125	V	J3 V	32.5	20
Copper	100	31.1	115	127	83.5	96.1	1	75.0-125			10.4	20
Lead	100	11.8	97.0	105	85.1	93.2	1	75.0-125			7.99	20
Nickel	100	555	607	693	51.4	137	1	75.0-125	V	V	13.2	20
Selenium	100	U	80.0	83.8	79.9	83.7	1	75.0-125			4.62	20
Silver	20.0	0.692	16.3	17.2	78.0	82.4	1	75.0-125			5.25	20
Thallium	100	U	90.8	96.5	90.8	96.5	1	75.0-125			6.05	20
Zinc	100	228	229	345	1.09	117	1	75.0-125	J6	J3	40.5	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163428-2 12/29/24 12:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	1.80	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4163428-1 12/29/24 11:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.00	5.56	111	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			98.0	77.0-120	

L1812969-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812969-09 12/30/24 01:15 • (MS) R4163428-3 12/30/24 03:08 • (MSD) R4163428-4 12/30/24 03:31

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 %
Gasoline Range Organics-NWTPH	142	U	126	154	89.3	109	25	50.0-150			19.8	27
(S) a,a,a-Trifluorotoluene(FID)					99.6	104		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	0.0107	U	0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	93.8			67.0-138
(S) 1,2-Dichloroethane-d4	108			70.0-130

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

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	0.625	0.674	0.728	108	116	10.0-160			7.70	31
Acrylonitrile	0.625	0.745	0.731	119	117	45.0-153			1.90	22
Benzene	0.125	0.114	0.121	91.2	96.8	70.0-123			5.96	20
Bromobenzene	0.125	0.140	0.146	112	117	73.0-121			4.20	20
Bromodichloromethane	0.125	0.129	0.135	103	108	73.0-121			4.55	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromoform	0.125	0.107	0.114	85.6	91.2	64.0-132			6.33	20
Bromomethane	0.125	0.107	0.108	85.6	86.4	56.0-147			0.930	20
n-Butylbenzene	0.125	0.130	0.141	104	113	68.0-135			8.12	20
sec-Butylbenzene	0.125	0.132	0.149	106	119	74.0-130			12.1	20
tert-Butylbenzene	0.125	0.139	0.149	111	119	75.0-127			6.94	20
Carbon tetrachloride	0.125	0.114	0.124	91.2	99.2	66.0-128			8.40	20
Chlorobenzene	0.125	0.115	0.121	92.0	96.8	76.0-128			5.08	20
Chlorodibromomethane	0.125	0.122	0.130	97.6	104	74.0-127			6.35	20
Chloroethane	0.125	0.107	0.110	85.6	88.0	61.0-134			2.76	20
Chloroform	0.125	0.114	0.119	91.2	95.2	72.0-123			4.29	20
Chloromethane	0.125	0.129	0.141	103	113	51.0-138			8.89	20
2-Chlorotoluene	0.125	0.147	0.158	118	126	75.0-124		J4	7.21	20
4-Chlorotoluene	0.125	0.148	0.160	118	128	75.0-124		J4	7.79	20
1,2-Dibromo-3-Chloropropane	0.125	0.132	0.131	106	105	59.0-130			0.760	20
1,2-Dibromoethane	0.125	0.129	0.137	103	110	74.0-128			6.02	20
Dibromomethane	0.125	0.128	0.131	102	105	75.0-122			2.32	20
1,2-Dichlorobenzene	0.125	0.129	0.135	103	108	76.0-124			4.55	20
1,3-Dichlorobenzene	0.125	0.127	0.134	102	107	76.0-125			5.36	20
1,4-Dichlorobenzene	0.125	0.136	0.146	109	117	77.0-121			7.09	20
Dichlorodifluoromethane	0.125	0.124	0.135	99.2	108	43.0-156			8.49	20
1,1-Dichloroethane	0.125	0.126	0.132	101	106	70.0-127			4.65	20
1,2-Dichloroethane	0.125	0.137	0.140	110	112	65.0-131			2.17	20
1,1-Dichloroethene	0.125	0.126	0.133	101	106	65.0-131			5.41	20
cis-1,2-Dichloroethene	0.125	0.112	0.116	89.6	92.8	73.0-125			3.51	20
trans-1,2-Dichloroethene	0.125	0.110	0.115	88.0	92.0	71.0-125			4.44	20
1,2-Dichloropropane	0.125	0.133	0.141	106	113	74.0-125			5.84	20
1,1-Dichloropropene	0.125	0.126	0.136	101	109	73.0-125			7.63	20
1,3-Dichloropropane	0.125	0.134	0.140	107	112	80.0-125			4.38	20
cis-1,3-Dichloropropene	0.125	0.124	0.133	99.2	106	76.0-127			7.00	20
trans-1,3-Dichloropropene	0.125	0.137	0.143	110	114	73.0-127			4.29	20
2,2-Dichloropropane	0.125	0.0957	0.0953	76.6	76.2	59.0-135			0.419	20
Di-isopropyl ether	0.125	0.142	0.148	114	118	60.0-136			4.14	20
Ethylbenzene	0.125	0.119	0.129	95.2	103	74.0-126			8.06	20
Hexachloro-1,3-butadiene	0.125	0.107	0.115	85.6	92.0	57.0-150			7.21	20
Isopropylbenzene	0.125	0.118	0.129	94.4	103	72.0-127			8.91	20
p-Isopropyltoluene	0.125	0.137	0.152	110	122	72.0-133			10.4	20
2-Butanone (MEK)	0.625	0.788	0.824	126	132	30.0-160			4.47	24
Methylene Chloride	0.125	0.112	0.117	89.6	93.6	68.0-123			4.37	20
4-Methyl-2-pentanone (MIBK)	0.625	0.741	0.763	119	122	56.0-143			2.93	20
Methyl tert-butyl ether	0.125	0.132	0.132	106	106	66.0-132			0.000	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	0.125	0.129	0.135	103	108	59.0-130			4.55	20
n-Propylbenzene	0.125	0.131	0.143	105	114	74.0-126			8.76	20
Styrene	0.125	0.127	0.135	102	108	72.0-127			6.11	20
1,1,1,2-Tetrachloroethane	0.125	0.124	0.128	99.2	102	74.0-129			3.17	20
1,1,2,2-Tetrachloroethane	0.125	0.152	0.158	122	126	68.0-128			3.87	20
1,1,2-Trichlorotrifluoroethane	0.125	0.114	0.123	91.2	98.4	61.0-139			7.59	20
Tetrachloroethene	0.125	0.113	0.126	90.4	101	70.0-136			10.9	20
Toluene	0.125	0.118	0.125	94.4	100	75.0-121			5.76	20
1,2,3-Trichlorobenzene	0.125	0.127	0.133	102	106	59.0-139			4.62	20
1,2,4-Trichlorobenzene	0.125	0.117	0.125	93.6	100	62.0-137			6.61	20
1,1,1-Trichloroethane	0.125	0.123	0.127	98.4	102	69.0-126			3.20	20
1,1,2-Trichloroethane	0.125	0.125	0.135	100	108	78.0-123			7.69	20
Trichloroethene	0.125	0.121	0.129	96.8	103	76.0-126			6.40	20
Trichlorofluoromethane	0.125	0.128	0.135	102	108	61.0-142			5.32	20
1,2,3-Trichloropropane	0.125	0.160	0.161	128	129	67.0-129			0.623	20
1,2,4-Trimethylbenzene	0.125	0.144	0.156	115	125	70.0-126			8.00	20
1,2,3-Trimethylbenzene	0.125	0.143	0.152	114	122	74.0-124			6.10	20
1,3,5-Trimethylbenzene	0.125	0.139	0.148	111	118	73.0-127			6.27	20
Vinyl chloride	0.125	0.131	0.143	105	114	63.0-134			8.76	20
Xylenes, Total	0.375	0.349	0.374	93.1	99.7	72.0-127			6.92	20
(S) Toluene-d8				96.8	98.4	75.0-131				
(S) 4-Bromofluorobenzene				95.3	94.8	67.0-138				
(S) 1,2-Dichloroethane-d4				117	120	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163534-3 12/27/24 09:13

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	98.6			77.0-126
(S) 1,2-Dichloroethane-d4	107			70.0-130

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

(LCS) R4163534-1 12/27/24 08:12 • (LCSD) R4163534-2 12/27/24 08:32

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 %
Benzene	5.00	4.90	4.54	98.0	90.8	70.0-123			7.63	20
Toluene	5.00	4.47	4.03	89.4	80.6	79.0-120			10.4	20
Ethylbenzene	5.00	4.69	4.28	93.8	85.6	79.0-123			9.14	20
Total Xylenes	15.0	13.5	12.6	90.0	84.0	79.0-123			6.90	20
(S) Toluene-d8				91.1	96.7	80.0-120				
(S) 4-Bromofluorobenzene				90.0	91.8	77.0-126				
(S) 1,2-Dichloroethane-d4				102	105	70.0-130				

L1812410-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812410-08 12/27/24 15:37 • (MS) R4163534-4 12/27/24 16:58 • (MSD) R4163534-5 12/27/24 17:18

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 %
Benzene	5.00	U	4.63	4.77	92.6	95.4	1	17.0-158			2.98	27
Toluene	5.00	U	4.31	4.36	86.2	87.2	1	26.0-154			1.15	28
Ethylbenzene	5.00	U	4.53	4.45	90.6	89.0	1	30.0-155			1.78	27
Total Xylenes	15.0	U	13.2	13.5	88.0	90.0	1	29.0-154			2.25	28
(S) Toluene-d8					97.6	95.2		80.0-120				
(S) 4-Bromofluorobenzene					90.9	90.7		77.0-126				
(S) 1,2-Dichloroethane-d4					103	102		70.0-130				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4162473-1 12/27/24 16:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	102			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4162473-2 12/27/24 16:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	50.6	101	50.0-150	
(S) o-Terphenyl			98.0	18.0-148	

L1812652-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812652-01 12/27/24 16:12 • (MS) R4162473-3 12/27/24 16:24 • (MSD) R4162473-4 12/27/24 16:36

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 %
Diesel Range Organics (DRO)	59.6	56.1	92.5	76.8	61.1	34.9	1	50.0-150		J6	18.7	20
(S) o-Terphenyl					91.8	97.3		18.0-148				

Sample Narrative:

OS: Sample resembles laboratory standard for Motor Oil.

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4163489-1 12/31/24 11:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.0257	0.0700
Dalapon	U		0.0440	0.0700
2,4-DB	U		0.0186	0.0700
Dicamba	U		0.0226	0.0700
Dichloroprop	U		0.0183	0.0700
Dinoseb	U		0.0255	0.0700
MCPA	U		1.86	6.50
MCPP	U		2.03	6.50
2,4,5-T	U		0.0236	0.0700
2,4,5-TP (Silvex)	U		0.0187	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	38.1			22.0-132

Laboratory Control Sample (LCS)

(LCS) R4163489-2 12/31/24 11:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.0833	0.0571	68.5	40.0-120	J
Dalapon	0.0833	0.0283	34.0	15.0-120	J
2,4-DB	0.0833	0.0472	56.7	25.0-143	J
Dicamba	0.0833	0.0510	61.2	43.0-120	J
Dichloroprop	0.0833	0.0454	54.5	32.0-129	J
Dinoseb	0.0833	0.00960	11.5	10.0-120	J
MCPA	8.33	5.00	60.0	31.0-121	J
MCPP	8.33	3.62	43.5	28.0-133	J
2,4,5-T	0.0833	0.0376	45.1	41.0-120	J
2,4,5-TP (Silvex)	0.0833	0.0483	58.0	42.0-120	J
(S) 2,4-Dichlorophenyl Acetic Acid			50.2	22.0-132	

L1811713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811713-01 12/31/24 15:13 • (MS) R4163489-3 12/31/24 15:24 • (MSD) R4163489-4 12/31/24 15:35

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 %
2,4-D	0.0886	U	0.0821	0.0692	92.6	79.0	1	10.0-160	J	J	17.0	24
Dalapon	0.0886	U	U	U	40.2	20.9	1	10.0-121	J	J J3	64.5	27
2,4-DB	0.0886	U	0.0771	0.0602	87.0	68.7	1	10.0-160	P	J J3	24.7	22

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1811713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811713-01 12/31/24 15:13 • (MS) R4163489-3 12/31/24 15:24 • (MSD) R4163489-4 12/31/24 15:35

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 %
Dicamba	0.0886	U	0.0713	0.0579	80.5	66.1	1	10.0-154	J	J	20.8	21
Dichloroprop	0.0886	U	0.0999	0.0907	113	104	1	10.0-158		P	9.70	20
Dinoseb	0.0886	U	0.0403	0.0452	45.5	51.7	1	10.0-120	J	J	11.6	40
MCPA	8.86	U	7.36	6.00	83.0	68.6	1	10.0-160		J	20.3	40
MCPP	8.86	U	5.94	5.76	67.0	65.8	1	10.0-160	J	J	3.12	40
2,4,5-T	0.0886	U	0.0550	0.0454	62.1	51.9	1	10.0-157	J	J	19.0	20
2,4,5-TP (Silvex)	0.0886	U	0.0707	0.0581	79.8	66.4	1	10.0-156	J	J	19.5	20
(S) 2,4-Dichlorophenyl Acetic Acid					73.9	60.9		22.0-132				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163087-1 12/30/24 15:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00645	0.0200
Alpha BHC	U		0.00637	0.0200
Beta BHC	U		0.00630	0.0200
Delta BHC	U		0.00635	0.0200
Gamma BHC	U		0.00676	0.0200
Chlordane	U		0.0990	0.300
4,4-DDD	U		0.00690	0.0200
4,4-DDE	U		0.00673	0.0200
4,4-DDT	U		0.00766	0.0200
Dieldrin	U		0.00697	0.0200
Endosulfan I	U		0.00604	0.0200
Endosulfan II	U		0.00661	0.0200
Endosulfan sulfate	U		0.00642	0.0200
Endrin	U		0.00746	0.0200
Endrin aldehyde	U		0.00590	0.0200
Endrin ketone	U		0.00695	0.0200
Hexachlorobenzene	U		0.00608	0.0200
Heptachlor	U		0.00693	0.0200
Heptachlor epoxide	U		0.00650	0.0200
Methoxychlor	U		0.00806	0.0200
Toxaphene	U		0.214	0.400
(S) Decachlorobiphenyl	68.3			10.0-135
(S) Tetrachloro-m-xylene	73.0			10.0-139

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4163087-2 12/30/24 15:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0477	71.6	34.0-136	
Alpha BHC	0.0666	0.0506	76.0	34.0-139	
Beta BHC	0.0666	0.0479	71.9	34.0-133	
Delta BHC	0.0666	0.0517	77.6	34.0-135	
Gamma BHC	0.0666	0.0512	76.9	34.0-136	
4,4-DDD	0.0666	0.0525	78.8	33.0-141	
4,4-DDE	0.0666	0.0519	77.9	34.0-134	
4,4-DDT	0.0666	0.0529	79.4	30.0-143	
Dieldrin	0.0666	0.0503	75.5	35.0-137	
Endosulfan I	0.0666	0.0470	70.6	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R4163087-2 12/30/24 15:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0500	75.1	35.0-132	
Endosulfan sulfate	0.0666	0.0467	70.1	35.0-132	
Endrin	0.0666	0.0488	73.3	34.0-137	
Endrin aldehyde	0.0666	0.0470	70.6	23.0-121	
Endrin ketone	0.0666	0.0491	73.7	35.0-144	
Hexachlorobenzene	0.0666	0.0467	70.1	33.0-129	
Heptachlor	0.0666	0.0581	87.2	36.0-141	
Heptachlor epoxide	0.0666	0.0510	76.6	36.0-134	
Methoxychlor	0.0666	0.0511	76.7	28.0-150	
(S) Decachlorobiphenyl			55.9	10.0-135	
(S) Tetrachloro-m-xylene			58.9	10.0-139	

L1812342-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812342-02 12/30/24 15:54 • (MS) R4163087-3 12/30/24 16:04 • (MSD) R4163087-4 12/30/24 16:13

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.0653	U	0.0405	0.0374	62.0	57.3	1	20.0-135			7.96	37
Alpha BHC	0.0653	U	0.0435	0.0397	66.6	60.8	1	27.0-140			9.13	35
Beta BHC	0.0653	U	0.0405	0.0367	62.0	56.2	1	23.0-141			9.84	37
Delta BHC	0.0653	U	0.0432	0.0396	66.2	60.6	1	21.0-138			8.70	35
Gamma BHC	0.0653	U	0.0444	0.0402	68.0	61.6	1	27.0-137			9.93	36
4,4-DDD	0.0653	U	0.0455	0.0427	69.7	65.4	1	15.0-152			6.35	39
4,4-DDE	0.0653	U	0.0422	0.0392	64.6	60.0	1	10.0-152			7.37	40
4,4-DDT	0.0653	U	0.0477	0.0448	73.0	68.6	1	10.0-151			6.27	40
Dieldrin	0.0653	U	0.0418	0.0387	64.0	59.3	1	17.0-145			7.70	37
Endosulfan I	0.0653	U	0.0400	0.0374	61.3	57.3	1	20.0-137			6.72	36
Endosulfan II	0.0653	U	0.0427	0.0396	65.4	60.6	1	15.0-141			7.53	37
Endosulfan sulfate	0.0653	U	0.0408	0.0385	62.5	59.0	1	15.0-143			5.80	38
Endrin	0.0653	U	0.0421	0.0398	64.5	60.9	1	19.0-143			5.62	37
Endrin aldehyde	0.0653	U	0.0417	0.0390	63.9	59.7	1	10.0-139			6.69	40
Endrin ketone	0.0653	U	0.0444	0.0404	68.0	61.9	1	17.0-149			9.43	38
Hexachlorobenzene	0.0653	U	0.0395	0.0361	60.5	55.3	1	25.0-126			8.99	35
Heptachlor	0.0653	U	0.0537	0.0493	82.2	75.5	1	22.0-138			8.54	37
Heptachlor epoxide	0.0653	U	0.0431	0.0393	66.0	60.2	1	22.0-138			9.22	36
Methoxychlor	0.0653	U	0.0461	0.0439	70.6	67.2	1	10.0-159			4.89	40
(S) Decachlorobiphenyl					42.6	43.6		10.0-135				
(S) Tetrachloro-m-xylene					49.6	47.9		10.0-139				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162916-2 12/28/24 00:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	120			23.0-120
(S) Nitrobenzene-d5	104			14.0-149
(S) 2-Fluorobiphenyl	106			34.0-125

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4162916-1 12/28/24 00:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0670	83.8	50.0-126	
Acenaphthene	0.0800	0.0684	85.5	50.0-120	
Acenaphthylene	0.0800	0.0698	87.3	50.0-120	
Benzo(a)anthracene	0.0800	0.0666	83.3	45.0-120	
Benzo(a)pyrene	0.0800	0.0657	82.1	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0737	92.1	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0805	101	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0717	89.6	49.0-125	
Chrysene	0.0800	0.0743	92.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0797	99.6	47.0-125	
Fluoranthene	0.0800	0.0754	94.3	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4162916-1 12/28/24 00:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0729	91.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0718	89.8	46.0-125	
Naphthalene	0.0800	0.0701	87.6	50.0-120	
Phenanthrene	0.0800	0.0707	88.4	47.0-120	
Pyrene	0.0800	0.0772	96.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0738	92.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0711	88.9	50.0-120	
2-Chloronaphthalene	0.0800	0.0711	88.9	50.0-120	
(S) p-Terphenyl-d14			105	23.0-120	
(S) Nitrobenzene-d5			103	14.0-149	
(S) 2-Fluorobiphenyl			103	34.0-125	

L1812374-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812374-08 12/28/24 19:32 • (MS) R4162887-1 12/28/24 19:50 • (MSD) R4162887-2 12/28/24 20:07

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	0.0838	U	0.0749	0.0731	89.4	87.2	1	10.0-145			2.43	30
Acenaphthene	0.0838	U	0.0705	0.0689	84.1	82.2	1	14.0-127			2.28	27
Acenaphthylene	0.0838	0.00463	0.0801	0.0786	90.1	88.3	1	21.0-124			1.87	25
Benzo(a)anthracene	0.0838	U	0.0801	0.0785	95.6	93.7	1	10.0-139			2.00	30
Benzo(a)pyrene	0.0838	U	0.0751	0.0749	89.6	89.4	1	10.0-141			0.282	31
Benzo(b)fluoranthene	0.0838	U	0.0701	0.0705	83.6	84.1	1	10.0-140			0.602	36
Benzo(g,h,i)perylene	0.0838	U	0.0681	0.0686	81.2	81.8	1	10.0-140			0.775	33
Benzo(k)fluoranthene	0.0838	U	0.0695	0.0688	83.0	82.1	1	10.0-137			1.07	31
Chrysene	0.0838	U	0.0794	0.0791	94.7	94.3	1	10.0-145			0.401	30
Dibenz(a,h)anthracene	0.0838	U	0.0738	0.0752	88.0	89.8	1	10.0-132			1.99	31
Fluoranthene	0.0838	0.00344	0.0824	0.0784	94.3	89.5	1	10.0-153			5.00	33
Fluorene	0.0838	U	0.0777	0.0749	92.7	89.4	1	11.0-130			3.61	29
Indeno(1,2,3-cd)pyrene	0.0838	0.0185	0.0731	0.0723	65.2	64.1	1	10.0-137			1.16	32
Naphthalene	0.0838	0.00450	0.0873	0.0783	98.8	88.1	1	10.0-135			10.9	27
Phenanthrene	0.0838	0.00467	0.0757	0.0742	84.7	82.9	1	10.0-144			1.98	31
Pyrene	0.0838	0.00489	0.0730	0.0706	81.3	78.4	1	10.0-148			3.39	35
1-Methylnaphthalene	0.0838	0.00509	0.0860	0.0805	96.6	90.0	1	10.0-142			6.61	28
2-Methylnaphthalene	0.0838	0.00615	0.0920	0.0780	102	85.7	1	10.0-137			16.4	28
2-Chloronaphthalene	0.0838	U	0.0756	0.0744	90.2	88.8	1	29.0-120			1.55	24
(S) p-Terphenyl-d14					95.5	100		23.0-120				
(S) Nitrobenzene-d5					112	117		14.0-149				
(S) 2-Fluorobiphenyl					103	108		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

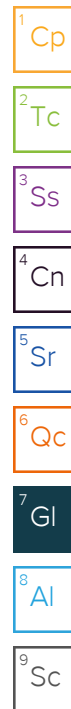
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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
B	The same analyte is found in the associated blank.
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.
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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P	RPD between the primary and confirmatory analysis exceeded 40%.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

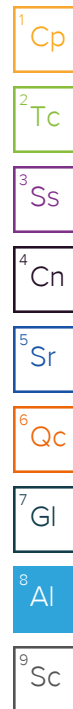
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: Oregon DEQ				Contract Laboratory Name: ESC				Lab Selection Criteria: ☐ Proximity (if TAT < 48 hrs) ☐ Prior work on same project ☒ Cost (for anticipated analyses) ☐ Other labs disqualified or unable to perform requested services ☐ Emergency work				Turn Around Time: ☒ 10 days (std.) ☐ 5 days ☐ 72 hours ☐ 48 hours ☐ 24 hours ☐ Other	
Send Lab Report To: Cathy Brown Address: 165 E. 7 th Avenue, Suite 100 Eugene, OR 97401 Tel. #: 503-753-6153 E-mail: cathy.brown@deq.oregon.gov				Lab Batch #: Invoice To: ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696									
Project Name: DEQ Forest Creek Sampler Name: Connor Anderson				Sample Preservative								D1A	
Sample ID#	Collection Date/Time	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs EPA 8260D	SVOCs EPA 8270E-SIM	Dioxins/Furans EPA 1613B	*Priority Pollutant Metals EPA 6010D/7471B	Herbicides EPA 8151A	Pesticides EPA 8081B	BTEX EPA 8260D	Comments
DRUMAREA-COMP-S	12/17/24; 15:15	S	4	X	X	X	X	X	X	X	X		7
TIREPILE-COMP-S	12/17/24; 16:00	S	4	X	X	X	X	X	X	X	X		12
BURNAREA-COMP-S	12/18/24; 13:55	S	4	X	X	X	X	X	X	X	X		12
BURNAREA-COMP-S-DUP	12/18/24; 13:55	S	4	X	X	X	X	X	X	X	X		14
TLA9 4.9 +0 = 4.9 16 samples 2 Trip Line Sample Receipt Checklist COC Seal Present/Intact: ☒ Y ☐ N If Applicable COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☒ N Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☒ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N RA Screen <0.5 mR/hr: ☒ Y ☐ N													
TRIP BLANK												X	
*Priority Pollutant Metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.													
Relinquished By: <i>Connor Anderson</i> Signature: <i>[Signature]</i>				Agency/Agent: <i>MFA</i> Time & Date: <i>12/23/24, 1100</i>				Received By: Signature:				Agency/Agent: Time & Date:	
Relinquished By: Signature:				Agency/Agent: Time & Date:				Received By: Signature: <i>Stewart Francis</i>				Agency/Agent: Time & Date: <i>12/24/24 9:00</i>	

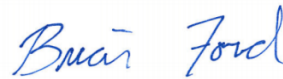
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Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812653
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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

SAMPLE SUMMARY

DU1-ISM-DUP L1812653-01 Solid

Collected by Connor Armstrong
Collected date/time 12/20/24 07:50
Received date/time 12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2424765	1	12/26/24 07:07	12/26/24 07:15	CMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426606	25	12/26/24 08:01	12/31/24 02:48	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2426184	1	12/26/24 08:01	12/29/24 21:44	DWR	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

DU1-ISM-DUP L1812653-02 Solid

Collected by Connor Armstrong
Collected date/time 12/20/24 07:50
Received date/time 12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2427274	1	01/02/25 09:52	01/02/25 10:01	MT	Mt. Juliet, TN
Mercury by Method 7471B	WG2427192	1	01/01/25 10:11	01/02/25 13:42	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2427250	1	01/01/25 14:30	01/02/25 10:01	JTM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2426695	2	12/31/24 10:29	01/02/25 15:11	SGB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2426593	1	01/01/25 15:14	01/06/25 16:28	LJD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2426623	1	12/31/24 10:54	12/31/24 22:02	RDH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2426620	1	12/31/24 11:02	01/03/25 05:58	MBE	Mt. Juliet, TN

⁵Sr

⁶Qc

⁷Gl

⁸Al

TRIP BLANK L1812653-03 GW

Collected by Connor Armstrong
Collected date/time 12/20/24 07:50
Received date/time 12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425234	1	12/27/24 02:09	12/27/24 02:09	DYW	Mt. Juliet, TN

⁹Sc

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.



Brian Ford
Project Manager

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.6		1	12/26/2024 07:15	WG2424765

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.89	B J	1.37	4.03	25	12/31/2024 02:48	WG2426606
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		12/31/2024 02:48	WG2426606

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0588	0.0806	1	12/29/2024 21:44	WG2426184
Acrylonitrile	U		0.00582	0.0201	1	12/29/2024 21:44	WG2426184
Benzene	0.00109	J	0.000753	0.00161	1	12/29/2024 21:44	WG2426184
Bromobenzene	U		0.00145	0.0201	1	12/29/2024 21:44	WG2426184
Bromodichloromethane	U		0.00117	0.00403	1	12/29/2024 21:44	WG2426184
Bromoform	U	C3	0.00189	0.0403	1	12/29/2024 21:44	WG2426184
Bromomethane	U		0.00317	0.0201	1	12/29/2024 21:44	WG2426184
n-Butylbenzene	U		0.00846	0.0201	1	12/29/2024 21:44	WG2426184
sec-Butylbenzene	U		0.00464	0.0201	1	12/29/2024 21:44	WG2426184
tert-Butylbenzene	U		0.00314	0.00806	1	12/29/2024 21:44	WG2426184
Carbon tetrachloride	U		0.00145	0.00806	1	12/29/2024 21:44	WG2426184
Chlorobenzene	U		0.000338	0.00403	1	12/29/2024 21:44	WG2426184
Chlorodibromomethane	U	C3	0.000986	0.00403	1	12/29/2024 21:44	WG2426184
Chloroethane	U		0.00274	0.00806	1	12/29/2024 21:44	WG2426184
Chloroform	U		0.00166	0.00403	1	12/29/2024 21:44	WG2426184
Chloromethane	U	J4	0.00701	0.0201	1	12/29/2024 21:44	WG2426184
2-Chlorotoluene	U		0.00139	0.00403	1	12/29/2024 21:44	WG2426184
4-Chlorotoluene	U		0.000725	0.00806	1	12/29/2024 21:44	WG2426184
1,2-Dibromo-3-Chloropropane	U	C3	0.00628	0.0403	1	12/29/2024 21:44	WG2426184
1,2-Dibromoethane	U		0.00104	0.00403	1	12/29/2024 21:44	WG2426184
Dibromomethane	U		0.00121	0.00806	1	12/29/2024 21:44	WG2426184
1,2-Dichlorobenzene	U		0.000685	0.00806	1	12/29/2024 21:44	WG2426184
1,3-Dichlorobenzene	U		0.000967	0.00806	1	12/29/2024 21:44	WG2426184
1,4-Dichlorobenzene	U		0.00113	0.00806	1	12/29/2024 21:44	WG2426184
Dichlorodifluoromethane	U		0.00259	0.00806	1	12/29/2024 21:44	WG2426184
1,1-Dichloroethane	U		0.000791	0.00403	1	12/29/2024 21:44	WG2426184
1,2-Dichloroethane	U		0.00105	0.00403	1	12/29/2024 21:44	WG2426184
1,1-Dichloroethene	U	J4	0.000976	0.00403	1	12/29/2024 21:44	WG2426184
cis-1,2-Dichloroethene	U		0.00118	0.00403	1	12/29/2024 21:44	WG2426184
trans-1,2-Dichloroethene	U		0.00168	0.00806	1	12/29/2024 21:44	WG2426184
1,2-Dichloropropane	U		0.00229	0.00806	1	12/29/2024 21:44	WG2426184
1,1-Dichloropropene	U		0.00130	0.00403	1	12/29/2024 21:44	WG2426184
1,3-Dichloropropane	U		0.000807	0.00806	1	12/29/2024 21:44	WG2426184
cis-1,3-Dichloropropene	U		0.00122	0.00403	1	12/29/2024 21:44	WG2426184
trans-1,3-Dichloropropene	U		0.00184	0.00806	1	12/29/2024 21:44	WG2426184
2,2-Dichloropropane	U		0.00222	0.00403	1	12/29/2024 21:44	WG2426184
Di-isopropyl ether	U		0.000661	0.00161	1	12/29/2024 21:44	WG2426184
Ethylbenzene	U		0.00119	0.00403	1	12/29/2024 21:44	WG2426184
Hexachloro-1,3-butadiene	U		0.00967	0.0403	1	12/29/2024 21:44	WG2426184
Isopropylbenzene	U		0.000685	0.00403	1	12/29/2024 21:44	WG2426184
p-Isopropyltoluene	0.00556	J J	0.00411	0.00806	1	12/29/2024 21:44	WG2426184
2-Butanone (MEK)	0.118	J J	0.102	0.161	1	12/29/2024 21:44	WG2426184
Methylene Chloride	U		0.0107	0.0403	1	12/29/2024 21:44	WG2426184
4-Methyl-2-pentanone (MIBK)	U		0.00367	0.0403	1	12/29/2024 21:44	WG2426184

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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
Methyl tert-butyl ether	U		0.000564	0.00161	1	12/29/2024 21:44	WG2426184
Naphthalene	U	C3	0.00786	0.0201	1	12/29/2024 21:44	WG2426184
n-Propylbenzene	U		0.00153	0.00806	1	12/29/2024 21:44	WG2426184
Styrene	0.000806	J	0.000369	0.0201	1	12/29/2024 21:44	WG2426184
1,1,1,2-Tetrachloroethane	U		0.00153	0.00403	1	12/29/2024 21:44	WG2426184
1,1,2,2-Tetrachloroethane	U		0.00112	0.00403	1	12/29/2024 21:44	WG2426184
1,1,2-Trichlorotrifluoroethane	U		0.00121	0.00403	1	12/29/2024 21:44	WG2426184
Tetrachloroethene	U	C3	0.00144	0.00403	1	12/29/2024 21:44	WG2426184
Toluene	0.00263	C3 J	0.00209	0.00806	1	12/29/2024 21:44	WG2426184
1,2,3-Trichlorobenzene	U	C3	0.0118	0.0201	1	12/29/2024 21:44	WG2426184
1,2,4-Trichlorobenzene	U		0.00709	0.0201	1	12/29/2024 21:44	WG2426184
1,1,1-Trichloroethane	U		0.00149	0.00403	1	12/29/2024 21:44	WG2426184
1,1,2-Trichloroethane	U		0.000962	0.00403	1	12/29/2024 21:44	WG2426184
Trichloroethene	U		0.000941	0.00161	1	12/29/2024 21:44	WG2426184
Trichlorofluoromethane	U		0.00133	0.00403	1	12/29/2024 21:44	WG2426184
1,2,3-Trichloropropane	U		0.00261	0.0201	1	12/29/2024 21:44	WG2426184
1,2,4-Trimethylbenzene	U		0.00255	0.00806	1	12/29/2024 21:44	WG2426184
1,2,3-Trimethylbenzene	U		0.00255	0.00806	1	12/29/2024 21:44	WG2426184
1,3,5-Trimethylbenzene	U		0.00322	0.00806	1	12/29/2024 21:44	WG2426184
Vinyl chloride	U		0.00187	0.00403	1	12/29/2024 21:44	WG2426184
Xylenes, Total	0.00330	J	0.00142	0.0105	1	12/29/2024 21:44	WG2426184
(S) Toluene-d8	94.5			75.0-131		12/29/2024 21:44	WG2426184
(S) 4-Bromofluorobenzene	106			67.0-138		12/29/2024 21:44	WG2426184
(S) 1,2-Dichloroethane-d4	110			70.0-130		12/29/2024 21:44	WG2426184

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	01/02/2025 10:01	WG2427274

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.104		0.0220	0.0428	1	01/02/2025 13:42	WG2427192

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.740	2.14	1	01/02/2025 10:01	WG2427250
Arsenic	2.39		0.896	2.14	1	01/02/2025 10:01	WG2427250
Beryllium	0.274		0.0511	0.214	1	01/02/2025 10:01	WG2427250
Cadmium	1.49		0.0699	0.535	1	01/02/2025 10:01	WG2427250
Chromium	179		0.229	1.07	1	01/02/2025 10:01	WG2427250
Copper	108		0.382	2.14	1	01/02/2025 10:01	WG2427250
Lead	38.9		0.349	0.535	1	01/02/2025 10:01	WG2427250
Nickel	242		0.214	2.14	1	01/02/2025 10:01	WG2427250
Selenium	U		1.15	2.14	1	01/02/2025 10:01	WG2427250
Silver	0.271	J	0.136	1.07	1	01/02/2025 10:01	WG2427250
Thallium	U		0.554	2.14	1	01/02/2025 10:01	WG2427250
Zinc	263		1.04	5.35	1	01/02/2025 10:01	WG2427250

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	34.8		2.85	8.56	2	01/02/2025 15:11	WG2426695
Residual Range Organics (RRO)	204		7.13	21.4	2	01/02/2025 15:11	WG2426695
(S) o-Terphenyl	63.3			18.0-148		01/02/2025 15:11	WG2426695

Sample Narrative:

L1812653-02 WG2426695: Sample resembles laboratory standard for Hydraulic Oil.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
2,4-D	U		0.0275	0.0749	1	01/06/2025 16:28	WG2426593
Dalapon	U		0.0471	0.0749	1	01/06/2025 16:28	WG2426593
2,4-DB	U		0.0199	0.0749	1	01/06/2025 16:28	WG2426593
Dicamba	U		0.0242	0.0749	1	01/06/2025 16:28	WG2426593
Dichloroprop	U	J4	0.0196	0.0749	1	01/06/2025 16:28	WG2426593
Dinoseb	U		0.0273	0.0749	1	01/06/2025 16:28	WG2426593
MCPA	U		1.99	6.96	1	01/06/2025 16:28	WG2426593
MCPP	U		2.17	6.96	1	01/06/2025 16:28	WG2426593
2,4,5-T	U		0.0253	0.0749	1	01/06/2025 16:28	WG2426593
2,4,5-TP (Silvex)	U		0.0200	0.0749	1	01/06/2025 16:28	WG2426593
(S) 2,4-Dichlorophenyl Acetic Acid	89.2			22.0-132		01/06/2025 16:28	WG2426593

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00690	0.0214	1	12/31/2024 22:02	WG2426623
Alpha BHC	U		0.00682	0.0214	1	12/31/2024 22:02	WG2426623
Beta BHC	U		0.00674	0.0214	1	12/31/2024 22:02	WG2426623
Delta BHC	U		0.00680	0.0214	1	12/31/2024 22:02	WG2426623
Gamma BHC	U		0.00724	0.0214	1	12/31/2024 22:02	WG2426623
Chlordane	U		0.106	0.321	1	12/31/2024 22:02	WG2426623
4,4-DDD	U		0.00739	0.0214	1	12/31/2024 22:02	WG2426623
4,4-DDE	U		0.00720	0.0214	1	12/31/2024 22:02	WG2426623
4,4-DDT	U		0.00820	0.0214	1	12/31/2024 22:02	WG2426623
Dieldrin	U		0.00746	0.0214	1	12/31/2024 22:02	WG2426623
Endosulfan I	U		0.00647	0.0214	1	12/31/2024 22:02	WG2426623
Endosulfan II	U		0.00708	0.0214	1	12/31/2024 22:02	WG2426623
Endosulfan sulfate	U		0.00687	0.0214	1	12/31/2024 22:02	WG2426623
Endrin	U		0.00798	0.0214	1	12/31/2024 22:02	WG2426623
Endrin aldehyde	U		0.00632	0.0214	1	12/31/2024 22:02	WG2426623
Endrin ketone	U		0.00744	0.0214	1	12/31/2024 22:02	WG2426623
Hexachlorobenzene	U		0.00651	0.0214	1	12/31/2024 22:02	WG2426623
Heptachlor	U		0.00742	0.0214	1	12/31/2024 22:02	WG2426623
Heptachlor epoxide	U		0.00696	0.0214	1	12/31/2024 22:02	WG2426623
Methoxychlor	U		0.00863	0.0214	1	12/31/2024 22:02	WG2426623
Toxaphene	U		0.229	0.428	1	12/31/2024 22:02	WG2426623
(S) Decachlorobiphenyl	69.2			10.0-135		12/31/2024 22:02	WG2426623
(S) Tetrachloro-m-xylene	71.2			10.0-139		12/31/2024 22:02	WG2426623

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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		0.00246	0.00642	1	01/03/2025 05:58	WG2426620
Acenaphthene	U		0.00224	0.00642	1	01/03/2025 05:58	WG2426620
Acenaphthylene	U		0.00231	0.00642	1	01/03/2025 05:58	WG2426620
Benzo(a)anthracene	U		0.00185	0.00642	1	01/03/2025 05:58	WG2426620
Benzo(a)pyrene	U		0.00192	0.00642	1	01/03/2025 05:58	WG2426620
Benzo(b)fluoranthene	0.00248	LC	0.00164	0.00642	1	01/03/2025 05:58	WG2426620
Benzo(g,h,i)perylene	0.00368	LC	0.00189	0.00642	1	01/03/2025 05:58	WG2426620
Benzo(k)fluoranthene	U		0.00230	0.00642	1	01/03/2025 05:58	WG2426620
Chrysene	U		0.00248	0.00642	1	01/03/2025 05:58	WG2426620
Dibenz(a,h)anthracene	U		0.00184	0.00642	1	01/03/2025 05:58	WG2426620
Fluoranthene	0.00277	LC	0.00243	0.00642	1	01/03/2025 05:58	WG2426620
Fluorene	U		0.00219	0.00642	1	01/03/2025 05:58	WG2426620
Indeno(1,2,3-cd)pyrene	U		0.00194	0.00642	1	01/03/2025 05:58	WG2426620
Naphthalene	U		0.00437	0.0214	1	01/03/2025 05:58	WG2426620
Phenanthrene	0.00339	LC	0.00247	0.00642	1	01/03/2025 05:58	WG2426620
Pyrene	0.00282	LC	0.00214	0.00642	1	01/03/2025 05:58	WG2426620
1-Methylnaphthalene	U		0.00481	0.0214	1	01/03/2025 05:58	WG2426620
2-Methylnaphthalene	U		0.00457	0.0214	1	01/03/2025 05:58	WG2426620
2-Chloronaphthalene	U		0.00499	0.0214	1	01/03/2025 05:58	WG2426620
(S) p-Terphenyl-d14	81.0			23.0-120		01/03/2025 05:58	WG2426620
(S) Nitrobenzene-d5	82.8			14.0-149		01/03/2025 05:58	WG2426620
(S) 2-Fluorobiphenyl	85.2			34.0-125		01/03/2025 05:58	WG2426620

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	12/27/2024 02:09	WG2425234
Toluene	U		0.278	1.00	1	12/27/2024 02:09	WG2425234
Ethylbenzene	U		0.137	1.00	1	12/27/2024 02:09	WG2425234
Total Xylenes	U		0.174	3.00	1	12/27/2024 02:09	WG2425234
(S) Toluene-d8	109			80.0-120		12/27/2024 02:09	WG2425234
(S) 4-Bromofluorobenzene	100			77.0-126		12/27/2024 02:09	WG2425234
(S) 1,2-Dichloroethane-d4	104			70.0-130		12/27/2024 02:09	WG2425234

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4162013-1 12/26/24 07:15

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1812761-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1812761-04 12/26/24 07:15 • (DUP) R4162013-3 12/26/24 07:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	92.0	91.8	1	0.283		10

Laboratory Control Sample (LCS)

(LCS) R4162013-2 12/26/24 07:15

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163953-1 01/02/25 10:01

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1812209-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1812209-14 01/02/25 10:01 • (DUP) R4163953-3 01/02/25 10:01

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	53.5	57.2	1	6.66		10

Laboratory Control Sample (LCS)

(LCS) R4163953-2 01/02/25 10:01

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163828-1 01/02/25 12:50

	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) R4163828-2 01/02/25 12:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.466	93.1	80.0-120	

L1811286-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811286-08 01/02/25 12:55 • (MS) R4163828-4 01/02/25 13:00 • (MSD) R4163828-5 01/02/25 13:03

	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	0.663	0.0944	0.715	0.750	93.6	98.9	1	75.0-125			4.75	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163794-1 01/02/25 09:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.691	2.00
Arsenic	U		0.837	2.00
Beryllium	U		0.0477	0.200
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Copper	U		0.357	2.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Selenium	U		1.07	2.00
Silver	U		0.127	1.00
Thallium	U		0.518	2.00
Zinc	U		0.974	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163794-2 01/02/25 09:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	89.4	89.4	80.0-120	
Arsenic	100	97.3	97.3	80.0-120	
Beryllium	100	96.7	96.7	80.0-120	
Cadmium	100	95.9	95.9	80.0-120	
Chromium	100	99.5	99.5	80.0-120	
Copper	100	104	104	80.0-120	
Lead	100	95.5	95.5	80.0-120	
Nickel	100	97.3	97.3	80.0-120	
Selenium	100	96.9	96.9	80.0-120	
Silver	20.0	19.5	97.7	80.0-120	
Thallium	100	95.8	95.8	80.0-120	
Zinc	100	99.0	99.0	80.0-120	

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

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 %
Antimony	100	U	79.5	79.4	79.5	79.4	1	75.0-125			0.152	20
Arsenic	100	3.87	109	114	105	110	1	75.0-125			4.52	20
Beryllium	100	0.286	100	105	100	105	1	75.0-125			4.90	20

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Cadmium	100	0.224	100	105	99.9	105	1	75.0-125			4.70	20
Chromium	100	8.62	110	111	102	102	1	75.0-125			0.393	20
Copper	100	4.61	112	113	108	109	1	75.0-125			0.883	20
Lead	100	13.4	120	121	106	108	1	75.0-125			1.45	20
Nickel	100	9.83	123	122	113	112	1	75.0-125			0.774	20
Selenium	100	U	104	111	104	111	1	75.0-125			5.67	20
Silver	20.0	1.31	22.8	24.0	108	114	1	75.0-125			5.03	20
Thallium	100	U	102	104	102	104	1	75.0-125			2.23	20
Zinc	100	23.5	122	122	98.4	98.1	1	75.0-125			0.168	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163231-2 12/30/24 21:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	1.26	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4163231-1 12/30/24 20:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.00	5.51	110	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			108	77.0-120	

L1813295-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813295-02 12/31/24 05:28 • (MS) R4163231-3 12/31/24 06:07 • (MSD) R4163231-4 12/31/24 06:26

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 %
Gasoline Range Organics-NWTPH	132	18.7	188	172	128	116	25.5	50.0-150			8.60	27
(S) a,a,a-Trifluorotoluene(FID)					105	104		77.0-120				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4162769-3 12/27/24 01:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
(S) Toluene-d8	105			80.0-120
(S) 4-Bromofluorobenzene	96.6			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

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

(LCS) R4162769-1 12/26/24 23:39 • (LCSD) R4162769-2 12/26/24 23:59

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 %
Benzene	5.00	5.58	5.49	112	110	70.0-123			1.63	20
Toluene	5.00	4.90	4.93	98.0	98.6	79.0-120			0.610	20
Ethylbenzene	5.00	5.30	5.04	106	101	79.0-123			5.03	20
Total Xylenes	15.0	15.4	15.1	103	101	79.0-123			1.97	20
(S) Toluene-d8				95.0	97.3	80.0-120				
(S) 4-Bromofluorobenzene				91.1	90.9	77.0-126				
(S) 1,2-Dichloroethane-d4				105	107	70.0-130				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4163779-2 12/29/24 19:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163779-2 12/29/24 19:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	95.9			75.0-131
(S) 4-Bromofluorobenzene	107			67.0-138
(S) 1,2-Dichloroethane-d4	97.1			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163779-1 12/29/24 18:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.730	117	10.0-160	
Acrylonitrile	0.625	0.676	108	45.0-153	
Benzene	0.125	0.120	96.0	70.0-123	
Bromobenzene	0.125	0.103	82.4	73.0-121	
Bromodichloromethane	0.125	0.116	92.8	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R4163779-1 12/29/24 18:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromoform	0.125	0.0899	71.9	64.0-132	
Bromomethane	0.125	0.103	82.4	56.0-147	
n-Butylbenzene	0.125	0.119	95.2	68.0-135	
sec-Butylbenzene	0.125	0.114	91.2	74.0-130	
tert-Butylbenzene	0.125	0.115	92.0	75.0-127	
Carbon tetrachloride	0.125	0.120	96.0	66.0-128	
Chlorobenzene	0.125	0.108	86.4	76.0-128	
Chlorodibromomethane	0.125	0.0982	78.6	74.0-127	
Chloroethane	0.125	0.101	80.8	61.0-134	
Chloroform	0.125	0.119	95.2	72.0-123	
Chloromethane	0.125	0.181	145	51.0-138	J4
2-Chlorotoluene	0.125	0.113	90.4	75.0-124	
4-Chlorotoluene	0.125	0.111	88.8	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.0851	68.1	59.0-130	
1,2-Dibromoethane	0.125	0.100	80.0	74.0-128	
Dibromomethane	0.125	0.115	92.0	75.0-122	
1,2-Dichlorobenzene	0.125	0.112	89.6	76.0-124	
1,3-Dichlorobenzene	0.125	0.111	88.8	76.0-125	
1,4-Dichlorobenzene	0.125	0.108	86.4	77.0-121	
Dichlorodifluoromethane	0.125	0.117	93.6	43.0-156	
1,1-Dichloroethane	0.125	0.145	116	70.0-127	
1,2-Dichloroethane	0.125	0.123	98.4	65.0-131	
1,1-Dichloroethene	0.125	0.165	132	65.0-131	J4
cis-1,2-Dichloroethene	0.125	0.118	94.4	73.0-125	
trans-1,2-Dichloroethene	0.125	0.129	103	71.0-125	
1,2-Dichloropropane	0.125	0.125	100	74.0-125	
1,1-Dichloropropene	0.125	0.124	99.2	73.0-125	
1,3-Dichloropropane	0.125	0.105	84.0	80.0-125	
cis-1,3-Dichloropropene	0.125	0.115	92.0	76.0-127	
trans-1,3-Dichloropropene	0.125	0.108	86.4	73.0-127	
2,2-Dichloropropane	0.125	0.129	103	59.0-135	
Di-isopropyl ether	0.125	0.154	123	60.0-136	
Ethylbenzene	0.125	0.109	87.2	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.102	81.6	57.0-150	
Isopropylbenzene	0.125	0.113	90.4	72.0-127	
p-Isopropyltoluene	0.125	0.120	96.0	72.0-133	
2-Butanone (MEK)	0.625	0.666	107	30.0-160	
Methylene Chloride	0.125	0.130	104	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.565	90.4	56.0-143	
Methyl tert-butyl ether	0.125	0.131	105	66.0-132	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4163779-1 12/29/24 18:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Naphthalene	0.125	0.0979	78.3	59.0-130	
n-Propylbenzene	0.125	0.113	90.4	74.0-126	
Styrene	0.125	0.112	89.6	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.101	80.8	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.100	80.0	68.0-128	
1,1,2-Trichlorotrifluoroethane	0.125	0.142	114	61.0-139	
Tetrachloroethene	0.125	0.0974	77.9	70.0-136	
Toluene	0.125	0.0992	79.4	75.0-121	
1,2,3-Trichlorobenzene	0.125	0.0983	78.6	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.113	90.4	62.0-137	
1,1,1-Trichloroethane	0.125	0.129	103	69.0-126	
1,1,2-Trichloroethane	0.125	0.102	81.6	78.0-123	
Trichloroethene	0.125	0.115	92.0	76.0-126	
Trichlorofluoromethane	0.125	0.120	96.0	61.0-142	
1,2,3-Trichloropropane	0.125	0.106	84.8	67.0-129	
1,2,4-Trimethylbenzene	0.125	0.109	87.2	70.0-126	
1,2,3-Trimethylbenzene	0.125	0.112	89.6	74.0-124	
1,3,5-Trimethylbenzene	0.125	0.108	86.4	73.0-127	
Vinyl chloride	0.125	0.112	89.6	63.0-134	
Xylenes, Total	0.375	0.325	86.7	72.0-127	
(S) Toluene-d8			92.8	75.0-131	
(S) 4-Bromofluorobenzene			104	67.0-138	
(S) 1,2-Dichloroethane-d4			106	70.0-130	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163906-1 01/02/25 09:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	80.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4163906-2 01/02/25 09:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	44.4	88.8	50.0-150	
(S) o-Terphenyl			112	18.0-148	

L1813127-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813127-01 01/02/25 10:08 • (MS) R4163906-3 01/02/25 10:22 • (MSD) R4163906-4 01/02/25 10:34

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 %
Diesel Range Organics (DRO)	52.2	U	39.8	37.9	76.3	72.5	1	50.0-150			4.86	20
(S) o-Terphenyl					102	95.3		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4165087-1 01/06/25 15:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.0257	0.0700
Dalapon	U		0.0440	0.0700
2,4-DB	U		0.0186	0.0700
Dicamba	U		0.0226	0.0700
Dichloroprop	U		0.0183	0.0700
Dinoseb	U		0.0255	0.0700
MCPA	U		1.86	6.50
MCPP	U		2.03	6.50
2,4,5-T	U		0.0236	0.0700
2,4,5-TP (Silvex)	U		0.0187	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	87.4			22.0-132

Laboratory Control Sample (LCS)

(LCS) R4165087-2 01/06/25 15:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.0833	0.0958	115	40.0-120	P
Dalapon	0.0833	0.0335	40.2	15.0-120	J
2,4-DB	0.0833	0.0791	95.0	25.0-143	
Dicamba	0.0833	0.0766	92.0	43.0-120	
Dichloroprop	0.0833	0.122	146	32.0-129	J4 P
Dinoseb	0.0833	0.0453	54.4	10.0-120	J
MCPA	8.33	7.05	84.6	31.0-121	
MCPP	8.33	8.02	96.3	28.0-133	
2,4,5-T	0.0833	0.0818	98.2	41.0-120	P
2,4,5-TP (Silvex)	0.0833	0.0738	88.6	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			91.0	22.0-132	

L1812209-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-10 01/06/25 15:57 • (MS) R4165087-3 01/06/25 16:07 • (MSD) R4165087-4 01/06/25 16:18

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 %
2,4-D	0.141	U	0.141	0.157	100	111	1	10.0-160	P	P	10.7	24
Dalapon	0.141	U	U	U	32.5	30.9	1	10.0-121	J	J	5.30	27
2,4-DB	0.141	U	0.135	0.144	95.7	102	1	10.0-160	P	P	6.20	22

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

L1812209-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-10 01/06/25 15:57 • (MS) R4165087-3 01/06/25 16:07 • (MSD) R4165087-4 01/06/25 16:18

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 %
Dicamba	0.141	U	0.117	0.128	82.7	90.9	1	10.0-154	J	P	9.41	21
Dichloroprop	0.141	U	0.197	0.212	139	150	1	10.0-158	P	P	7.47	20
Dinoseb	0.141	U	0.0675	0.0791	47.8	55.9	1	10.0-120	J	J	15.7	40
MCPA	14.1	U	12.8	11.7	90.3	82.8	1	10.0-160	P	P	8.60	40
MCPP	14.1	U	12.5	13.1	88.5	92.4	1	10.0-160			4.38	40
2,4,5-T	0.141	U	0.123	0.132	86.9	93.2	1	10.0-157	P	P	6.93	20
2,4,5-TP (Silvex)	0.141	U	0.116	0.127	82.4	90.2	1	10.0-156	J	P	9.05	20
(S) 2,4-Dichlorophenyl Acetic Acid					81.4	89.2		22.0-132				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163677-1 12/31/24 20:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00645	0.0200
Alpha BHC	U		0.00637	0.0200
Beta BHC	U		0.00630	0.0200
Delta BHC	U		0.00635	0.0200
Gamma BHC	U		0.00676	0.0200
Chlordane	U		0.0990	0.300
4,4-DDD	U		0.00690	0.0200
4,4-DDE	U		0.00673	0.0200
4,4-DDT	U		0.00766	0.0200
Dieldrin	U		0.00697	0.0200
Endosulfan I	U		0.00604	0.0200
Endosulfan II	U		0.00661	0.0200
Endosulfan sulfate	U		0.00642	0.0200
Endrin	U		0.00746	0.0200
Endrin aldehyde	U		0.00590	0.0200
Endrin ketone	U		0.00695	0.0200
Hexachlorobenzene	U		0.00608	0.0200
Heptachlor	U		0.00693	0.0200
Heptachlor epoxide	U		0.00650	0.0200
Methoxychlor	U		0.00806	0.0200
Toxaphene	U		0.214	0.400
(S) Decachlorobiphenyl	86.0			10.0-135
(S) Tetrachloro-m-xylene	89.3			10.0-139

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0583	87.5	34.0-136	
Alpha BHC	0.0666	0.0597	89.6	34.0-139	
Beta BHC	0.0666	0.0571	85.7	34.0-133	
Delta BHC	0.0666	0.0458	68.8	34.0-135	
Gamma BHC	0.0666	0.0602	90.4	34.0-136	
4,4-DDD	0.0666	0.0614	92.2	33.0-141	
4,4-DDE	0.0666	0.0568	85.3	34.0-134	
4,4-DDT	0.0666	0.0574	86.2	30.0-143	
Dieldrin	0.0666	0.0585	87.8	35.0-137	
Endosulfan I	0.0666	0.0633	95.0	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0581	87.2	35.0-132	
Endosulfan sulfate	0.0666	0.0556	83.5	35.0-132	
Endrin	0.0666	0.0607	91.1	34.0-137	
Endrin aldehyde	0.0666	0.0482	72.4	23.0-121	
Endrin ketone	0.0666	0.0604	90.7	35.0-144	
Hexachlorobenzene	0.0666	0.0529	79.4	33.0-129	
Heptachlor	0.0666	0.0500	75.1	36.0-141	
Heptachlor epoxide	0.0666	0.0579	86.9	36.0-134	
Methoxychlor	0.0666	0.0556	83.5	28.0-150	
(S) Decachlorobiphenyl			81.4	10.0-135	
(S) Tetrachloro-m-xylene			88.3	10.0-139	

L1811713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811713-01 12/31/24 22:58 • (MS) R4163677-3 12/31/24 23:07 • (MSD) R4163677-4 12/31/24 23:16

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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.0708	U	0.0602	0.0513	85.0	72.1	1	20.0-135			15.8	37
Alpha BHC	0.0708	U	0.0678	0.0570	95.8	80.1	1	27.0-140			17.2	35
Beta BHC	0.0708	U	0.0606	0.0511	85.6	71.8	1	23.0-141			16.9	37
Delta BHC	0.0708	U	0.0490	0.0409	69.2	57.5	1	21.0-138			17.9	35
Gamma BHC	0.0708	U	0.0667	0.0561	94.2	78.7	1	27.0-137			17.3	36
4,4-DDD	0.0708	U	0.0607	0.0520	85.7	73.0	1	15.0-152			15.4	39
4,4-DDE	0.0708	U	0.0576	0.0480	81.3	67.4	1	10.0-152			18.1	40
4,4-DDT	0.0708	U	0.0582	0.0494	82.2	69.4	1	10.0-151			16.4	40
Dieldrin	0.0708	U	0.0607	0.0513	85.7	72.1	1	17.0-145			16.7	37
Endosulfan I	0.0708	U	0.0656	0.0539	92.7	75.7	1	20.0-137			19.6	36
Endosulfan II	0.0708	U	0.0607	0.0509	85.7	71.5	1	15.0-141			17.5	37
Endosulfan sulfate	0.0708	U	0.0593	0.0504	83.8	70.7	1	15.0-143			16.3	38
Endrin	0.0708	U	0.0649	0.0538	91.7	75.6	1	19.0-143			18.6	37
Endrin aldehyde	0.0708	U	0.0536	0.0441	75.7	62.0	1	10.0-139			19.3	40
Endrin ketone	0.0708	U	0.0617	0.0505	87.1	70.9	1	17.0-149			19.9	38
Hexachlorobenzene	0.0708	U	0.0593	0.0502	83.8	70.4	1	25.0-126			16.7	35
Heptachlor	0.0708	U	0.0584	0.0520	82.5	73.0	1	22.0-138			11.7	37
Heptachlor epoxide	0.0708	U	0.0600	0.0504	84.8	70.7	1	22.0-138			17.5	36
Methoxychlor	0.0708	U	0.0557	0.0486	78.8	68.2	1	10.0-159			13.8	40
(S) Decachlorobiphenyl					77.7	73.0		10.0-135				
(S) Tetrachloro-m-xylene					85.6	73.9		10.0-139				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164024-2 12/31/24 15:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	114			23.0-120
(S) Nitrobenzene-d5	112			14.0-149
(S) 2-Fluorobiphenyl	115			34.0-125

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0774	96.8	50.0-126	
Acenaphthene	0.0800	0.0744	93.0	50.0-120	
Acenaphthylene	0.0800	0.0780	97.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0758	94.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0733	91.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0810	101	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0802	100	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0771	96.4	49.0-125	
Chrysene	0.0800	0.0799	99.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0788	98.5	47.0-125	
Fluoranthene	0.0800	0.0813	102	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0813	102	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0748	93.5	46.0-125	
Naphthalene	0.0800	0.0750	93.8	50.0-120	
Phenanthrene	0.0800	0.0806	101	47.0-120	
Pyrene	0.0800	0.0780	97.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0788	98.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0766	95.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0851	106	50.0-120	
(S) p-Terphenyl-d14			103	23.0-120	
(S) Nitrobenzene-d5			100	14.0-149	
(S) 2-Fluorobiphenyl			106	34.0-125	

L1813004-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813004-06 01/03/25 04:47 • (MS) R4164389-1 01/03/25 05:04 • (MSD) R4164389-2 01/03/25 05:22

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	0.0952	U	0.0387	0.0531	40.6	55.2	1	10.0-145	U3		31.4	30
Acenaphthene	0.0952	U	0.0488	0.0615	51.3	64.0	1	14.0-127			23.0	27
Acenaphthylene	0.0952	U	0.0458	0.0577	48.1	60.0	1	21.0-124			23.1	25
Benzo(a)anthracene	0.0952	U	0.0375	0.0533	39.4	55.5	1	10.0-139	U3		34.9	30
Benzo(a)pyrene	0.0952	U	0.0409	0.0582	42.9	60.5	1	10.0-141	U3		35.0	31
Benzo(b)fluoranthene	0.0952	U	0.0472	0.0655	49.6	68.1	1	10.0-140			32.5	36
Benzo(g,h,i)perylene	0.0952	U	0.0530	0.0742	55.6	77.2	1	10.0-140	U3		33.4	33
Benzo(k)fluoranthene	0.0952	U	0.0425	0.0636	44.6	66.1	1	10.0-137	U3		39.8	31
Chrysene	0.0952	U	0.0453	0.0649	47.6	67.5	1	10.0-145	U3		35.7	30
Dibenz(a,h)anthracene	0.0952	U	0.0502	0.0708	52.7	73.6	1	10.0-132	U3		34.1	31
Fluoranthene	0.0952	U	0.0443	0.0619	46.5	64.3	1	10.0-153	U3		33.1	33
Fluorene	0.0952	U	0.0499	0.0649	52.4	67.5	1	11.0-130			26.1	29
Indeno(1,2,3-cd)pyrene	0.0952	U	0.0481	0.0676	50.5	70.3	1	10.0-137	U3		33.8	32
Naphthalene	0.0952	U	0.0616	0.0682	63.7	69.9	1	10.0-135			10.2	27
Phenanthrene	0.0952	U	0.0461	0.0629	48.5	65.4	1	10.0-144			30.7	31
Pyrene	0.0952	U	0.0459	0.0644	48.2	67.0	1	10.0-148			33.6	35
1-Methylnaphthalene	0.0952	U	0.0576	0.0684	59.8	70.3	1	10.0-142			17.1	28
2-Methylnaphthalene	0.0952	U	0.0561	0.0670	58.1	68.8	1	10.0-137			17.6	28
2-Chloronaphthalene	0.0952	U	0.0539	0.0666	56.6	69.2	1	29.0-120			21.1	24
(S) p-Terphenyl-d14					53.9	150		23.0-120	U1			
(S) Nitrobenzene-d5					62.9	145		14.0-149				
(S) 2-Fluorobiphenyl					64.9	155		34.0-125	U1			

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

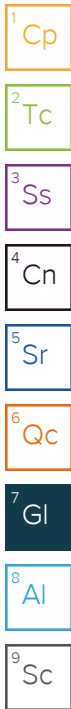
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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
B	The same analyte is found in the associated blank.
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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
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.
P	RPD between the primary and confirmatory analysis exceeded 40%.



ACCREDITATIONS & LOCATIONS

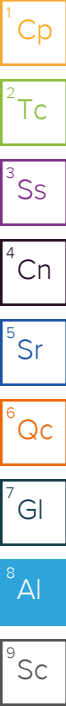
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: Oregon DEQ				Contract Laboratory Name: ESC				Lab Selection Criteria: ☐ Proximity (if TAT < 48 hrs) ☐ Prior work on same project ☒ Cost (for anticipated analyses) ☐ Other labs disqualified or unable to perform requested services ☐ Emergency work				Turn Around Time: ☒ 10 days (std.) ☐ 5 days ☐ 72 hours ☐ 48 hours ☐ 24 hours ☐ Other	
Send Lab Report To: Cathy Brown Address: 165 E. 7 th Avenue, Suite 100 Eugene, OR 97401 Tel. #: 503-753-6153 E-mail: cathy.brown@deq.oregon.gov				Lab Batch #: Invoice To: ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696									
Project Name: DEQ Forest Creek Sampler Name: Connor Anderson				Sample Preservative									
Sample ID#	Collection Date/Time	Matrix	Number of Containers	NWTTPH-CX	NWTTPH-DX	VOCs EPA 8260D	SVOCs EPA 8270E-SIM	Dioxins/Furans EPA 1613B	*Priority Pollutant Metals EPA 6010D/7471B	Herbicides EPA 8151A	Pesticides EPA 8081B	BTEX EPA 8260D	Comments
DU1-ISM-DUP	12/20/24; 07:50	S	13	X	X	X	X	X	X	X	X		ISM processing 01/02
TRIP BLANK												X	03
*Priority Pollutant Metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.													
Relinquished By: Connor Anderson				Agency/Agent: MFA				Received By: CRONERD				Agency/Agent:	
Signature: [Signature]				Time & Date: 12/23/24, 1100				Signature:				Time & Date: 12-24-24 0900	
Relinquished By:				Agency/Agent:				Received By:				Agency/Agent:	
Signature:				Time & Date:				Signature:				Time & Date:	

TI 4301 1538 3840
 A
 T

Sample Receipt Checklist
 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RA Screen <0.5 mR/hr: ☒ Y ☐ N

1.710-1.77LA9

TION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS
 ("S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY
 LICITING T'S AND C'S, EXPRESS OR IMPLIED.

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812670
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

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Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	³ Ss
Gl: Glossary of Terms	5	⁴ Cn
Al: Accreditations & Locations	6	⁵ Gl
Sc: Sample Chain of Custody	7	⁶ Al
		⁷ Sc

SAMPLE SUMMARY

DRUMAREA-COMP-S L1812670-01 Solid

Collected by
Connor Anderson

Collected date/time
12/17/24 15:15

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2424919	1	01/21/25 00:00	01/21/25 00:00	-	Subcontract

¹Cp

²Tc

³Ss

TIREPILE-COMP-S L1812670-02 Solid

Collected by
Connor Anderson

Collected date/time
12/17/24 16:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2424919	1	01/21/25 00:00	01/21/25 00:00	-	Subcontract

⁴Cn

⁵Gl

BURNAREA-COMP-S L1812670-03 Solid

Collected by
Connor Anderson

Collected date/time
12/18/24 13:55

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2424919	1	01/21/25 00:00	01/21/25 00:00	-	Subcontract

⁶Al

⁷Sc

BURNAREA-COMP-S-DUP L1812670-04 Solid

Collected by
Connor Anderson

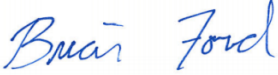
Collected date/time
12/18/24 13:55

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2424919	1	01/21/25 00:00	01/21/25 00:00	-	Subcontract

CASE NARRATIVE

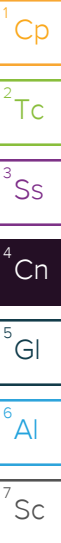
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples 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.



Brian Ford
Project Manager

Project Narrative

L1812670 -01, -02, -03, -04 contains subout data that is included after the chain of custody.



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

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

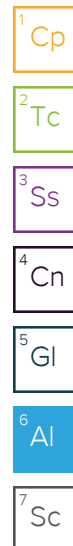
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: Oregon DEQ				Contract Laboratory Name: ESC				Lab Selection Criteria: ☐ Proximity (if TAT < 48 hrs) ☐ Prior work on same project ☒ Cost (for anticipated analyses) ☐ Other labs disqualified or unable to perform requested services ☐ Emergency work				Turn Around Time: ☒ 10 days (std.) ☐ 5 days ☐ 72 hours ☐ 48 hours ☐ 24 hours ☐ Other	
Send Lab Report To: Cathy Brown Address: 165 E. 7 th Avenue, Suite 100 Eugene, OR 97401 Tel. #: 503-753-6153 E-mail: cathy.brown@deq.oregon.gov				Lab Batch #: Invoice To: ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696									
Project Name: DEQ Forest Creek Sampler Name: Connor Anderson				Sample Preservative								D101	
Sample ID#	Collection Date/Time	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs EPA 8260D	SVOCs EPA 8270E-SIM	Dioxins/Furans EPA 1613B	*Priority Pollutant Metals EPA 6010D/7471B	Herbicides EPA 8151A	Pesticides EPA 8081B	BTEX EPA 8260D	Comments
DRUMAREA-COMP-S	12/17/24; 15:15	S	4	X	X	X	X	X	X	X	X		10'
TIREPILE-COMP-S	12/17/24; 16:00	S	4	X	X	X	X	X	X	X	X		2'
BURNAREA-COMP-S	12/18/24; 13:55	S	4	X	X	X	X	X	X	X	X		2'
BURNAREA-COMP-S-DUP	12/18/24; 13:55	S	4	X	X	X	X	X	X	X	X		2'
TRA 4.9 +0 = 4.9 16 samples 2 Trip Line Sample Receipt Checklist COC Seal Present/Intact: ☒ Y ☐ N COC Signed/Accurate: ☒ Y ☐ N Bottles arrive intact: ☒ Y ☐ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N RA Screen <0.5 mR/hr: ☒ Y ☐ N				TRK 4301 1538 3894									
TRIP BLANK												X	
*Priority Pollutant Metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.													
Relinquished By: <i>Connor Anderson</i>				Agency/Agent: <i>MFA</i>				Received By:				Agency/Agent:	
Signature: <i>[Signature]</i>				Time & Date: <i>12/23/24, 1100</i>				Signature:				Time & Date:	
Relinquished By:				Agency/Agent:				Received By:				Agency/Agent:	
Signature:				Time & Date:				Signature: <i>Stewart Francis</i>				Time & Date: <i>12/24/24 9:00</i>	

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.



ANALYTICAL REPORT

PREPARED FOR

Attn: Jimmy Huckaba
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

Generated 1/21/2025 5:45:26 PM

JOB DESCRIPTION

Oregon samples

JOB NUMBER

320-118076-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



Generated
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Authorized for release by
Nathaniel Horner, Project Manager I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

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Definitions/Glossary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

Glossary

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

Case Narrative

Client: Pace Analytical National
Project: Oregon samples

Job ID: 320-118076-1

Job ID: 320-118076-1

Eurofins Sacramento

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/7/2025 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.5°C.

Dioxin

Method 1613B: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: BURNAREA-COMP-S-DUP (320-118076-4). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Method 1613B: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): DRUMAREA-COMP-S (320-118076-1) and TIREPILE-COMP-S (320-118076-2). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

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

General Chemistry

Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The following samples in analytical batch 320-827913 were prepared and analyzed outside this time period: DRUMAREA-COMP-S (320-118076-1), TIREPILE-COMP-S (320-118076-2), BURNAREA-COMP-S (320-118076-3) and BURNAREA-COMP-S-DUP (320-118076-4).

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

Eurofins Sacramento

Detection Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: DRUMAREA-COMP-S

Lab Sample ID: 320-118076-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	199	G	5.75		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	20.7		5.00		pg/g	1	✱	1613B	Total/NA
OCDD	1180		10.0		pg/g	1	✱	1613B	Total/NA
OCDF	33.9		10.0		pg/g	1	✱	1613B	Total/NA
Total TCDF	10.8	q	1.00		pg/g	1	✱	1613B	Total/NA
Total PeCDF	11.6	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDD	34.1	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDF	15.1	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDD	365	G	5.75		pg/g	1	✱	1613B	Total/NA
Total HpCDF	55.2		5.00		pg/g	1	✱	1613B	Total/NA
2,3,7,8-TCDF - RA	1.05		1.00		pg/g	1	✱	1613B	Total/NA

Client Sample ID: TIREPILE-COMP-S

Lab Sample ID: 320-118076-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.45		1.00		pg/g	1	✱	1613B	Total/NA
1,2,3,7,8-PeCDD	5.31		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,7,8-PeCDF	19.2		5.00		pg/g	1	✱	1613B	Total/NA
2,3,4,7,8-PeCDF	33.5		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,7,8-HxCDD	7.19		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,6,7,8-HxCDD	13.3		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,7,8,9-HxCDD	10.8		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,7,8-HxCDF	59.9		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,6,7,8-HxCDF	44.1		5.00		pg/g	1	✱	1613B	Total/NA
2,3,4,6,7,8-HxCDF	53.5		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	251	G	7.83		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	429		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	20.7		5.00		pg/g	1	✱	1613B	Total/NA
OCDD	1320		10.0		pg/g	1	✱	1613B	Total/NA
OCDF	244		10.0		pg/g	1	✱	1613B	Total/NA
Total TCDD	34.0	q	1.00		pg/g	1	✱	1613B	Total/NA
Total TCDF	208	q	1.00		pg/g	1	✱	1613B	Total/NA
Total PeCDD	60.0	q	5.00		pg/g	1	✱	1613B	Total/NA
Total PeCDF	265	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDD	141	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDF	397		5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDD	473	G	7.83		pg/g	1	✱	1613B	Total/NA
Total HpCDF	595		5.00		pg/g	1	✱	1613B	Total/NA
2,3,7,8-TCDF - RA	14.3		1.00		pg/g	1	✱	1613B	Total/NA

Client Sample ID: BURNAREA-COMP-S

Lab Sample ID: 320-118076-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	14.1		5.00		pg/g	1	✱	1613B	Total/NA
OCDD	41.9		10.0		pg/g	1	✱	1613B	Total/NA
Total HxCDD	13.5	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDD	23.6		5.00		pg/g	1	✱	1613B	Total/NA

Client Sample ID: BURNAREA-COMP-S-DUP

Lab Sample ID: 320-118076-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	15.1	q	5.00		pg/g	1	✱	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: BURNAREA-COMP-S-DUP (Continued)

Lab Sample ID: 320-118076-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil	Fac	D	Method	Prep Type
OCDD	44.3		10.0		pg/g	1		✱	1613B	Total/NA
Total HxCDD	11.1	q	5.00		pg/g	1		✱	1613B	Total/NA
Total HpCDD	27.5	q	5.00		pg/g	1		✱	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: DRUMAREA-COMP-S

Lab Sample ID: 320-118076-1

Date Collected: 12/17/24 15:15

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 80.8

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,7,8-PeCDD	ND	q	5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,7,8-PeCDF	ND	q	5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,7,8,9-HxCDD	ND	q	5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,4,6,7,8-HpCDD	199	G	5.75		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,4,6,7,8-HpCDF	20.7		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
OCDD	1180		10.0		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
OCDF	33.9		10.0		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
Total TCDD	ND	q	1.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
Total TCDF	10.8	q	1.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
Total PeCDD	ND	q	5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
Total PeCDF	11.6	q	5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
Total HxCDD	34.1	q	5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
Total HxCDF	15.1	q	5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
Total HpCDD	365	G	5.75		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1
Total HpCDF	55.2		5.00		pg/g	☆	01/10/25 07:38	01/14/25 23:55	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	70		25 - 164	01/10/25 07:38	01/14/25 23:55	1
13C-2,3,7,8-TCDF	75		24 - 169	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,7,8-PeCDD	62		25 - 181	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,7,8-PeCDF	63		24 - 185	01/10/25 07:38	01/14/25 23:55	1
13C-2,3,4,7,8-PeCDF	59		21 - 178	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,4,7,8-HxCDD	50		32 - 141	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,6,7,8-HxCDD	66		28 - 130	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,4,7,8-HxCDF	52		26 - 152	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,6,7,8-HxCDF	58		26 - 123	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,7,8,9-HxCDF	67		29 - 147	01/10/25 07:38	01/14/25 23:55	1
13C-2,3,4,6,7,8-HxCDF	69		28 - 136	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,4,6,7,8-HpCDD	63		23 - 140	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,4,6,7,8-HpCDF	65		28 - 143	01/10/25 07:38	01/14/25 23:55	1
13C-1,2,3,4,7,8,9-HpCDF	66		26 - 138	01/10/25 07:38	01/14/25 23:55	1
13C-OCDD	70		17 - 157	01/10/25 07:38	01/14/25 23:55	1
13C-OCDF	80		17 - 157	01/10/25 07:38	01/14/25 23:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	92		35 - 197	01/10/25 07:38	01/14/25 23:55	1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	1.05		1.00		pg/g	☆	01/10/25 07:38	01/15/25 15:37	1

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: DRUMAREA-COMP-S

Lab Sample ID: 320-118076-1

Date Collected: 12/17/24 15:15

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 80.8

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	85		24 - 169	01/10/25 07:38	01/15/25 15:37	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	98		35 - 197	01/10/25 07:38	01/15/25 15:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	19.2	H	0.1		%			01/16/25 15:51	1
Percent Solids (ASTM D 2216)	80.8	H	0.1		%			01/16/25 15:51	1

Client Sample ID: TIREPILE-COMP-S

Lab Sample ID: 320-118076-2

Date Collected: 12/17/24 16:00

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 83.8

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1.45		1.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,7,8-PeCDD	5.31		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,7,8-PeCDF	19.2		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
2,3,4,7,8-PeCDF	33.5		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,4,7,8-HxCDD	7.19		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,6,7,8-HxCDD	13.3		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,7,8,9-HxCDD	10.8		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,4,7,8-HxCDF	59.9		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,6,7,8-HxCDF	44.1		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
2,3,4,6,7,8-HxCDF	53.5		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,4,6,7,8-HpCDD	251	G	7.83		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,4,6,7,8-HpCDF	429		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
1,2,3,4,7,8,9-HpCDF	20.7		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
OCDD	1320		10.0		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
OCDF	244		10.0		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
Total TCDD	34.0	q	1.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
Total TCDF	208	q	1.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
Total PeCDD	60.0	q	5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
Total PeCDF	265	q	5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
Total HxCDD	141	q	5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
Total HxCDF	397		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
Total HpCDD	473	G	7.83		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
Total HpCDF	595		5.00		pg/g	☼	01/10/25 07:38	01/15/25 00:42	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		25 - 164				01/10/25 07:38	01/15/25 00:42	1
13C-2,3,7,8-TCDF	74		24 - 169				01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,7,8-PeCDD	57		25 - 181				01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,7,8-PeCDF	59		24 - 185				01/10/25 07:38	01/15/25 00:42	1
13C-2,3,4,7,8-PeCDF	58		21 - 178				01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,4,7,8-HxCDD	56		32 - 141				01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,6,7,8-HxCDD	67		28 - 130				01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,4,7,8-HxCDF	61		26 - 152				01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,6,7,8-HxCDF	65		26 - 123				01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,7,8,9-HxCDF	64		29 - 147				01/10/25 07:38	01/15/25 00:42	1

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: TIREPILE-COMP-S

Lab Sample ID: 320-118076-2

Date Collected: 12/17/24 16:00

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 83.8

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,4,6,7,8-HxCDF	66		28 - 136	01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,4,6,7,8-HpCDD	64		23 - 140	01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,4,6,7,8-HpCDF	70		28 - 143	01/10/25 07:38	01/15/25 00:42	1
13C-1,2,3,4,7,8,9-HpCDF	60		26 - 138	01/10/25 07:38	01/15/25 00:42	1
13C-OCDD	72		17 - 157	01/10/25 07:38	01/15/25 00:42	1
13C-OCDF	79		17 - 157	01/10/25 07:38	01/15/25 00:42	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	93		35 - 197	01/10/25 07:38	01/15/25 00:42	1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	14.3		1.00		pg/g	☼	01/10/25 07:38	01/15/25 16:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	82		24 - 169				01/10/25 07:38	01/15/25 16:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	98		35 - 197				01/10/25 07:38	01/15/25 16:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	16.2	H	0.1		%			01/16/25 15:51	1
Percent Solids (ASTM D 2216)	83.8	H	0.1		%			01/16/25 15:51	1

Client Sample ID: BURNAREA-COMP-S

Lab Sample ID: 320-118076-3

Date Collected: 12/18/24 13:55

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 70.4

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
2,3,7,8-TCDF	ND		1.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,4,6,7,8-HpCDD	14.1		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,4,6,7,8-HpCDF	ND q		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
OCDD	41.9		10.0		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
OCDF	ND q		10.0		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
Total TCDD	ND		1.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
Total TCDF	ND q		1.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
Total PeCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1
Total PeCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 01:29	1

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: BURNAREA-COMP-S

Lab Sample ID: 320-118076-3

Date Collected: 12/18/24 13:55

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 70.4

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	13.5	q	5.00		pg/g	✱	01/10/25 07:38	01/15/25 01:29	1
Total HxCDF	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 01:29	1
Total HpCDD	23.6		5.00		pg/g	✱	01/10/25 07:38	01/15/25 01:29	1
Total HpCDF	ND	q	5.00		pg/g	✱	01/10/25 07:38	01/15/25 01:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		25 - 164				01/10/25 07:38	01/15/25 01:29	1
13C-2,3,7,8-TCDF	72		24 - 169				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,7,8-PeCDD	58		25 - 181				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,7,8-PeCDF	62		24 - 185				01/10/25 07:38	01/15/25 01:29	1
13C-2,3,4,7,8-PeCDF	58		21 - 178				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,4,7,8-HxCDD	56		32 - 141				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,6,7,8-HxCDD	69		28 - 130				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,6,7,8-HxCDF	64		26 - 123				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,7,8,9-HxCDF	62		29 - 147				01/10/25 07:38	01/15/25 01:29	1
13C-2,3,4,6,7,8-HxCDF	66		28 - 136				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,4,6,7,8-HpCDD	67		23 - 140				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,4,6,7,8-HpCDF	68		28 - 143				01/10/25 07:38	01/15/25 01:29	1
13C-1,2,3,4,7,8,9-HpCDF	59		26 - 138				01/10/25 07:38	01/15/25 01:29	1
13C-OCDD	64		17 - 157				01/10/25 07:38	01/15/25 01:29	1
13C-OCDF	78		17 - 157				01/10/25 07:38	01/15/25 01:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	98		35 - 197				01/10/25 07:38	01/15/25 01:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	29.6	H	0.1		%			01/16/25 15:51	1
Percent Solids (ASTM D 2216)	70.4	H	0.1		%			01/16/25 15:51	1

Client Sample ID: BURNAREA-COMP-S-DUP

Lab Sample ID: 320-118076-4

Date Collected: 12/18/24 13:55

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 70.9

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
2,3,7,8-TCDF	ND		1.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,6,7,8-HxCDD	ND	q	5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,7,8,9-HxCDD	ND	q	5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,4,6,7,8-HpCDD	15.1	q	5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g	✱	01/10/25 07:38	01/15/25 02:16	1

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: BURNAREA-COMP-S-DUP

Lab Sample ID: 320-118076-4

Date Collected: 12/18/24 13:55

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 70.9

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
OCDD	44.3		10.0		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
OCDF	ND		10.0		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
Total TCDD	ND		1.00		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
Total TCDF	ND		1.00		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
Total PeCDD	ND		5.00		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
Total PeCDF	ND		5.00		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
Total HxCDD	11.1	q	5.00		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
Total HxCDF	ND		5.00		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
Total HpCDD	27.5	q	5.00		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1
Total HpCDF	ND		5.00		pg/g	☼	01/10/25 07:38	01/15/25 02:16	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	21	*5-	25 - 164	01/10/25 07:38	01/15/25 02:16	1
13C-2,3,7,8-TCDF	23	*5-	24 - 169	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,7,8-PeCDD	24	*5-	25 - 181	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,7,8-PeCDF	22	*5-	24 - 185	01/10/25 07:38	01/15/25 02:16	1
13C-2,3,4,7,8-PeCDF	21		21 - 178	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,4,7,8-HxCDD	25	*5-	32 - 141	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,6,7,8-HxCDD	36		28 - 130	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,4,7,8-HxCDF	25	*5-	26 - 152	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,6,7,8-HxCDF	28		26 - 123	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,7,8,9-HxCDF	27	*5-	29 - 147	01/10/25 07:38	01/15/25 02:16	1
13C-2,3,4,6,7,8-HxCDF	30		28 - 136	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,4,6,7,8-HpCDD	30		23 - 140	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,4,6,7,8-HpCDF	35		28 - 143	01/10/25 07:38	01/15/25 02:16	1
13C-1,2,3,4,7,8,9-HpCDF	32		26 - 138	01/10/25 07:38	01/15/25 02:16	1
13C-OCDD	38		17 - 157	01/10/25 07:38	01/15/25 02:16	1
13C-OCDF	42		17 - 157	01/10/25 07:38	01/15/25 02:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	90		35 - 197	01/10/25 07:38	01/15/25 02:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	29.1	H	0.1		%			01/16/25 15:51	1
Percent Solids (ASTM D 2216)	70.9	H	0.1		%			01/16/25 15:51	1

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Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: DRUMAREA-COMP-S

Lab Sample ID: 320-118076-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		1.00		pg/g	1	0.0645	1613B
1,2,3,7,8-PeCDD	ND	q	5.00		pg/g	1	0.0635	1613B
1,2,3,7,8-PeCDF	ND	q	5.00		pg/g	0.03	0.00273	1613B
2,3,4,7,8-PeCDF	ND		5.00		pg/g	0.3	0.0270	1613B
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0257	1613B
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0192	1613B
1,2,3,7,8,9-HxCDD	ND	q	5.00		pg/g	0.1	0.0206	1613B
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g	0.1	0.0183	1613B
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g	0.1	0.0182	1613B
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.0132	1613B
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g	0.1	0.0149	1613B
1,2,3,4,6,7,8-HpCDD	199	G	5.75		pg/g	0.01	1.99	1613B
1,2,3,4,6,7,8-HpCDF	20.7		5.00		pg/g	0.01	0.207	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	0.01	0.00287	1613B
OCDD	1180		10.0		pg/g	0.0003	0.354	1613B
OCDF	33.9		10.0		pg/g	0.0003	0.0102	1613B
2,3,7,8-TCDF - RA	1.05		1.00		pg/g	0.1	0.105	1613B
Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		2.96	TEQ
Total TEQ					pg/g		2.96	TEQ

Client Sample ID: TIREPILE-COMP-S

Lab Sample ID: 320-118076-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL		Method
						TEF	TEQ	
2,3,7,8-TCDD	1.45		1.00		pg/g	1	1.45	1613B
1,2,3,7,8-PeCDD	5.31		5.00		pg/g	1	5.31	1613B
1,2,3,7,8-PeCDF	19.2		5.00		pg/g	0.03	0.576	1613B
2,3,4,7,8-PeCDF	33.5		5.00		pg/g	0.3	10.1	1613B
1,2,3,4,7,8-HxCDD	7.19		5.00		pg/g	0.1	0.719	1613B
1,2,3,6,7,8-HxCDD	13.3		5.00		pg/g	0.1	1.33	1613B
1,2,3,7,8,9-HxCDD	10.8		5.00		pg/g	0.1	1.08	1613B
1,2,3,4,7,8-HxCDF	59.9		5.00		pg/g	0.1	5.99	1613B
1,2,3,6,7,8-HxCDF	44.1		5.00		pg/g	0.1	4.41	1613B
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.120	1613B
2,3,4,6,7,8-HxCDF	53.5		5.00		pg/g	0.1	5.35	1613B
1,2,3,4,6,7,8-HpCDD	251	G	7.83		pg/g	0.01	2.51	1613B
1,2,3,4,6,7,8-HpCDF	429		5.00		pg/g	0.01	4.29	1613B
1,2,3,4,7,8,9-HpCDF	20.7		5.00		pg/g	0.01	0.207	1613B
OCDD	1320		10.0		pg/g	0.0003	0.396	1613B
OCDF	244		10.0		pg/g	0.0003	0.0732	1613B
2,3,7,8-TCDF - RA	14.3		1.00		pg/g	0.1	1.43	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Eurofins Sacramento

Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: TIREPILE-COMP-S (Continued)

Lab Sample ID: 320-118076-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		45.3	TEQ
Total TEQ					pg/g		45.3	TEQ

Client Sample ID: BURNAREA-COMP-S

Lab Sample ID: 320-118076-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		1.00		pg/g	1	0.0565	1613B
2,3,7,8-TCDF	ND		1.00		pg/g	0.1	0.00384	1613B
1,2,3,7,8-PeCDD	ND		5.00		pg/g	1	0.0471	1613B
1,2,3,7,8-PeCDF	ND		5.00		pg/g	0.03	0.00143	1613B
2,3,4,7,8-PeCDF	ND		5.00		pg/g	0.3	0.0134	1613B
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0158	1613B
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0139	1613B
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g	0.1	0.0139	1613B
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g	0.1	0.00710	1613B
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g	0.1	0.00665	1613B
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.00580	1613B
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g	0.1	0.00635	1613B
1,2,3,4,6,7,8-HpCDD	14.1		5.00		pg/g	0.01	0.141	1613B
1,2,3,4,6,7,8-HpCDF	ND q		5.00		pg/g	0.01	0.000665	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	0.01	0.000790	1613B
OCDD	41.9		10.0		pg/g	0.0003	0.0126	1613B
OCDF	ND q		10.0		pg/g	0.0003	0.0000171	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		0.347	TEQ
Total TEQ					pg/g		0.347	TEQ

Client Sample ID: BURNAREA-COMP-S-DUP

Lab Sample ID: 320-118076-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		1.00		pg/g	1	0.124	1613B
2,3,7,8-TCDF	ND		1.00		pg/g	0.1	0.0106	1613B
1,2,3,7,8-PeCDD	ND		5.00		pg/g	1	0.135	1613B
1,2,3,7,8-PeCDF	ND		5.00		pg/g	0.03	0.00314	1613B
2,3,4,7,8-PeCDF	ND		5.00		pg/g	0.3	0.0320	1613B
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0196	1613B
1,2,3,6,7,8-HxCDD	ND q		5.00		pg/g	0.1	0.0142	1613B
1,2,3,7,8,9-HxCDD	ND q		5.00		pg/g	0.1	0.0154	1613B
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g	0.1	0.0104	1613B
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g	0.1	0.00995	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Eurofins Sacramento

Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: BURNAREA-COMP-S-DUP (Continued)

Lab Sample ID: 320-118076-4

						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.00765	1613B
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g	0.1	0.00740	1613B
1,2,3,4,6,7,8-HpCDD	15.1	q	5.00		pg/g	0.01	0.151	1613B
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g	0.01	0.00116	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	0.01	0.00139	1613B
OCDD	44.3		10.0		pg/g	0.0003	0.0133	1613B
OCDF	ND		10.0		pg/g	0.0003	0.0000258	1613B
						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		0.556	TEQ
Total TEQ					pg/g		0.556	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Eurofins Sacramento

Surrogate Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-118076-1	DRUMAREA-COMP-S	92
320-118076-1 - RA	DRUMAREA-COMP-S	98
320-118076-2	TIREPILE-COMP-S	93
320-118076-2 - RA	TIREPILE-COMP-S	98
320-118076-3	BURNAREA-COMP-S	98
320-118076-4	BURNAREA-COMP-S-DUP	90
MB 320-826876/1-A	Method Blank	95

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-826876/2-A	Lab Control Sample	95
LCSD 320-826876/3-A	Lab Control Sample Dup	96

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-118076-1	DRUMAREA-COMP-S	70	75	62	63	59	50	66	52
320-118076-1 - RA	DRUMAREA-COMP-S		85						
320-118076-2	TIREPILE-COMP-S	65	74	57	59	58	56	67	61
320-118076-2 - RA	TIREPILE-COMP-S		82						
320-118076-3	BURNAREA-COMP-S	65	72	58	62	58	56	69	57
320-118076-4	BURNAREA-COMP-S-DUP	21 *5-	23 *5-	24 *5-	22 *5-	21	25 *5-	36	25 *5-
MB 320-826876/1-A	Method Blank	60	68	56	61	58	53	65	57

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)	OCDF (17-157)
320-118076-1	DRUMAREA-COMP-S	58	67	69	63	65	66	70	80
320-118076-1 - RA	DRUMAREA-COMP-S								
320-118076-2	TIREPILE-COMP-S	65	64	66	64	70	60	72	79
320-118076-2 - RA	TIREPILE-COMP-S								
320-118076-3	BURNAREA-COMP-S	64	62	66	67	68	59	64	78
320-118076-4	BURNAREA-COMP-S-DUP	28	27 *5-	30	30	35	32	38	42
MB 320-826876/1-A	Method Blank	61	59	59	56	64	53	61	64

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD
 OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-826876/2-A	Lab Control Sample	69	76	65	66	56	50	66	50
LCSD 320-826876/3-A	Lab Control Sample Dup	71	78	65	67	63	60	77	63

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)	OCDF (13-199)
LCS 320-826876/2-A	Lab Control Sample	55	71	69	68	62	70	78	79
LCSD 320-826876/3-A	Lab Control Sample Dup	67	72	72	68	76	71	75	81

Eurofins Sacramento

Isotope Dilution Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-826876/1-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 826876

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,7,8-TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDD	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDF	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,7,8-TCDF	68		24 - 169	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDD	56		25 - 181	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDF	61		24 - 185	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,7,8-PeCDF	58		21 - 178	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8,9-HxCDF	59		29 - 147	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138	01/10/25 07:38	01/14/25 16:53	1
13C-OCDD	61		17 - 157	01/10/25 07:38	01/14/25 16:53	1
13C-OCDF	64		17 - 157	01/10/25 07:38	01/14/25 16:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	95		35 - 197	01/10/25 07:38	01/14/25 16:53	1

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-826876/2-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	20.0	20.88		pg/g		104	67 - 158
2,3,7,8-TCDF	20.0	20.35		pg/g		102	75 - 158
1,2,3,7,8-PeCDD	100	105.1		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	107.9		pg/g		108	80 - 134
2,3,4,7,8-PeCDF	100	108.6		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	107.7		pg/g		108	70 - 164
1,2,3,6,7,8-HxCDD	100	106.5		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	135.5		pg/g		135	64 - 162
1,2,3,4,7,8-HxCDF	100	115.7		pg/g		116	72 - 134
1,2,3,6,7,8-HxCDF	100	112.9		pg/g		113	84 - 130
1,2,3,7,8,9-HxCDF	100	112.6		pg/g		113	78 - 130
2,3,4,6,7,8-HxCDF	100	111.7		pg/g		112	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111.2		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	105.9		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	116.4		pg/g		116	78 - 138
OCDD	200	206.8		pg/g		103	78 - 144
OCDF	200	218.2		pg/g		109	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	69		20 - 175
13C-2,3,7,8-TCDF	76		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	66		21 - 192
13C-2,3,4,7,8-PeCDF	56		13 - 328
13C-1,2,3,4,7,8-HxCDD	50		21 - 193
13C-1,2,3,6,7,8-HxCDD	66		25 - 163
13C-1,2,3,4,7,8-HxCDF	50		19 - 202
13C-1,2,3,6,7,8-HxCDF	55		21 - 159
13C-1,2,3,7,8,9-HxCDF	71		17 - 205
13C-2,3,4,6,7,8-HxCDF	69		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	62		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	70		20 - 186
13C-OCDD	78		13 - 199
13C-OCDF	79		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl-2,3,7,8-TCDD	95		31 - 191

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	21.85		pg/g		109	67 - 158	5	50
2,3,7,8-TCDF	20.0	21.35		pg/g		107	75 - 158	5	50
1,2,3,7,8-PeCDD	100	109.2		pg/g		109	70 - 142	4	50
1,2,3,7,8-PeCDF	100	114.1		pg/g		114	80 - 134	6	50

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,4,7,8-PeCDF	100	113.0		pg/g		113	68 - 160	4	50
1,2,3,4,7,8-HxCDD	100	111.7		pg/g		112	70 - 164	4	50
1,2,3,6,7,8-HxCDD	100	107.7		pg/g		108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	100	116.6		pg/g		117	64 - 162	15	50
1,2,3,4,7,8-HxCDF	100	119.5		pg/g		120	72 - 134	3	50
1,2,3,6,7,8-HxCDF	100	118.5		pg/g		118	84 - 130	5	50
1,2,3,7,8,9-HxCDF	100	112.0		pg/g		112	78 - 130	0	50
2,3,4,6,7,8-HxCDF	100	115.7		pg/g		116	70 - 156	4	50
1,2,3,4,6,7,8-HpCDD	100	116.1		pg/g		116	70 - 140	4	50
1,2,3,4,6,7,8-HpCDF	100	105.1		pg/g		105	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF	100	113.8		pg/g		114	78 - 138	2	50
OCDD	200	218.1		pg/g		109	78 - 144	5	50
OCDF	200	217.3		pg/g		109	63 - 170	0	50

LCSD LCSD			
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	71		20 - 175
13C-2,3,7,8-TCDF	78		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	67		21 - 192
13C-2,3,4,7,8-PeCDF	63		13 - 328
13C-1,2,3,4,7,8-HxCDD	60		21 - 193
13C-1,2,3,6,7,8-HxCDD	77		25 - 163
13C-1,2,3,4,7,8-HxCDF	63		19 - 202
13C-1,2,3,6,7,8-HxCDF	67		21 - 159
13C-1,2,3,7,8,9-HxCDF	72		17 - 205
13C-2,3,4,6,7,8-HxCDF	72		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	76		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	71		20 - 186
13C-OCDD	75		13 - 199
13C-OCDF	81		13 - 199

LCSD LCSD			
Surrogate	%Recovery	Qualifier	Limits
37Cl4-2,3,7,8-TCDD	96		31 - 191

Eurofins Sacramento

QC Association Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Specialty Organics

Prep Batch: 826876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118076-1	DRUMAREA-COMP-S	Total/NA	Solid	HRMS-Sox	
320-118076-1 - RA	DRUMAREA-COMP-S	Total/NA	Solid	HRMS-Sox	
320-118076-2	TIREPILE-COMP-S	Total/NA	Solid	HRMS-Sox	
320-118076-2 - RA	TIREPILE-COMP-S	Total/NA	Solid	HRMS-Sox	
320-118076-3	BURNAREA-COMP-S	Total/NA	Solid	HRMS-Sox	
320-118076-4	BURNAREA-COMP-S-DUP	Total/NA	Solid	HRMS-Sox	
MB 320-826876/1-A	Method Blank	Total/NA	Solid	HRMS-Sox	
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Sox	
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	HRMS-Sox	

Analysis Batch: 827323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118076-1	DRUMAREA-COMP-S	Total/NA	Solid	1613B	826876
320-118076-2	TIREPILE-COMP-S	Total/NA	Solid	1613B	826876
320-118076-3	BURNAREA-COMP-S	Total/NA	Solid	1613B	826876
320-118076-4	BURNAREA-COMP-S-DUP	Total/NA	Solid	1613B	826876
MB 320-826876/1-A	Method Blank	Total/NA	Solid	1613B	826876
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	1613B	826876
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	1613B	826876

Analysis Batch: 827705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118076-1 - RA	DRUMAREA-COMP-S	Total/NA	Solid	1613B	826876
320-118076-2 - RA	TIREPILE-COMP-S	Total/NA	Solid	1613B	826876

General Chemistry

Analysis Batch: 827913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118076-1	DRUMAREA-COMP-S	Total/NA	Solid	D 2216	
320-118076-2	TIREPILE-COMP-S	Total/NA	Solid	D 2216	
320-118076-3	BURNAREA-COMP-S	Total/NA	Solid	D 2216	
320-118076-4	BURNAREA-COMP-S-DUP	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: DRUMAREA-COMP-S

Lab Sample ID: 320-118076-1

Date Collected: 12/17/24 15:15

Matrix: Solid

Date Received: 01/07/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: DRUMAREA-COMP-S

Lab Sample ID: 320-118076-1

Date Collected: 12/17/24 15:15

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 80.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.10 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827323	01/14/25 23:55	CB	EET SAC
Total/NA	Prep	HRMS-Sox	RA		10.10 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B	RA	1	1 uL	1 uL	827705	01/15/25 15:37	DB	EET SAC

Client Sample ID: TIREPILE-COMP-S

Lab Sample ID: 320-118076-2

Date Collected: 12/17/24 16:00

Matrix: Solid

Date Received: 01/07/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: TIREPILE-COMP-S

Lab Sample ID: 320-118076-2

Date Collected: 12/17/24 16:00

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 83.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.43 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827323	01/15/25 00:42	CB	EET SAC
Total/NA	Prep	HRMS-Sox	RA		10.43 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B	RA	1	1 uL	1 uL	827705	01/15/25 16:21	DB	EET SAC

Client Sample ID: BURNAREA-COMP-S

Lab Sample ID: 320-118076-3

Date Collected: 12/18/24 13:55

Matrix: Solid

Date Received: 01/07/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: BURNAREA-COMP-S

Lab Sample ID: 320-118076-3

Date Collected: 12/18/24 13:55

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 70.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.26 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827323	01/15/25 01:29	CB	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Client Sample ID: BURNAREA-COMP-S-DUP
Date Collected: 12/18/24 13:55
Date Received: 01/07/25 09:10

Lab Sample ID: 320-118076-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: BURNAREA-COMP-S-DUP
Date Collected: 12/18/24 13:55
Date Received: 01/07/25 09:10

Lab Sample ID: 320-118076-4
Matrix: Solid
Percent Solids: 70.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.38 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827323	01/15/25 02:16	CB	EET SAC

Laboratory References:
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200060	03-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
TEQ		Solid	Total Dioxin/Furan TEQ
TEQ		Solid	Total TEQ

Method Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	EET SAC
TEQ	Total TEQ Calculation	Lab SOP	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
HRMS-Sox	Soxhlet Extraction	EPA	EET SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

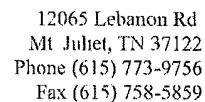
Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118076-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118076-1	DRUMAREA-COMP-S	Solid	12/17/24 15:15	01/07/25 09:10
320-118076-2	TIREPILE-COMP-S	Solid	12/17/24 16:00	01/07/25 09:10
320-118076-3	BURNAREA-COMP-S	Solid	12/18/24 13:55	01/07/25 09:10
320-118076-4	BURNAREA-COMP-S-DUP	Solid	12/18/24 13:55	01/07/25 09:10

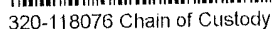
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Send Reports to: James C Huckaba



* Container used for multiple Samples and/or Analyses

Received by: _____ Date: _____





Environment Testing

Loc 320

118076

Sacramento Sample
Receiving Notes (SSRN)Tracking # 4243 55773902

Job _____

SO (PO) / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COCTherm ID 621 Corr Factor: (+/-) 0.0 °CIce ☒ Wet ☒ Gel _____ Other _____Cooler Custody Seal SealCooler ID —Temp Observed 05 °C Corrected: 05 °CFrom Temp Blank ☒ Sandwich ☐ Sidewall ☐**Opening/Processing The Shipment** Yes No NACooler compromised/tampered with? ☐ ☒ ☐Cooler Temperature is acceptable? ☒ ☐ ☐Frozen samples show signs of thaw? ☐ ☐ ☒Initials SO Date 11/7/24**Unpacking/Labeling The Samples** Yes No NAContainers are not broken or leaking? ☒ ☐ ☐Samples compromised/tampered with? ☐ ☒ ☐COC is complete w/o discrepancies ☒ ☐ ☐Sample custody seal? ☐ ☐ ☒Sample containers have legible labels? ☒ ☐ ☐Sample date/times are provided? ☒ ☐ ☐Appropriate containers are used? ☒ ☐ ☐Sample bottles are completely filled? ☒ ☐ ☐Sample preservatives verified? ☐ ☐ ☒Is the Field Sampler's name on COC? ☐ ☐ ☒Samples w/o discrepancies? ☒ ☐ ☐Zero headspace?* ☐ ☐ ☒Alkalinity has no headspace? ☐ ☐ ☒Perchlorate has headspace? ☐ ☐ ☒

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

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

Initials DM Date 01/07/25

Notes: _____

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____

Login CompletionReceipt Temperature on COC? ☒ ☐ ☐NCM Filed? ☐ ☐ ☒Samples received within hold time? ☒ ☐ ☐Log Release checked in TALS? ☒ ☐ ☐Initials DM Date 01/07/25

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812675
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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

SAMPLE SUMMARY

DU1-ISM L1812675-01 Solid

Collected by
Connor Anderson

Collected date/time
12/20/24 07:50

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2425038	1	12/27/24 08:26	12/27/24 08:36	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426906	25	12/26/24 08:01	12/31/24 14:51	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2426527	1	12/26/24 08:01	12/30/24 20:10	JTO	Mt. Juliet, TN

DU1-ISM L1812675-02 Solid

Collected by
Connor Anderson

Collected date/time
12/20/24 07:50

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2427275	1	01/02/25 09:34	01/02/25 09:47	MT	Mt. Juliet, TN
Mercury by Method 7471B	WG2427192	1	01/01/25 10:11	01/02/25 13:50	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2427250	1	01/01/25 14:30	01/02/25 10:03	JTM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2426695	4	12/31/24 10:29	01/02/25 18:55	SGB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2426593	1	01/01/25 15:14	01/06/25 16:38	LJD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2426623	1	12/31/24 10:54	12/31/24 22:12	RDH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2426620	1	12/31/24 11:02	01/03/25 06:16	MBE	Mt. Juliet, TN

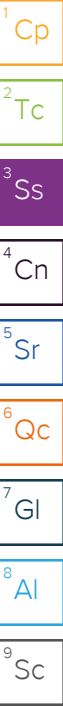
TRIP BLANK L1812675-03 GW

Collected by
Connor Anderson

Collected date/time
12/20/24 07:50

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425925	1	12/29/24 08:33	12/29/24 08:33	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2428154	1	01/03/25 15:28	01/03/25 15:28	JHH	Mt. Juliet, TN

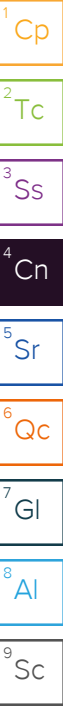


CASE NARRATIVE

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.



Brian Ford
Project Manager



Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	80.6		1	12/27/2024 08:36	WG2425038

Volatile Organic Compounds (GC) by Method NWTPHGX

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	8.77		1.26	3.70	25	12/31/2024 14:51	WG2426906
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120		12/31/2024 14:51	WG2426906

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.169		0.0541	0.0740	1	12/30/2024 20:10	WG2426527
Acrylonitrile	U		0.00535	0.0185	1	12/30/2024 20:10	WG2426527
Benzene	0.000703	J	0.000692	0.00148	1	12/30/2024 20:10	WG2426527
Bromobenzene	U		0.00133	0.0185	1	12/30/2024 20:10	WG2426527
Bromodichloromethane	U		0.00107	0.00370	1	12/30/2024 20:10	WG2426527
Bromoform	U		0.00173	0.0370	1	12/30/2024 20:10	WG2426527
Bromomethane	U	C3	0.00292	0.0185	1	12/30/2024 20:10	WG2426527
n-Butylbenzene	U		0.00777	0.0185	1	12/30/2024 20:10	WG2426527
sec-Butylbenzene	U		0.00426	0.0185	1	12/30/2024 20:10	WG2426527
tert-Butylbenzene	U		0.00289	0.00740	1	12/30/2024 20:10	WG2426527
Carbon tetrachloride	U		0.00133	0.00740	1	12/30/2024 20:10	WG2426527
Chlorobenzene	U		0.000311	0.00370	1	12/30/2024 20:10	WG2426527
Chlorodibromomethane	U		0.000906	0.00370	1	12/30/2024 20:10	WG2426527
Chloroethane	U		0.00252	0.00740	1	12/30/2024 20:10	WG2426527
Chloroform	U		0.00153	0.00370	1	12/30/2024 20:10	WG2426527
Chloromethane	U		0.00644	0.0185	1	12/30/2024 20:10	WG2426527
2-Chlorotoluene	U		0.00128	0.00370	1	12/30/2024 20:10	WG2426527
4-Chlorotoluene	U		0.000666	0.00740	1	12/30/2024 20:10	WG2426527
1,2-Dibromo-3-Chloropropane	U		0.00578	0.0370	1	12/30/2024 20:10	WG2426527
1,2-Dibromoethane	U		0.000960	0.00370	1	12/30/2024 20:10	WG2426527
Dibromomethane	U		0.00111	0.00740	1	12/30/2024 20:10	WG2426527
1,2-Dichlorobenzene	U		0.000629	0.00740	1	12/30/2024 20:10	WG2426527
1,3-Dichlorobenzene	U		0.000888	0.00740	1	12/30/2024 20:10	WG2426527
1,4-Dichlorobenzene	U		0.00104	0.00740	1	12/30/2024 20:10	WG2426527
Dichlorodifluoromethane	U		0.00238	0.00740	1	12/30/2024 20:10	WG2426527
1,1-Dichloroethane	U		0.000727	0.00370	1	12/30/2024 20:10	WG2426527
1,2-Dichloroethane	U		0.000961	0.00370	1	12/30/2024 20:10	WG2426527
1,1-Dichloroethene	U		0.000897	0.00370	1	12/30/2024 20:10	WG2426527
cis-1,2-Dichloroethene	U		0.00109	0.00370	1	12/30/2024 20:10	WG2426527
trans-1,2-Dichloroethene	U		0.00154	0.00740	1	12/30/2024 20:10	WG2426527
1,2-Dichloropropane	U		0.00210	0.00740	1	12/30/2024 20:10	WG2426527
1,1-Dichloropropene	U		0.00120	0.00370	1	12/30/2024 20:10	WG2426527
1,3-Dichloropropane	U		0.000742	0.00740	1	12/30/2024 20:10	WG2426527
cis-1,3-Dichloropropene	U		0.00112	0.00370	1	12/30/2024 20:10	WG2426527
trans-1,3-Dichloropropene	U		0.00169	0.00740	1	12/30/2024 20:10	WG2426527
2,2-Dichloropropane	U		0.00204	0.00370	1	12/30/2024 20:10	WG2426527
Di-isopropyl ether	U		0.000607	0.00148	1	12/30/2024 20:10	WG2426527
Ethylbenzene	U		0.00109	0.00370	1	12/30/2024 20:10	WG2426527
Hexachloro-1,3-butadiene	U		0.00888	0.0370	1	12/30/2024 20:10	WG2426527
Isopropylbenzene	U		0.000629	0.00370	1	12/30/2024 20:10	WG2426527
p-Isopropyltoluene	0.0724		0.00378	0.00740	1	12/30/2024 20:10	WG2426527
2-Butanone (MEK)	U		0.0940	0.148	1	12/30/2024 20:10	WG2426527
Methylene Chloride	U		0.00983	0.0370	1	12/30/2024 20:10	WG2426527
4-Methyl-2-pentanone (MIBK)	0.00903	J	0.00338	0.0370	1	12/30/2024 20:10	WG2426527

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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
Methyl tert-butyl ether	U		0.000518	0.00148	1	12/30/2024 20:10	WG2426527
Naphthalene	U		0.00723	0.0185	1	12/30/2024 20:10	WG2426527
n-Propylbenzene	U		0.00141	0.00740	1	12/30/2024 20:10	WG2426527
Styrene	0.000370	J	0.000339	0.0185	1	12/30/2024 20:10	WG2426527
1,1,1,2-Tetrachloroethane	U		0.00140	0.00370	1	12/30/2024 20:10	WG2426527
1,1,2,2-Tetrachloroethane	U		0.00103	0.00370	1	12/30/2024 20:10	WG2426527
1,1,2-Trichlorotrifluoroethane	U		0.00112	0.00370	1	12/30/2024 20:10	WG2426527
Tetrachloroethene	U		0.00133	0.00370	1	12/30/2024 20:10	WG2426527
Toluene	0.00344	J	0.00193	0.00740	1	12/30/2024 20:10	WG2426527
1,2,3-Trichlorobenzene	U		0.0109	0.0185	1	12/30/2024 20:10	WG2426527
1,2,4-Trichlorobenzene	U		0.00652	0.0185	1	12/30/2024 20:10	WG2426527
1,1,1-Trichloroethane	U		0.00137	0.00370	1	12/30/2024 20:10	WG2426527
1,1,2-Trichloroethane	U		0.000884	0.00370	1	12/30/2024 20:10	WG2426527
Trichloroethene	U		0.000865	0.00148	1	12/30/2024 20:10	WG2426527
Trichlorofluoromethane	0.00437		0.00122	0.00370	1	12/30/2024 20:10	WG2426527
1,2,3-Trichloropropane	U		0.00240	0.0185	1	12/30/2024 20:10	WG2426527
1,2,4-Trimethylbenzene	U		0.00234	0.00740	1	12/30/2024 20:10	WG2426527
1,2,3-Trimethylbenzene	U		0.00234	0.00740	1	12/30/2024 20:10	WG2426527
1,3,5-Trimethylbenzene	U		0.00296	0.00740	1	12/30/2024 20:10	WG2426527
Vinyl chloride	U		0.00172	0.00370	1	12/30/2024 20:10	WG2426527
Xylenes, Total	0.00360	J	0.00130	0.00963	1	12/30/2024 20:10	WG2426527
(S) Toluene-d8	99.7			75.0-131		12/30/2024 20:10	WG2426527
(S) 4-Bromofluorobenzene	94.1			67.0-138		12/30/2024 20:10	WG2426527
(S) 1,2-Dichloroethane-d4	117			70.0-130		12/30/2024 20:10	WG2426527

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	01/02/2025 09:47	WG2427275

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.184		0.0220	0.0428	1	01/02/2025 13:50	WG2427192

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.739	2.14	1	01/02/2025 10:03	WG2427250
Arsenic	2.08	J	0.896	2.14	1	01/02/2025 10:03	WG2427250
Beryllium	0.204	J	0.0510	0.214	1	01/02/2025 10:03	WG2427250
Cadmium	1.10		0.0699	0.535	1	01/02/2025 10:03	WG2427250
Chromium	131		0.229	1.07	1	01/02/2025 10:03	WG2427250
Copper	98.6		0.382	2.14	1	01/02/2025 10:03	WG2427250
Lead	48.7		0.349	0.535	1	01/02/2025 10:03	WG2427250
Nickel	202		0.214	2.14	1	01/02/2025 10:03	WG2427250
Selenium	U		1.15	2.14	1	01/02/2025 10:03	WG2427250
Silver	0.322	J	0.136	1.07	1	01/02/2025 10:03	WG2427250
Thallium	U		0.554	2.14	1	01/02/2025 10:03	WG2427250
Zinc	254		1.04	5.35	1	01/02/2025 10:03	WG2427250

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	37.7		5.69	17.1	4	01/02/2025 18:55	WG2426695
Residual Range Organics (RRO)	263		14.2	42.8	4	01/02/2025 18:55	WG2426695
(S) o-Terphenyl	60.2			18.0-148		01/02/2025 18:55	WG2426695

Sample Narrative:

L1812675-02 WG2426695: Sample resembles laboratory standard for Hydraulic Oil.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
2,4-D	U		0.0275	0.0749	1	01/06/2025 16:38	WG2426593
Dalapon	U		0.0471	0.0749	1	01/06/2025 16:38	WG2426593
2,4-DB	U		0.0199	0.0749	1	01/06/2025 16:38	WG2426593
Dicamba	U		0.0242	0.0749	1	01/06/2025 16:38	WG2426593
Dichloroprop	U	J4	0.0196	0.0749	1	01/06/2025 16:38	WG2426593
Dinoseb	U		0.0273	0.0749	1	01/06/2025 16:38	WG2426593
MCPA	U		1.99	6.96	1	01/06/2025 16:38	WG2426593
MCPD	U		2.17	6.96	1	01/06/2025 16:38	WG2426593
2,4,5-T	U		0.0253	0.0749	1	01/06/2025 16:38	WG2426593
2,4,5-TP (Silvex)	U		0.0200	0.0749	1	01/06/2025 16:38	WG2426593
(S) 2,4-Dichlorophenyl Acetic Acid	96.3			22.0-132		01/06/2025 16:38	WG2426593

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00690	0.0214	1	12/31/2024 22:12	WG2426623
Alpha BHC	U		0.00682	0.0214	1	12/31/2024 22:12	WG2426623
Beta BHC	U		0.00674	0.0214	1	12/31/2024 22:12	WG2426623
Delta BHC	U		0.00680	0.0214	1	12/31/2024 22:12	WG2426623
Gamma BHC	U		0.00723	0.0214	1	12/31/2024 22:12	WG2426623
Chlordane	U		0.106	0.321	1	12/31/2024 22:12	WG2426623
4,4-DDD	U		0.00738	0.0214	1	12/31/2024 22:12	WG2426623
4,4-DDE	U		0.00720	0.0214	1	12/31/2024 22:12	WG2426623
4,4-DDT	U		0.00820	0.0214	1	12/31/2024 22:12	WG2426623
Dieldrin	U		0.00746	0.0214	1	12/31/2024 22:12	WG2426623
Endosulfan I	U		0.00646	0.0214	1	12/31/2024 22:12	WG2426623
Endosulfan II	U		0.00707	0.0214	1	12/31/2024 22:12	WG2426623
Endosulfan sulfate	U		0.00687	0.0214	1	12/31/2024 22:12	WG2426623
Endrin	U		0.00798	0.0214	1	12/31/2024 22:12	WG2426623
Endrin aldehyde	U		0.00631	0.0214	1	12/31/2024 22:12	WG2426623
Endrin ketone	U		0.00744	0.0214	1	12/31/2024 22:12	WG2426623
Hexachlorobenzene	U		0.00651	0.0214	1	12/31/2024 22:12	WG2426623
Heptachlor	U		0.00742	0.0214	1	12/31/2024 22:12	WG2426623
Heptachlor epoxide	U		0.00696	0.0214	1	12/31/2024 22:12	WG2426623
Methoxychlor	U		0.00863	0.0214	1	12/31/2024 22:12	WG2426623
Toxaphene	U		0.229	0.428	1	12/31/2024 22:12	WG2426623
(S) Decachlorobiphenyl	74.3			10.0-135		12/31/2024 22:12	WG2426623
(S) Tetrachloro-m-xylene	76.7			10.0-139		12/31/2024 22:12	WG2426623

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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		0.00246	0.00642	1	01/03/2025 06:16	WG2426620
Acenaphthene	U		0.00224	0.00642	1	01/03/2025 06:16	WG2426620
Acenaphthylene	U		0.00231	0.00642	1	01/03/2025 06:16	WG2426620
Benzo(a)anthracene	U		0.00185	0.00642	1	01/03/2025 06:16	WG2426620
Benzo(a)pyrene	U		0.00192	0.00642	1	01/03/2025 06:16	WG2426620
Benzo(b)fluoranthene	0.00258	LC	0.00164	0.00642	1	01/03/2025 06:16	WG2426620
Benzo(g,h,i)perylene	0.00451	LC	0.00189	0.00642	1	01/03/2025 06:16	WG2426620
Benzo(k)fluoranthene	U		0.00230	0.00642	1	01/03/2025 06:16	WG2426620
Chrysene	U		0.00248	0.00642	1	01/03/2025 06:16	WG2426620
Dibenz(a,h)anthracene	U		0.00184	0.00642	1	01/03/2025 06:16	WG2426620
Fluoranthene	0.00244	LC	0.00243	0.00642	1	01/03/2025 06:16	WG2426620
Fluorene	U		0.00219	0.00642	1	01/03/2025 06:16	WG2426620
Indeno(1,2,3-cd)pyrene	U		0.00194	0.00642	1	01/03/2025 06:16	WG2426620
Naphthalene	U		0.00437	0.0214	1	01/03/2025 06:16	WG2426620
Phenanthrene	0.00462	LC	0.00247	0.00642	1	01/03/2025 06:16	WG2426620
Pyrene	0.00233	LC	0.00214	0.00642	1	01/03/2025 06:16	WG2426620
1-Methylnaphthalene	U		0.00481	0.0214	1	01/03/2025 06:16	WG2426620
2-Methylnaphthalene	0.00676	LC	0.00457	0.0214	1	01/03/2025 06:16	WG2426620
2-Chloronaphthalene	U		0.00499	0.0214	1	01/03/2025 06:16	WG2426620
(S) p-Terphenyl-d14	81.5			23.0-120		01/03/2025 06:16	WG2426620
(S) Nitrobenzene-d5	92.0			14.0-149		01/03/2025 06:16	WG2426620
(S) 2-Fluorobiphenyl	77.7			34.0-125		01/03/2025 06:16	WG2426620

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	12/29/2024 08:33	WG2425925
Toluene	U		0.278	1.00	1	01/03/2025 15:28	WG2428154
Ethylbenzene	U		0.137	1.00	1	12/29/2024 08:33	WG2425925
Total Xylenes	U		0.174	3.00	1	12/29/2024 08:33	WG2425925
(S) Toluene-d8	101			80.0-120		12/29/2024 08:33	WG2425925
(S) Toluene-d8	104			80.0-120		01/03/2025 15:28	WG2428154
(S) 4-Bromofluorobenzene	91.9			77.0-126		12/29/2024 08:33	WG2425925
(S) 4-Bromofluorobenzene	91.7			77.0-126		01/03/2025 15:28	WG2428154
(S) 1,2-Dichloroethane-d4	119			70.0-130		12/29/2024 08:33	WG2425925
(S) 1,2-Dichloroethane-d4	92.9			70.0-130		01/03/2025 15:28	WG2428154

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162361-1 12/27/24 08:36

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1812686-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1812686-01 12/27/24 08:36 • (DUP) R4162361-3 12/27/24 08:36

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	75.6	71.6	1	5.45		10

Laboratory Control Sample (LCS)

(LCS) R4162361-2 12/27/24 08:36

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163952-1 01/02/25 09:47

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1813462-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1813462-05 01/02/25 09:47 • (DUP) R4163952-3 01/02/25 09:47

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	82.8	82.9	1	0.118		10

Laboratory Control Sample (LCS)

(LCS) R4163952-2 01/02/25 09:47

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163828-1 01/02/25 12:50

	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) R4163828-2 01/02/25 12:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.466	93.1	80.0-120	

L1811286-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811286-08 01/02/25 12:55 • (MS) R4163828-4 01/02/25 13:00 • (MSD) R4163828-5 01/02/25 13:03

	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	0.663	0.0944	0.715	0.750	93.6	98.9	1	75.0-125			4.75	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163794-1 01/02/25 09:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.691	2.00
Arsenic	U		0.837	2.00
Beryllium	U		0.0477	0.200
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Copper	U		0.357	2.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Selenium	U		1.07	2.00
Silver	U		0.127	1.00
Thallium	U		0.518	2.00
Zinc	U		0.974	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163794-2 01/02/25 09:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	89.4	89.4	80.0-120	
Arsenic	100	97.3	97.3	80.0-120	
Beryllium	100	96.7	96.7	80.0-120	
Cadmium	100	95.9	95.9	80.0-120	
Chromium	100	99.5	99.5	80.0-120	
Copper	100	104	104	80.0-120	
Lead	100	95.5	95.5	80.0-120	
Nickel	100	97.3	97.3	80.0-120	
Selenium	100	96.9	96.9	80.0-120	
Silver	20.0	19.5	97.7	80.0-120	
Thallium	100	95.8	95.8	80.0-120	
Zinc	100	99.0	99.0	80.0-120	

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

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 %
Antimony	100	U	79.5	79.4	79.5	79.4	1	75.0-125			0.152	20
Arsenic	100	3.87	109	114	105	110	1	75.0-125			4.52	20
Beryllium	100	0.286	100	105	100	105	1	75.0-125			4.90	20

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Cadmium	100	0.224	100	105	99.9	105	1	75.0-125			4.70	20
Chromium	100	8.62	110	111	102	102	1	75.0-125			0.393	20
Copper	100	4.61	112	113	108	109	1	75.0-125			0.883	20
Lead	100	13.4	120	121	106	108	1	75.0-125			1.45	20
Nickel	100	9.83	123	122	113	112	1	75.0-125			0.774	20
Selenium	100	U	104	111	104	111	1	75.0-125			5.67	20
Silver	20.0	1.31	22.8	24.0	108	114	1	75.0-125			5.03	20
Thallium	100	U	102	104	102	104	1	75.0-125			2.23	20
Zinc	100	23.5	122	122	98.4	98.1	1	75.0-125			0.168	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163695-1 12/31/24 11:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	98.6			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4163695-2 12/31/24 12:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.00	3.76	75.2	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			103	77.0-120	

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4164167-3 12/29/24 08:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	97.5			77.0-126
(S) 1,2-Dichloroethane-d4	120			70.0-130

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

(LCS) R4164167-1 12/29/24 07:06 • (LCSD) R4164167-2 12/29/24 07:28

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 %
Benzene	5.00	4.30	3.74	86.0	74.8	70.0-123			13.9	20
Ethylbenzene	5.00	4.40	4.09	88.0	81.8	79.0-123			7.30	20
Total Xylenes	15.0	13.6	12.3	90.7	82.0	79.0-123			10.0	20
(S) Toluene-d8				102	102	80.0-120				
(S) 4-Bromofluorobenzene				95.4	93.4	77.0-126				
(S) 1,2-Dichloroethane-d4				122	123	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164380-2 01/03/25 11:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.278	1.00
(S) Toluene-d8	106			80.0-120
(S) 4-Bromofluorobenzene	90.3			77.0-126
(S) 1,2-Dichloroethane-d4	100			70.0-130

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

(LCS) R4164380-1 01/03/25 10:34 • (LCSD) R4164380-3 01/03/25 12:37

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 %
Toluene	5.00	4.47	4.78	89.4	95.6	79.0-120			6.70	20
(S) Toluene-d8				102	106	80.0-120				
(S) 4-Bromofluorobenzene				93.0	95.7	77.0-126				
(S) 1,2-Dichloroethane-d4				99.6	93.4	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163221-2 12/30/24 19:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163221-2 12/30/24 19:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	99.9			75.0-131
(S) 4-Bromofluorobenzene	91.4			67.0-138
(S) 1,2-Dichloroethane-d4	113			70.0-130

Laboratory Control Sample (LCS)

(LCS) R4163221-1 12/30/24 18:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.718	115	10.0-160	
Acrylonitrile	0.625	0.804	129	45.0-153	
Benzene	0.125	0.109	87.2	70.0-123	
Bromobenzene	0.125	0.129	103	73.0-121	
Bromodichloromethane	0.125	0.124	99.2	73.0-121	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163221-1 12/30/24 18:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromoform	0.125	0.0999	79.9	64.0-132	
Bromomethane	0.125	0.0904	72.3	56.0-147	
n-Butylbenzene	0.125	0.132	106	68.0-135	
sec-Butylbenzene	0.125	0.133	106	74.0-130	
tert-Butylbenzene	0.125	0.130	104	75.0-127	
Carbon tetrachloride	0.125	0.108	86.4	66.0-128	
Chlorobenzene	0.125	0.107	85.6	76.0-128	
Chlorodibromomethane	0.125	0.112	89.6	74.0-127	
Chloroethane	0.125	0.111	88.8	61.0-134	
Chloroform	0.125	0.113	90.4	72.0-123	
Chloromethane	0.125	0.127	102	51.0-138	
2-Chlorotoluene	0.125	0.139	111	75.0-124	
4-Chlorotoluene	0.125	0.141	113	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.127	102	59.0-130	
1,2-Dibromoethane	0.125	0.121	96.8	74.0-128	
Dibromomethane	0.125	0.117	93.6	75.0-122	
1,2-Dichlorobenzene	0.125	0.122	97.6	76.0-124	
1,3-Dichlorobenzene	0.125	0.119	95.2	76.0-125	
1,4-Dichlorobenzene	0.125	0.129	103	77.0-121	
Dichlorodifluoromethane	0.125	0.104	83.2	43.0-156	
1,1-Dichloroethane	0.125	0.125	100	70.0-127	
1,2-Dichloroethane	0.125	0.126	101	65.0-131	
1,1-Dichloroethene	0.125	0.122	97.6	65.0-131	
cis-1,2-Dichloroethene	0.125	0.109	87.2	73.0-125	
trans-1,2-Dichloroethene	0.125	0.106	84.8	71.0-125	
1,2-Dichloropropane	0.125	0.132	106	74.0-125	
1,1-Dichloropropene	0.125	0.119	95.2	73.0-125	
1,3-Dichloropropane	0.125	0.127	102	80.0-125	
cis-1,3-Dichloropropene	0.125	0.125	100	76.0-127	
trans-1,3-Dichloropropene	0.125	0.131	105	73.0-127	
2,2-Dichloropropane	0.125	0.114	91.2	59.0-135	
Di-isopropyl ether	0.125	0.147	118	60.0-136	
Ethylbenzene	0.125	0.111	88.8	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.110	88.0	57.0-150	
Isopropylbenzene	0.125	0.112	89.6	72.0-127	
p-Isopropyltoluene	0.125	0.135	108	72.0-133	
2-Butanone (MEK)	0.625	0.848	136	30.0-160	
Methylene Chloride	0.125	0.110	88.0	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.736	118	56.0-143	
Methyl tert-butyl ether	0.125	0.128	102	66.0-132	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163221-1 12/30/24 18:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Naphthalene	0.125	0.122	97.6	59.0-130	
n-Propylbenzene	0.125	0.134	107	74.0-126	
Styrene	0.125	0.117	93.6	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.110	88.0	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.148	118	68.0-128	
1,1,2-Trichlorotrifluoroethane	0.125	0.111	88.8	61.0-139	
Tetrachloroethene	0.125	0.105	84.0	70.0-136	
Toluene	0.125	0.110	88.0	75.0-121	
1,2,3-Trichlorobenzene	0.125	0.126	101	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.121	96.8	62.0-137	
1,1,1-Trichloroethane	0.125	0.117	93.6	69.0-126	
1,1,2-Trichloroethane	0.125	0.116	92.8	78.0-123	
Trichloroethene	0.125	0.113	90.4	76.0-126	
Trichlorofluoromethane	0.125	0.117	93.6	61.0-142	
1,2,3-Trichloropropane	0.125	0.154	123	67.0-129	
1,2,4-Trimethylbenzene	0.125	0.139	111	70.0-126	
1,2,3-Trimethylbenzene	0.125	0.136	109	74.0-124	
1,3,5-Trimethylbenzene	0.125	0.136	109	73.0-127	
Vinyl chloride	0.125	0.129	103	63.0-134	
Xylenes, Total	0.375	0.326	86.9	72.0-127	
(S) Toluene-d8			96.1	75.0-131	
(S) 4-Bromofluorobenzene			94.4	67.0-138	
(S) 1,2-Dichloroethane-d4			116	70.0-130	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163906-1 01/02/25 09:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	80.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4163906-2 01/02/25 09:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	44.4	88.8	50.0-150	
(S) o-Terphenyl			112	18.0-148	

L1813127-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813127-01 01/02/25 10:08 • (MS) R4163906-3 01/02/25 10:22 • (MSD) R4163906-4 01/02/25 10:34

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 %
Diesel Range Organics (DRO)	52.2	U	39.8	37.9	76.3	72.5	1	50.0-150			4.86	20
(S) o-Terphenyl					102	95.3		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4165087-1 01/06/25 15:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.0257	0.0700
Dalapon	U		0.0440	0.0700
2,4-DB	U		0.0186	0.0700
Dicamba	U		0.0226	0.0700
Dichloroprop	U		0.0183	0.0700
Dinoseb	U		0.0255	0.0700
MCPA	U		1.86	6.50
MCPP	U		2.03	6.50
2,4,5-T	U		0.0236	0.0700
2,4,5-TP (Silvex)	U		0.0187	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	87.4			22.0-132

Laboratory Control Sample (LCS)

(LCS) R4165087-2 01/06/25 15:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.0833	0.0958	115	40.0-120	P
Dalapon	0.0833	0.0335	40.2	15.0-120	J
2,4-DB	0.0833	0.0791	95.0	25.0-143	
Dicamba	0.0833	0.0766	92.0	43.0-120	
Dichloroprop	0.0833	0.122	146	32.0-129	J4 P
Dinoseb	0.0833	0.0453	54.4	10.0-120	J
MCPA	8.33	7.05	84.6	31.0-121	
MCPP	8.33	8.02	96.3	28.0-133	
2,4,5-T	0.0833	0.0818	98.2	41.0-120	P
2,4,5-TP (Silvex)	0.0833	0.0738	88.6	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			91.0	22.0-132	

L1812209-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-10 01/06/25 15:57 • (MS) R4165087-3 01/06/25 16:07 • (MSD) R4165087-4 01/06/25 16:18

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 %
2,4-D	0.141	U	0.141	0.157	100	111	1	10.0-160	P	P	10.7	24
Dalapon	0.141	U	U	U	32.5	30.9	1	10.0-121	J	J	5.30	27
2,4-DB	0.141	U	0.135	0.144	95.7	102	1	10.0-160	P	P	6.20	22

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1812209-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-10 01/06/25 15:57 • (MS) R4165087-3 01/06/25 16:07 • (MSD) R4165087-4 01/06/25 16:18

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 %
Dicamba	0.141	U	0.117	0.128	82.7	90.9	1	10.0-154	J	P	9.41	21
Dichloroprop	0.141	U	0.197	0.212	139	150	1	10.0-158	P	P	7.47	20
Dinoseb	0.141	U	0.0675	0.0791	47.8	55.9	1	10.0-120	J	J	15.7	40
MCPA	14.1	U	12.8	11.7	90.3	82.8	1	10.0-160	P	P	8.60	40
MCPP	14.1	U	12.5	13.1	88.5	92.4	1	10.0-160			4.38	40
2,4,5-T	0.141	U	0.123	0.132	86.9	93.2	1	10.0-157	P	P	6.93	20
2,4,5-TP (Silvex)	0.141	U	0.116	0.127	82.4	90.2	1	10.0-156	J	P	9.05	20
(S) 2,4-Dichlorophenyl Acetic Acid					81.4	89.2		22.0-132				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163677-1 12/31/24 20:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00645	0.0200
Alpha BHC	U		0.00637	0.0200
Beta BHC	U		0.00630	0.0200
Delta BHC	U		0.00635	0.0200
Gamma BHC	U		0.00676	0.0200
Chlordane	U		0.0990	0.300
4,4-DDD	U		0.00690	0.0200
4,4-DDE	U		0.00673	0.0200
4,4-DDT	U		0.00766	0.0200
Dieldrin	U		0.00697	0.0200
Endosulfan I	U		0.00604	0.0200
Endosulfan II	U		0.00661	0.0200
Endosulfan sulfate	U		0.00642	0.0200
Endrin	U		0.00746	0.0200
Endrin aldehyde	U		0.00590	0.0200
Endrin ketone	U		0.00695	0.0200
Hexachlorobenzene	U		0.00608	0.0200
Heptachlor	U		0.00693	0.0200
Heptachlor epoxide	U		0.00650	0.0200
Methoxychlor	U		0.00806	0.0200
Toxaphene	U		0.214	0.400
(S) Decachlorobiphenyl	86.0			10.0-135
(S) Tetrachloro-m-xylene	89.3			10.0-139

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0583	87.5	34.0-136	
Alpha BHC	0.0666	0.0597	89.6	34.0-139	
Beta BHC	0.0666	0.0571	85.7	34.0-133	
Delta BHC	0.0666	0.0458	68.8	34.0-135	
Gamma BHC	0.0666	0.0602	90.4	34.0-136	
4,4-DDD	0.0666	0.0614	92.2	33.0-141	
4,4-DDE	0.0666	0.0568	85.3	34.0-134	
4,4-DDT	0.0666	0.0574	86.2	30.0-143	
Dieldrin	0.0666	0.0585	87.8	35.0-137	
Endosulfan I	0.0666	0.0633	95.0	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0581	87.2	35.0-132	
Endosulfan sulfate	0.0666	0.0556	83.5	35.0-132	
Endrin	0.0666	0.0607	91.1	34.0-137	
Endrin aldehyde	0.0666	0.0482	72.4	23.0-121	
Endrin ketone	0.0666	0.0604	90.7	35.0-144	
Hexachlorobenzene	0.0666	0.0529	79.4	33.0-129	
Heptachlor	0.0666	0.0500	75.1	36.0-141	
Heptachlor epoxide	0.0666	0.0579	86.9	36.0-134	
Methoxychlor	0.0666	0.0556	83.5	28.0-150	
(S) Decachlorobiphenyl			81.4	10.0-135	
(S) Tetrachloro-m-xylene			88.3	10.0-139	

L1811713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811713-01 12/31/24 22:58 • (MS) R4163677-3 12/31/24 23:07 • (MSD) R4163677-4 12/31/24 23:16

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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.0708	U	0.0602	0.0513	85.0	72.1	1	20.0-135			15.8	37
Alpha BHC	0.0708	U	0.0678	0.0570	95.8	80.1	1	27.0-140			17.2	35
Beta BHC	0.0708	U	0.0606	0.0511	85.6	71.8	1	23.0-141			16.9	37
Delta BHC	0.0708	U	0.0490	0.0409	69.2	57.5	1	21.0-138			17.9	35
Gamma BHC	0.0708	U	0.0667	0.0561	94.2	78.7	1	27.0-137			17.3	36
4,4-DDD	0.0708	U	0.0607	0.0520	85.7	73.0	1	15.0-152			15.4	39
4,4-DDE	0.0708	U	0.0576	0.0480	81.3	67.4	1	10.0-152			18.1	40
4,4-DDT	0.0708	U	0.0582	0.0494	82.2	69.4	1	10.0-151			16.4	40
Dieldrin	0.0708	U	0.0607	0.0513	85.7	72.1	1	17.0-145			16.7	37
Endosulfan I	0.0708	U	0.0656	0.0539	92.7	75.7	1	20.0-137			19.6	36
Endosulfan II	0.0708	U	0.0607	0.0509	85.7	71.5	1	15.0-141			17.5	37
Endosulfan sulfate	0.0708	U	0.0593	0.0504	83.8	70.7	1	15.0-143			16.3	38
Endrin	0.0708	U	0.0649	0.0538	91.7	75.6	1	19.0-143			18.6	37
Endrin aldehyde	0.0708	U	0.0536	0.0441	75.7	62.0	1	10.0-139			19.3	40
Endrin ketone	0.0708	U	0.0617	0.0505	87.1	70.9	1	17.0-149			19.9	38
Hexachlorobenzene	0.0708	U	0.0593	0.0502	83.8	70.4	1	25.0-126			16.7	35
Heptachlor	0.0708	U	0.0584	0.0520	82.5	73.0	1	22.0-138			11.7	37
Heptachlor epoxide	0.0708	U	0.0600	0.0504	84.8	70.7	1	22.0-138			17.5	36
Methoxychlor	0.0708	U	0.0557	0.0486	78.8	68.2	1	10.0-159			13.8	40
(S) Decachlorobiphenyl					77.7	73.0		10.0-135				
(S) Tetrachloro-m-xylene					85.6	73.9		10.0-139				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164024-2 12/31/24 15:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	114			23.0-120
(S) Nitrobenzene-d5	112			14.0-149
(S) 2-Fluorobiphenyl	115			34.0-125

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0774	96.8	50.0-126	
Acenaphthene	0.0800	0.0744	93.0	50.0-120	
Acenaphthylene	0.0800	0.0780	97.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0758	94.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0733	91.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0810	101	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0802	100	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0771	96.4	49.0-125	
Chrysene	0.0800	0.0799	99.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0788	98.5	47.0-125	
Fluoranthene	0.0800	0.0813	102	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0813	102	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0748	93.5	46.0-125	
Naphthalene	0.0800	0.0750	93.8	50.0-120	
Phenanthrene	0.0800	0.0806	101	47.0-120	
Pyrene	0.0800	0.0780	97.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0788	98.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0766	95.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0851	106	50.0-120	
(S) p-Terphenyl-d14			103	23.0-120	
(S) Nitrobenzene-d5			100	14.0-149	
(S) 2-Fluorobiphenyl			106	34.0-125	

L1813004-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813004-06 01/03/25 04:47 • (MS) R4164389-1 01/03/25 05:04 • (MSD) R4164389-2 01/03/25 05:22

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	0.0952	U	0.0387	0.0531	40.6	55.2	1	10.0-145	U3		31.4	30
Acenaphthene	0.0952	U	0.0488	0.0615	51.3	64.0	1	14.0-127			23.0	27
Acenaphthylene	0.0952	U	0.0458	0.0577	48.1	60.0	1	21.0-124			23.1	25
Benzo(a)anthracene	0.0952	U	0.0375	0.0533	39.4	55.5	1	10.0-139	U3		34.9	30
Benzo(a)pyrene	0.0952	U	0.0409	0.0582	42.9	60.5	1	10.0-141	U3		35.0	31
Benzo(b)fluoranthene	0.0952	U	0.0472	0.0655	49.6	68.1	1	10.0-140			32.5	36
Benzo(g,h,i)perylene	0.0952	U	0.0530	0.0742	55.6	77.2	1	10.0-140	U3		33.4	33
Benzo(k)fluoranthene	0.0952	U	0.0425	0.0636	44.6	66.1	1	10.0-137	U3		39.8	31
Chrysene	0.0952	U	0.0453	0.0649	47.6	67.5	1	10.0-145	U3		35.7	30
Dibenz(a,h)anthracene	0.0952	U	0.0502	0.0708	52.7	73.6	1	10.0-132	U3		34.1	31
Fluoranthene	0.0952	U	0.0443	0.0619	46.5	64.3	1	10.0-153	U3		33.1	33
Fluorene	0.0952	U	0.0499	0.0649	52.4	67.5	1	11.0-130			26.1	29
Indeno(1,2,3-cd)pyrene	0.0952	U	0.0481	0.0676	50.5	70.3	1	10.0-137	U3		33.8	32
Naphthalene	0.0952	U	0.0616	0.0682	63.7	69.9	1	10.0-135			10.2	27
Phenanthrene	0.0952	U	0.0461	0.0629	48.5	65.4	1	10.0-144			30.7	31
Pyrene	0.0952	U	0.0459	0.0644	48.2	67.0	1	10.0-148			33.6	35
1-Methylnaphthalene	0.0952	U	0.0576	0.0684	59.8	70.3	1	10.0-142			17.1	28
2-Methylnaphthalene	0.0952	U	0.0561	0.0670	58.1	68.8	1	10.0-137			17.6	28
2-Chloronaphthalene	0.0952	U	0.0539	0.0666	56.6	69.2	1	29.0-120			21.1	24
(S) p-Terphenyl-d14					53.9	150		23.0-120	U1			
(S) Nitrobenzene-d5					62.9	145		14.0-149				
(S) 2-Fluorobiphenyl					64.9	155		34.0-125	U1			

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

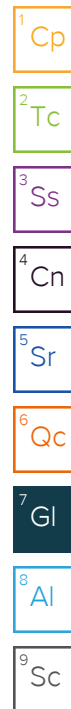
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
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.
P	RPD between the primary and confirmatory analysis exceeded 40%.



ACCREDITATIONS & LOCATIONS

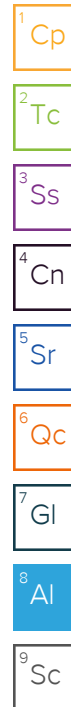
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: Oregon DEQ				Contract Laboratory Name: ESC				Lab Selection Criteria: ☐ Proximity (if TAT < 48 hrs) ☐ Prior work on same project ☒ Cost (for anticipated analyses) ☐ Other labs disqualified or unable to perform requested services ☐ Emergency work				Turn Around Time: ☒ 10 days (std.) ☐ 5 days ☐ 72 hours ☐ 48 hours ☐ 24 hours ☐ Other	
				Lab Batch #: Invoice To: ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696									
Send Lab Report To: Cathy Brown Address: 165 E. 7 th Avenue, Suite 100 Eugene, OR 97401 Tel. #: 503-753-6153 E-mail: cathy.brown@deq.oregon.gov													
Project Name: DEQ Forest Creek				Sample Preservative									
Sampler Name: Connor Anderson													
Sample ID#	Collection Date/Time	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs EPA 8260D	SVOCs EPA 8270E-SIM	Dioxins/Furans EPA 1613B	*Priority Pollutant Metals EPA 6010D/7471B	Herbicides EPA 8151A	Pesticides EPA 8081B	BTEX EPA 8260D	Comments
DU1-ISM	12/20/24; 07:50	S	13	X	X	X	X	X	X	X	X		ISM processing 12/21/24
2.71022.7 TL49 Sample Receipt Checklist CCC Seal Present/Intact: ☒ Y ☐ N CCC Signed/Accurate: ☒ Y ☐ N Bottles arrive intact: ☒ Y ☐ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N RA Screen <0.5 mR/hr: ☒ Y ☐ N total 13 4301 1538 3839													
TRIP BLANK													
*Priority Pollutant Metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.													
Relinquished By: Connor Anderson				Agency/Agent: MFA				Received By: Troy Chumley				Agency/Agent: PNM	
Signature: [Signature]				Time & Date: 12/23/24, 1100				Signature: [Signature]				Time & Date: 12/24/24	
Relinquished By:				Agency/Agent:				Received By:				Agency/Agent:	
Signature:				Time & Date:				Signature:				Time & Date:	

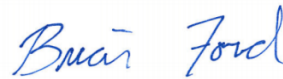
THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812686
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



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

SAMPLE SUMMARY

DU2-ISM L1812686-01 Solid

Collected by
Connor Anderson

Collected date/time
12/17/24 14:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2425038	1	12/27/24 08:26	12/27/24 08:36	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426165	25	12/26/24 08:01	12/29/24 22:37	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425137	1	12/26/24 08:01	12/27/24 20:05	DWR	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

DU2-ISM L1812686-02 Solid

Collected by
Connor Anderson

Collected date/time
12/17/24 14:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2427275	1	01/02/25 09:34	01/02/25 09:47	MT	Mt. Juliet, TN
Mercury by Method 7471B	WG2427192	1	01/01/25 10:11	01/02/25 13:53	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2427250	1	01/01/25 14:30	01/02/25 10:05	JTM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2426694	10	12/31/24 07:35	12/31/24 17:52	SGB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2425581	1	12/31/24 13:30	01/02/25 16:16	HCS	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2425581	1	12/31/24 13:30	01/04/25 14:15	MEW	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2426623	1	12/31/24 10:54	12/31/24 22:21	RDH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2426620	1	12/31/24 11:02	01/01/25 04:45	MBE	Mt. Juliet, TN

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

TRIP BLANK L1812686-03 GW

Collected by
Connor Anderson

Collected date/time
12/17/24 14:00

Received date/time
12/24/24 09:00

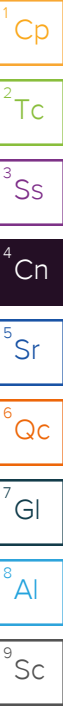
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425234	1	12/27/24 02:29	12/27/24 02:29	DYW	Mt. Juliet, TN

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.



Brian Ford
Project Manager



Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	75.6		1	12/27/2024 08:36	WG2425038

Volatile Organic Compounds (GC) by Method NWTPHGX

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	6.91	B	1.39	4.11	25	12/29/2024 22:37	WG2426165
(S) a,a,a-Trifluorotoluene(FID)	93.1			77.0-120		12/29/2024 22:37	WG2426165

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0600	0.0822	1	12/27/2024 20:05	WG2425137
Acrylonitrile	U		0.00594	0.0206	1	12/27/2024 20:05	WG2425137
Benzene	0.00411		0.000768	0.00164	1	12/27/2024 20:05	WG2425137
Bromobenzene	U		0.00148	0.0206	1	12/27/2024 20:05	WG2425137
Bromodichloromethane	U		0.00119	0.00411	1	12/27/2024 20:05	WG2425137
Bromoform	U		0.00192	0.0411	1	12/27/2024 20:05	WG2425137
Bromomethane	U		0.00324	0.0206	1	12/27/2024 20:05	WG2425137
n-Butylbenzene	U		0.00863	0.0206	1	12/27/2024 20:05	WG2425137
sec-Butylbenzene	U		0.00474	0.0206	1	12/27/2024 20:05	WG2425137
tert-Butylbenzene	U		0.00321	0.00822	1	12/27/2024 20:05	WG2425137
Carbon tetrachloride	U		0.00148	0.00822	1	12/27/2024 20:05	WG2425137
Chlorobenzene	0.00148	J	0.000345	0.00411	1	12/27/2024 20:05	WG2425137
Chlorodibromomethane	U		0.00101	0.00411	1	12/27/2024 20:05	WG2425137
Chloroethane	U		0.00280	0.00822	1	12/27/2024 20:05	WG2425137
Chloroform	U		0.00169	0.00411	1	12/27/2024 20:05	WG2425137
Chloromethane	U		0.00715	0.0206	1	12/27/2024 20:05	WG2425137
2-Chlorotoluene	U	J4	0.00142	0.00411	1	12/27/2024 20:05	WG2425137
4-Chlorotoluene	U	J4	0.000740	0.00822	1	12/27/2024 20:05	WG2425137
1,2-Dibromo-3-Chloropropane	U		0.00641	0.0411	1	12/27/2024 20:05	WG2425137
1,2-Dibromoethane	U		0.00107	0.00411	1	12/27/2024 20:05	WG2425137
Dibromomethane	U		0.00123	0.00822	1	12/27/2024 20:05	WG2425137
1,2-Dichlorobenzene	U		0.000699	0.00822	1	12/27/2024 20:05	WG2425137
1,3-Dichlorobenzene	U		0.000987	0.00822	1	12/27/2024 20:05	WG2425137
1,4-Dichlorobenzene	U		0.00115	0.00822	1	12/27/2024 20:05	WG2425137
Dichlorodifluoromethane	U		0.00265	0.00822	1	12/27/2024 20:05	WG2425137
1,1-Dichloroethane	U		0.000807	0.00411	1	12/27/2024 20:05	WG2425137
1,2-Dichloroethane	U		0.00107	0.00411	1	12/27/2024 20:05	WG2425137
1,1-Dichloroethene	U		0.000997	0.00411	1	12/27/2024 20:05	WG2425137
cis-1,2-Dichloroethene	U		0.00121	0.00411	1	12/27/2024 20:05	WG2425137
trans-1,2-Dichloroethene	U		0.00171	0.00822	1	12/27/2024 20:05	WG2425137
1,2-Dichloropropane	U		0.00234	0.00822	1	12/27/2024 20:05	WG2425137
1,1-Dichloropropene	U		0.00133	0.00411	1	12/27/2024 20:05	WG2425137
1,3-Dichloropropane	U		0.000824	0.00822	1	12/27/2024 20:05	WG2425137
cis-1,3-Dichloropropene	U		0.00124	0.00411	1	12/27/2024 20:05	WG2425137
trans-1,3-Dichloropropene	U		0.00187	0.00822	1	12/27/2024 20:05	WG2425137
2,2-Dichloropropane	U	C3	0.00227	0.00411	1	12/27/2024 20:05	WG2425137
Di-isopropyl ether	U		0.000674	0.00164	1	12/27/2024 20:05	WG2425137
Ethylbenzene	0.00186	J	0.00121	0.00411	1	12/27/2024 20:05	WG2425137
Hexachloro-1,3-butadiene	U		0.00987	0.0411	1	12/27/2024 20:05	WG2425137
Isopropylbenzene	U		0.000699	0.00411	1	12/27/2024 20:05	WG2425137
p-Isopropyltoluene	0.0237		0.00419	0.00822	1	12/27/2024 20:05	WG2425137
2-Butanone (MEK)	U		0.104	0.164	1	12/27/2024 20:05	WG2425137
Methylene Chloride	U		0.0109	0.0411	1	12/27/2024 20:05	WG2425137
4-Methyl-2-pentanone (MIBK)	U		0.00375	0.0411	1	12/27/2024 20:05	WG2425137

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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
Methyl tert-butyl ether	U		0.000576	0.00164	1	12/27/2024 20:05	WG2425137
Naphthalene	U		0.00803	0.0206	1	12/27/2024 20:05	WG2425137
n-Propylbenzene	U		0.00156	0.00822	1	12/27/2024 20:05	WG2425137
Styrene	0.00119	U	0.000377	0.0206	1	12/27/2024 20:05	WG2425137
1,1,1,2-Tetrachloroethane	U		0.00156	0.00411	1	12/27/2024 20:05	WG2425137
1,1,2,2-Tetrachloroethane	U		0.00114	0.00411	1	12/27/2024 20:05	WG2425137
1,1,2-Trichlorotrifluoroethane	U		0.00124	0.00411	1	12/27/2024 20:05	WG2425137
Tetrachloroethene	U		0.00147	0.00411	1	12/27/2024 20:05	WG2425137
Toluene	0.00617	U	0.00214	0.00822	1	12/27/2024 20:05	WG2425137
1,2,3-Trichlorobenzene	U		0.0121	0.0206	1	12/27/2024 20:05	WG2425137
1,2,4-Trichlorobenzene	U		0.00724	0.0206	1	12/27/2024 20:05	WG2425137
1,1,1-Trichloroethane	U		0.00152	0.00411	1	12/27/2024 20:05	WG2425137
1,1,2-Trichloroethane	U		0.000982	0.00411	1	12/27/2024 20:05	WG2425137
Trichloroethene	U		0.000960	0.00164	1	12/27/2024 20:05	WG2425137
Trichlorofluoromethane	0.00345	U	0.00136	0.00411	1	12/27/2024 20:05	WG2425137
1,2,3-Trichloropropane	U		0.00266	0.0206	1	12/27/2024 20:05	WG2425137
1,2,4-Trimethylbenzene	0.00288	U	0.00260	0.00822	1	12/27/2024 20:05	WG2425137
1,2,3-Trimethylbenzene	U		0.00260	0.00822	1	12/27/2024 20:05	WG2425137
1,3,5-Trimethylbenzene	U		0.00329	0.00822	1	12/27/2024 20:05	WG2425137
Vinyl chloride	U		0.00191	0.00411	1	12/27/2024 20:05	WG2425137
Xylenes, Total	0.00671	U	0.00145	0.0107	1	12/27/2024 20:05	WG2425137
(S) Toluene-d8	107			75.0-131		12/27/2024 20:05	WG2425137
(S) 4-Bromofluorobenzene	93.2			67.0-138		12/27/2024 20:05	WG2425137
(S) 1,2-Dichloroethane-d4	94.1			70.0-130		12/27/2024 20:05	WG2425137

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	91.0		1	01/02/2025 09:47	WG2427275

Mercury by Method 7471B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.163		0.0226	0.0440	1	01/02/2025 13:53	WG2427192

Metals (ICP) by Method 6010D

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.759	2.20	1	01/02/2025 10:05	WG2427250
Arsenic	2.81		0.920	2.20	1	01/02/2025 10:05	WG2427250
Beryllium	0.234		0.0524	0.220	1	01/02/2025 10:05	WG2427250
Cadmium	1.90		0.0718	0.549	1	01/02/2025 10:05	WG2427250
Chromium	143		0.235	1.10	1	01/02/2025 10:05	WG2427250
Copper	225		0.392	2.20	1	01/02/2025 10:05	WG2427250
Lead	61.2		0.358	0.549	1	01/02/2025 10:05	WG2427250
Nickel	204		0.220	2.20	1	01/02/2025 10:05	WG2427250
Selenium	U		1.18	2.20	1	01/02/2025 10:05	WG2427250
Silver	0.464	J	0.140	1.10	1	01/02/2025 10:05	WG2427250
Thallium	U		0.569	2.20	1	01/02/2025 10:05	WG2427250
Zinc	1040		1.07	5.49	1	01/02/2025 10:05	WG2427250

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	83.0		14.6	44.0	10	12/31/2024 17:52	WG2426694
Residual Range Organics (RRO)	431		36.6	110	10	12/31/2024 17:52	WG2426694
(S) o-Terphenyl	76.9			18.0-148		12/31/2024 17:52	WG2426694

Sample Narrative:

L1812686-02 WG2426694: Sample resembles laboratory standard for Hydraulic Oil.

Chlorinated Acid Herbicides (GC) by Method 8151A

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
2,4-D	U		0.0282	0.0769	1	01/02/2025 16:16	WG2425581
Dalapon	U		0.0484	0.0769	1	01/02/2025 16:16	WG2425581
2,4-DB	U		0.0204	0.0769	1	01/04/2025 14:15	WG2425581
Dicamba	U		0.0248	0.0769	1	01/02/2025 16:16	WG2425581
Dichloroprop	U		0.0201	0.0769	1	01/02/2025 16:16	WG2425581
Dinoseb	U		0.0280	0.0769	1	01/04/2025 14:15	WG2425581
MCPA	U		2.04	7.14	1	01/02/2025 16:16	WG2425581
MCPP	U		2.23	7.14	1	01/02/2025 16:16	WG2425581
2,4,5-T	U		0.0259	0.0769	1	01/02/2025 16:16	WG2425581
2,4,5-TP (Silvex)	U		0.0205	0.0769	1	01/04/2025 14:15	WG2425581
(S) 2,4-Dichlorophenyl Acetic Acid	79.6			22.0-132		01/04/2025 14:15	WG2425581
(S) 2,4-Dichlorophenyl Acetic Acid	60.5			22.0-132		01/02/2025 16:16	WG2425581

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00709	0.0220	1	12/31/2024 22:21	WG2426623
Alpha BHC	U		0.00700	0.0220	1	12/31/2024 22:21	WG2426623
Beta BHC	U		0.00692	0.0220	1	12/31/2024 22:21	WG2426623
Delta BHC	U		0.00698	0.0220	1	12/31/2024 22:21	WG2426623
Gamma BHC	U		0.00743	0.0220	1	12/31/2024 22:21	WG2426623
Chlordane	U		0.109	0.330	1	12/31/2024 22:21	WG2426623
4,4-DDD	U		0.00758	0.0220	1	12/31/2024 22:21	WG2426623
4,4-DDE	U		0.00740	0.0220	1	12/31/2024 22:21	WG2426623
4,4-DDT	U		0.00842	0.0220	1	12/31/2024 22:21	WG2426623
Dieldrin	U		0.00766	0.0220	1	12/31/2024 22:21	WG2426623
Endosulfan I	U		0.00664	0.0220	1	12/31/2024 22:21	WG2426623
Endosulfan II	U		0.00726	0.0220	1	12/31/2024 22:21	WG2426623
Endosulfan sulfate	U		0.00705	0.0220	1	12/31/2024 22:21	WG2426623
Endrin	U		0.00820	0.0220	1	12/31/2024 22:21	WG2426623
Endrin aldehyde	U		0.00648	0.0220	1	12/31/2024 22:21	WG2426623
Endrin ketone	U		0.00764	0.0220	1	12/31/2024 22:21	WG2426623
Hexachlorobenzene	U		0.00668	0.0220	1	12/31/2024 22:21	WG2426623
Heptachlor	U		0.00762	0.0220	1	12/31/2024 22:21	WG2426623
Heptachlor epoxide	U		0.00714	0.0220	1	12/31/2024 22:21	WG2426623
Methoxychlor	U		0.00886	0.0220	1	12/31/2024 22:21	WG2426623
Toxaphene	U		0.235	0.440	1	12/31/2024 22:21	WG2426623
(S) Decachlorobiphenyl	69.8			10.0-135		12/31/2024 22:21	WG2426623
(S) Tetrachloro-m-xylene	71.1			10.0-139		12/31/2024 22:21	WG2426623

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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		0.00253	0.00659	1	01/01/2025 04:45	WG2426620
Acenaphthene	U		0.00230	0.00659	1	01/01/2025 04:45	WG2426620
Acenaphthylene	U		0.00237	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(a)anthracene	0.00190	LC	0.00190	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(a)pyrene	U		0.00197	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(b)fluoranthene	0.00310	LC	0.00168	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(g,h,i)perylene	0.00358	LC	0.00195	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(k)fluoranthene	U		0.00236	0.00659	1	01/01/2025 04:45	WG2426620
Chrysene	U		0.00255	0.00659	1	01/01/2025 04:45	WG2426620
Dibenz(a,h)anthracene	U		0.00189	0.00659	1	01/01/2025 04:45	WG2426620
Fluoranthene	0.00510	LC	0.00249	0.00659	1	01/01/2025 04:45	WG2426620
Fluorene	U		0.00225	0.00659	1	01/01/2025 04:45	WG2426620
Indeno(1,2,3-cd)pyrene	U		0.00199	0.00659	1	01/01/2025 04:45	WG2426620
Naphthalene	0.00833	LC	0.00448	0.0220	1	01/01/2025 04:45	WG2426620
Phenanthrene	0.00749		0.00254	0.00659	1	01/01/2025 04:45	WG2426620
Pyrene	0.00499	LC	0.00220	0.00659	1	01/01/2025 04:45	WG2426620
1-Methylnaphthalene	U		0.00493	0.0220	1	01/01/2025 04:45	WG2426620
2-Methylnaphthalene	U		0.00469	0.0220	1	01/01/2025 04:45	WG2426620
2-Chloronaphthalene	U		0.00512	0.0220	1	01/01/2025 04:45	WG2426620
(S) p-Terphenyl-d14	59.4			23.0-120		01/01/2025 04:45	WG2426620
(S) Nitrobenzene-d5	79.9			14.0-149		01/01/2025 04:45	WG2426620
(S) 2-Fluorobiphenyl	63.7			34.0-125		01/01/2025 04:45	WG2426620

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	12/27/2024 02:29	WG2425234
Toluene	U		0.278	1.00	1	12/27/2024 02:29	WG2425234
Ethylbenzene	U		0.137	1.00	1	12/27/2024 02:29	WG2425234
Total Xylenes	U		0.174	3.00	1	12/27/2024 02:29	WG2425234
(S) Toluene-d8	107			80.0-120		12/27/2024 02:29	WG2425234
(S) 4-Bromofluorobenzene	94.2			77.0-126		12/27/2024 02:29	WG2425234
(S) 1,2-Dichloroethane-d4	106			70.0-130		12/27/2024 02:29	WG2425234

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162361-1 12/27/24 08:36

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1812686-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1812686-01 12/27/24 08:36 • (DUP) R4162361-3 12/27/24 08:36

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	75.6	71.6	1	5.45		10

Laboratory Control Sample (LCS)

(LCS) R4162361-2 12/27/24 08:36

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163952-1 01/02/25 09:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1813462-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1813462-05 01/02/25 09:47 • (DUP) R4163952-3 01/02/25 09:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	82.8	82.9	1	0.118		10

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R4163952-2 01/02/25 09:47

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

⁹Sc

Method Blank (MB)

(MB) R4163828-1 01/02/25 12:50

	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) R4163828-2 01/02/25 12:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.466	93.1	80.0-120	

L1811286-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811286-08 01/02/25 12:55 • (MS) R4163828-4 01/02/25 13:00 • (MSD) R4163828-5 01/02/25 13:03

	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	0.663	0.0944	0.715	0.750	93.6	98.9	1	75.0-125			4.75	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163794-1 01/02/25 09:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.691	2.00
Arsenic	U		0.837	2.00
Beryllium	U		0.0477	0.200
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Copper	U		0.357	2.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Selenium	U		1.07	2.00
Silver	U		0.127	1.00
Thallium	U		0.518	2.00
Zinc	U		0.974	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163794-2 01/02/25 09:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	89.4	89.4	80.0-120	
Arsenic	100	97.3	97.3	80.0-120	
Beryllium	100	96.7	96.7	80.0-120	
Cadmium	100	95.9	95.9	80.0-120	
Chromium	100	99.5	99.5	80.0-120	
Copper	100	104	104	80.0-120	
Lead	100	95.5	95.5	80.0-120	
Nickel	100	97.3	97.3	80.0-120	
Selenium	100	96.9	96.9	80.0-120	
Silver	20.0	19.5	97.7	80.0-120	
Thallium	100	95.8	95.8	80.0-120	
Zinc	100	99.0	99.0	80.0-120	

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

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 %
Antimony	100	U	79.5	79.4	79.5	79.4	1	75.0-125			0.152	20
Arsenic	100	3.87	109	114	105	110	1	75.0-125			4.52	20
Beryllium	100	0.286	100	105	100	105	1	75.0-125			4.90	20

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Cadmium	100	0.224	100	105	99.9	105	1	75.0-125			4.70	20
Chromium	100	8.62	110	111	102	102	1	75.0-125			0.393	20
Copper	100	4.61	112	113	108	109	1	75.0-125			0.883	20
Lead	100	13.4	120	121	106	108	1	75.0-125			1.45	20
Nickel	100	9.83	123	122	113	112	1	75.0-125			0.774	20
Selenium	100	U	104	111	104	111	1	75.0-125			5.67	20
Silver	20.0	1.31	22.8	24.0	108	114	1	75.0-125			5.03	20
Thallium	100	U	102	104	102	104	1	75.0-125			2.23	20
Zinc	100	23.5	122	122	98.4	98.1	1	75.0-125			0.168	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163428-2 12/29/24 12:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	1.80	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4163428-1 12/29/24 11:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.00	5.56	111	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			98.0	77.0-120	

L1812969-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812969-09 12/30/24 01:15 • (MS) R4163428-3 12/30/24 03:08 • (MSD) R4163428-4 12/30/24 03:31

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 %
Gasoline Range Organics-NWTPH	142	U	126	154	89.3	109	25	50.0-150			19.8	27
(S) a,a,a-Trifluorotoluene(FID)					99.6	104		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	0.0107	U	0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	93.8			67.0-138
(S) 1,2-Dichloroethane-d4	108			70.0-130

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

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	0.625	0.674	0.728	108	116	10.0-160			7.70	31
Acrylonitrile	0.625	0.745	0.731	119	117	45.0-153			1.90	22
Benzene	0.125	0.114	0.121	91.2	96.8	70.0-123			5.96	20
Bromobenzene	0.125	0.140	0.146	112	117	73.0-121			4.20	20
Bromodichloromethane	0.125	0.129	0.135	103	108	73.0-121			4.55	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromoform	0.125	0.107	0.114	85.6	91.2	64.0-132			6.33	20
Bromomethane	0.125	0.107	0.108	85.6	86.4	56.0-147			0.930	20
n-Butylbenzene	0.125	0.130	0.141	104	113	68.0-135			8.12	20
sec-Butylbenzene	0.125	0.132	0.149	106	119	74.0-130			12.1	20
tert-Butylbenzene	0.125	0.139	0.149	111	119	75.0-127			6.94	20
Carbon tetrachloride	0.125	0.114	0.124	91.2	99.2	66.0-128			8.40	20
Chlorobenzene	0.125	0.115	0.121	92.0	96.8	76.0-128			5.08	20
Chlorodibromomethane	0.125	0.122	0.130	97.6	104	74.0-127			6.35	20
Chloroethane	0.125	0.107	0.110	85.6	88.0	61.0-134			2.76	20
Chloroform	0.125	0.114	0.119	91.2	95.2	72.0-123			4.29	20
Chloromethane	0.125	0.129	0.141	103	113	51.0-138			8.89	20
2-Chlorotoluene	0.125	0.147	0.158	118	126	75.0-124		J4	7.21	20
4-Chlorotoluene	0.125	0.148	0.160	118	128	75.0-124		J4	7.79	20
1,2-Dibromo-3-Chloropropane	0.125	0.132	0.131	106	105	59.0-130			0.760	20
1,2-Dibromoethane	0.125	0.129	0.137	103	110	74.0-128			6.02	20
Dibromomethane	0.125	0.128	0.131	102	105	75.0-122			2.32	20
1,2-Dichlorobenzene	0.125	0.129	0.135	103	108	76.0-124			4.55	20
1,3-Dichlorobenzene	0.125	0.127	0.134	102	107	76.0-125			5.36	20
1,4-Dichlorobenzene	0.125	0.136	0.146	109	117	77.0-121			7.09	20
Dichlorodifluoromethane	0.125	0.124	0.135	99.2	108	43.0-156			8.49	20
1,1-Dichloroethane	0.125	0.126	0.132	101	106	70.0-127			4.65	20
1,2-Dichloroethane	0.125	0.137	0.140	110	112	65.0-131			2.17	20
1,1-Dichloroethene	0.125	0.126	0.133	101	106	65.0-131			5.41	20
cis-1,2-Dichloroethene	0.125	0.112	0.116	89.6	92.8	73.0-125			3.51	20
trans-1,2-Dichloroethene	0.125	0.110	0.115	88.0	92.0	71.0-125			4.44	20
1,2-Dichloropropane	0.125	0.133	0.141	106	113	74.0-125			5.84	20
1,1-Dichloropropene	0.125	0.126	0.136	101	109	73.0-125			7.63	20
1,3-Dichloropropane	0.125	0.134	0.140	107	112	80.0-125			4.38	20
cis-1,3-Dichloropropene	0.125	0.124	0.133	99.2	106	76.0-127			7.00	20
trans-1,3-Dichloropropene	0.125	0.137	0.143	110	114	73.0-127			4.29	20
2,2-Dichloropropane	0.125	0.0957	0.0953	76.6	76.2	59.0-135			0.419	20
Di-isopropyl ether	0.125	0.142	0.148	114	118	60.0-136			4.14	20
Ethylbenzene	0.125	0.119	0.129	95.2	103	74.0-126			8.06	20
Hexachloro-1,3-butadiene	0.125	0.107	0.115	85.6	92.0	57.0-150			7.21	20
Isopropylbenzene	0.125	0.118	0.129	94.4	103	72.0-127			8.91	20
p-Isopropyltoluene	0.125	0.137	0.152	110	122	72.0-133			10.4	20
2-Butanone (MEK)	0.625	0.788	0.824	126	132	30.0-160			4.47	24
Methylene Chloride	0.125	0.112	0.117	89.6	93.6	68.0-123			4.37	20
4-Methyl-2-pentanone (MIBK)	0.625	0.741	0.763	119	122	56.0-143			2.93	20
Methyl tert-butyl ether	0.125	0.132	0.132	106	106	66.0-132			0.000	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	0.125	0.129	0.135	103	108	59.0-130			4.55	20
n-Propylbenzene	0.125	0.131	0.143	105	114	74.0-126			8.76	20
Styrene	0.125	0.127	0.135	102	108	72.0-127			6.11	20
1,1,1,2-Tetrachloroethane	0.125	0.124	0.128	99.2	102	74.0-129			3.17	20
1,1,2,2-Tetrachloroethane	0.125	0.152	0.158	122	126	68.0-128			3.87	20
1,1,2-Trichlorotrifluoroethane	0.125	0.114	0.123	91.2	98.4	61.0-139			7.59	20
Tetrachloroethene	0.125	0.113	0.126	90.4	101	70.0-136			10.9	20
Toluene	0.125	0.118	0.125	94.4	100	75.0-121			5.76	20
1,2,3-Trichlorobenzene	0.125	0.127	0.133	102	106	59.0-139			4.62	20
1,2,4-Trichlorobenzene	0.125	0.117	0.125	93.6	100	62.0-137			6.61	20
1,1,1-Trichloroethane	0.125	0.123	0.127	98.4	102	69.0-126			3.20	20
1,1,2-Trichloroethane	0.125	0.125	0.135	100	108	78.0-123			7.69	20
Trichloroethene	0.125	0.121	0.129	96.8	103	76.0-126			6.40	20
Trichlorofluoromethane	0.125	0.128	0.135	102	108	61.0-142			5.32	20
1,2,3-Trichloropropane	0.125	0.160	0.161	128	129	67.0-129			0.623	20
1,2,4-Trimethylbenzene	0.125	0.144	0.156	115	125	70.0-126			8.00	20
1,2,3-Trimethylbenzene	0.125	0.143	0.152	114	122	74.0-124			6.10	20
1,3,5-Trimethylbenzene	0.125	0.139	0.148	111	118	73.0-127			6.27	20
Vinyl chloride	0.125	0.131	0.143	105	114	63.0-134			8.76	20
Xylenes, Total	0.375	0.349	0.374	93.1	99.7	72.0-127			6.92	20
(S) Toluene-d8				96.8	98.4	75.0-131				
(S) 4-Bromofluorobenzene				95.3	94.8	67.0-138				
(S) 1,2-Dichloroethane-d4				117	120	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162769-3 12/27/24 01:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
(S) Toluene-d8	105			80.0-120
(S) 4-Bromofluorobenzene	96.6			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

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

(LCS) R4162769-1 12/26/24 23:39 • (LCSD) R4162769-2 12/26/24 23:59

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 %
Benzene	5.00	5.58	5.49	112	110	70.0-123			1.63	20
Toluene	5.00	4.90	4.93	98.0	98.6	79.0-120			0.610	20
Ethylbenzene	5.00	5.30	5.04	106	101	79.0-123			5.03	20
Total Xylenes	15.0	15.4	15.1	103	101	79.0-123			1.97	20
(S) Toluene-d8				95.0	97.3	80.0-120				
(S) 4-Bromofluorobenzene				91.1	90.9	77.0-126				
(S) 1,2-Dichloroethane-d4				105	107	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163691-1 12/31/24 15:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	90.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4163691-2 12/31/24 15:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	43.9	87.8	50.0-150	
(S) o-Terphenyl			93.2	18.0-148	

L1812209-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-20 12/31/24 16:26 • (MS) R4163691-3 12/31/24 16:38 • (MSD) R4163691-4 12/31/24 16:51

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 %
Diesel Range Organics (DRO)	48.3	1.97	32.3	39.6	62.8	77.6	1	50.0-150		J3	20.3	20
(S) o-Terphenyl					72.2	83.6		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164307-1 01/02/25 11:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.0257	0.0700
Dalapon	U		0.0440	0.0700
2,4-DB	U		0.0186	0.0700
Dicamba	U		0.0226	0.0700
Dichloroprop	U		0.0183	0.0700
Dinoseb	U		0.0255	0.0700
MCPA	U		1.86	6.50
MCPP	U		2.03	6.50
2,4,5-T	U		0.0236	0.0700
2,4,5-TP (Silvex)	U		0.0187	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	73.7			22.0-132

Laboratory Control Sample (LCS)

(LCS) R4164307-2 01/02/25 11:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.0833	0.0730	87.6	40.0-120	
Dalapon	0.0833	0.0393	47.2	15.0-120	
2,4-DB	0.0833	0.0991	119	25.0-143	P
Dicamba	0.0833	0.0690	82.8	43.0-120	
Dichloroprop	0.0833	0.0734	88.1	32.0-129	P
Dinoseb	0.0833	0.0105	12.6	10.0-120	
MCPA	8.33	8.24	98.9	31.0-121	
MCPP	8.33	6.02	72.3	28.0-133	
2,4,5-T	0.0833	0.0626	75.2	41.0-120	
2,4,5-TP (Silvex)	0.0833	0.0661	79.4	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			79.6	22.0-132	

L1812342-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812342-01 01/02/25 12:53 • (MS) R4164307-3 01/02/25 13:05 • (MSD) R4164307-4 01/02/25 13:16

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 %
2,4-D	0.0828	U	0.0691	0.0624	83.5	75.4	1	10.0-160			10.2	24
Dalapon	0.0828	U	ND	ND	29.1	21.5	1	10.0-121		J3	30.1	27
2,4-DB	0.0828	U	0.128	0.110	155	133	1	10.0-160	P	P	15.1	22
Dicamba	0.0828	U	0.0659	0.0591	79.6	71.4	1	10.0-154			10.9	21

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1812342-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812342-01 01/02/25 12:53 • (MS) R4164307-3 01/02/25 13:05 • (MSD) R4164307-4 01/02/25 13:16

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 %
Dichloroprop	0.0828	U	0.0659	0.0595	79.6	71.9	1	10.0-158			10.2	20
Dinoseb	0.0828	U	ND	ND	20.2	24.0	1	10.0-120			17.5	40
MCPA	8.28	U	7.85	6.24	94.8	75.4	1	10.0-160			22.9	40
MCPP	8.28	U	17.0	15.3	205	185	1	10.0-160	E J5 P	J5 P	10.5	40
2,4,5-T	0.0828	U	0.0729	0.0649	88.0	78.4	1	10.0-157	P		11.6	20
2,4,5-TP (Silvex)	0.0828	U	0.0654	0.0671	79.0	81.0	1	10.0-156			2.57	20
(S) 2,4-Dichlorophenyl Acetic Acid					91.6	76.5		22.0-132				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4163677-1 12/31/24 20:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00645	0.0200
Alpha BHC	U		0.00637	0.0200
Beta BHC	U		0.00630	0.0200
Delta BHC	U		0.00635	0.0200
Gamma BHC	U		0.00676	0.0200
Chlordane	U		0.0990	0.300
4,4-DDD	U		0.00690	0.0200
4,4-DDE	U		0.00673	0.0200
4,4-DDT	U		0.00766	0.0200
Dieldrin	U		0.00697	0.0200
Endosulfan I	U		0.00604	0.0200
Endosulfan II	U		0.00661	0.0200
Endosulfan sulfate	U		0.00642	0.0200
Endrin	U		0.00746	0.0200
Endrin aldehyde	U		0.00590	0.0200
Endrin ketone	U		0.00695	0.0200
Hexachlorobenzene	U		0.00608	0.0200
Heptachlor	U		0.00693	0.0200
Heptachlor epoxide	U		0.00650	0.0200
Methoxychlor	U		0.00806	0.0200
Toxaphene	U		0.214	0.400
(S) Decachlorobiphenyl	86.0			10.0-135
(S) Tetrachloro-m-xylene	89.3			10.0-139

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0583	87.5	34.0-136	
Alpha BHC	0.0666	0.0597	89.6	34.0-139	
Beta BHC	0.0666	0.0571	85.7	34.0-133	
Delta BHC	0.0666	0.0458	68.8	34.0-135	
Gamma BHC	0.0666	0.0602	90.4	34.0-136	
4,4-DDD	0.0666	0.0614	92.2	33.0-141	
4,4-DDE	0.0666	0.0568	85.3	34.0-134	
4,4-DDT	0.0666	0.0574	86.2	30.0-143	
Dieldrin	0.0666	0.0585	87.8	35.0-137	
Endosulfan I	0.0666	0.0633	95.0	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0581	87.2	35.0-132	
Endosulfan sulfate	0.0666	0.0556	83.5	35.0-132	
Endrin	0.0666	0.0607	91.1	34.0-137	
Endrin aldehyde	0.0666	0.0482	72.4	23.0-121	
Endrin ketone	0.0666	0.0604	90.7	35.0-144	
Hexachlorobenzene	0.0666	0.0529	79.4	33.0-129	
Heptachlor	0.0666	0.0500	75.1	36.0-141	
Heptachlor epoxide	0.0666	0.0579	86.9	36.0-134	
Methoxychlor	0.0666	0.0556	83.5	28.0-150	
(S) Decachlorobiphenyl			81.4	10.0-135	
(S) Tetrachloro-m-xylene			88.3	10.0-139	

L1811713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811713-01 12/31/24 22:58 • (MS) R4163677-3 12/31/24 23:07 • (MSD) R4163677-4 12/31/24 23:16

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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.0708	U	0.0602	0.0513	85.0	72.1	1	20.0-135			15.8	37
Alpha BHC	0.0708	U	0.0678	0.0570	95.8	80.1	1	27.0-140			17.2	35
Beta BHC	0.0708	U	0.0606	0.0511	85.6	71.8	1	23.0-141			16.9	37
Delta BHC	0.0708	U	0.0490	0.0409	69.2	57.5	1	21.0-138			17.9	35
Gamma BHC	0.0708	U	0.0667	0.0561	94.2	78.7	1	27.0-137			17.3	36
4,4-DDD	0.0708	U	0.0607	0.0520	85.7	73.0	1	15.0-152			15.4	39
4,4-DDE	0.0708	U	0.0576	0.0480	81.3	67.4	1	10.0-152			18.1	40
4,4-DDT	0.0708	U	0.0582	0.0494	82.2	69.4	1	10.0-151			16.4	40
Dieldrin	0.0708	U	0.0607	0.0513	85.7	72.1	1	17.0-145			16.7	37
Endosulfan I	0.0708	U	0.0656	0.0539	92.7	75.7	1	20.0-137			19.6	36
Endosulfan II	0.0708	U	0.0607	0.0509	85.7	71.5	1	15.0-141			17.5	37
Endosulfan sulfate	0.0708	U	0.0593	0.0504	83.8	70.7	1	15.0-143			16.3	38
Endrin	0.0708	U	0.0649	0.0538	91.7	75.6	1	19.0-143			18.6	37
Endrin aldehyde	0.0708	U	0.0536	0.0441	75.7	62.0	1	10.0-139			19.3	40
Endrin ketone	0.0708	U	0.0617	0.0505	87.1	70.9	1	17.0-149			19.9	38
Hexachlorobenzene	0.0708	U	0.0593	0.0502	83.8	70.4	1	25.0-126			16.7	35
Heptachlor	0.0708	U	0.0584	0.0520	82.5	73.0	1	22.0-138			11.7	37
Heptachlor epoxide	0.0708	U	0.0600	0.0504	84.8	70.7	1	22.0-138			17.5	36
Methoxychlor	0.0708	U	0.0557	0.0486	78.8	68.2	1	10.0-159			13.8	40
(S) Decachlorobiphenyl					77.7	73.0		10.0-135				
(S) Tetrachloro-m-xylene					85.6	73.9		10.0-139				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164024-2 12/31/24 15:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	114			23.0-120
(S) Nitrobenzene-d5	112			14.0-149
(S) 2-Fluorobiphenyl	115			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0774	96.8	50.0-126	
Acenaphthene	0.0800	0.0744	93.0	50.0-120	
Acenaphthylene	0.0800	0.0780	97.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0758	94.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0733	91.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0810	101	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0802	100	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0771	96.4	49.0-125	
Chrysene	0.0800	0.0799	99.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0788	98.5	47.0-125	
Fluoranthene	0.0800	0.0813	102	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0813	102	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0748	93.5	46.0-125	
Naphthalene	0.0800	0.0750	93.8	50.0-120	
Phenanthrene	0.0800	0.0806	101	47.0-120	
Pyrene	0.0800	0.0780	97.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0788	98.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0766	95.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0851	106	50.0-120	
(S) p-Terphenyl-d14			103	23.0-120	
(S) Nitrobenzene-d5			100	14.0-149	
(S) 2-Fluorobiphenyl			106	34.0-125	

L1813004-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813004-06 01/03/25 04:47 • (MS) R4164389-1 01/03/25 05:04 • (MSD) R4164389-2 01/03/25 05:22

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	0.0952	U	0.0387	0.0531	40.6	55.2	1	10.0-145	U3		31.4	30
Acenaphthene	0.0952	U	0.0488	0.0615	51.3	64.0	1	14.0-127			23.0	27
Acenaphthylene	0.0952	U	0.0458	0.0577	48.1	60.0	1	21.0-124			23.1	25
Benzo(a)anthracene	0.0952	U	0.0375	0.0533	39.4	55.5	1	10.0-139	U3		34.9	30
Benzo(a)pyrene	0.0952	U	0.0409	0.0582	42.9	60.5	1	10.0-141	U3		35.0	31
Benzo(b)fluoranthene	0.0952	U	0.0472	0.0655	49.6	68.1	1	10.0-140			32.5	36
Benzo(g,h,i)perylene	0.0952	U	0.0530	0.0742	55.6	77.2	1	10.0-140	U3		33.4	33
Benzo(k)fluoranthene	0.0952	U	0.0425	0.0636	44.6	66.1	1	10.0-137	U3		39.8	31
Chrysene	0.0952	U	0.0453	0.0649	47.6	67.5	1	10.0-145	U3		35.7	30
Dibenz(a,h)anthracene	0.0952	U	0.0502	0.0708	52.7	73.6	1	10.0-132	U3		34.1	31
Fluoranthene	0.0952	U	0.0443	0.0619	46.5	64.3	1	10.0-153	U3		33.1	33
Fluorene	0.0952	U	0.0499	0.0649	52.4	67.5	1	11.0-130			26.1	29
Indeno(1,2,3-cd)pyrene	0.0952	U	0.0481	0.0676	50.5	70.3	1	10.0-137	U3		33.8	32
Naphthalene	0.0952	U	0.0616	0.0682	63.7	69.9	1	10.0-135			10.2	27
Phenanthrene	0.0952	U	0.0461	0.0629	48.5	65.4	1	10.0-144			30.7	31
Pyrene	0.0952	U	0.0459	0.0644	48.2	67.0	1	10.0-148			33.6	35
1-Methylnaphthalene	0.0952	U	0.0576	0.0684	59.8	70.3	1	10.0-142			17.1	28
2-Methylnaphthalene	0.0952	U	0.0561	0.0670	58.1	68.8	1	10.0-137			17.6	28
2-Chloronaphthalene	0.0952	U	0.0539	0.0666	56.6	69.2	1	29.0-120			21.1	24
(S) p-Terphenyl-d14					53.9	150		23.0-120	U1			
(S) Nitrobenzene-d5					62.9	145		14.0-149				
(S) 2-Fluorobiphenyl					64.9	155		34.0-125	U1			

1Cp

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GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

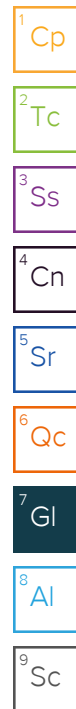
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.
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
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
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.
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.



GLOSSARY OF TERMS

Qualifier	Description
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
P	RPD between the primary and confirmatory analysis exceeded 40%.

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ACCREDITATIONS & LOCATIONS

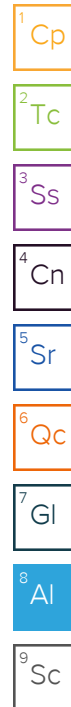
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



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Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812692
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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

SAMPLE SUMMARY

DU4-ISM L1812692-01 Solid

Collected by
Connor Anderson

Collected date/time
12/18/24 11:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2425516	1	12/27/24 17:34	12/27/24 17:42	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426606	25	12/26/24 08:31	12/31/24 03:08	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425137	1	12/26/24 08:31	12/27/24 20:24	DWR	Mt. Juliet, TN

¹ Cp

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³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

DU4-ISM L1812692-02 Solid

Collected by
Connor Anderson

Collected date/time
12/18/24 11:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2426905	1	12/31/24 11:49	12/31/24 12:11	CMB	Mt. Juliet, TN
Mercury by Method 7471B	WG2427192	1	01/01/25 10:11	01/02/25 13:55	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2427250	1	01/01/25 14:30	01/02/25 10:10	JTM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2426694	20	12/31/24 07:35	12/31/24 18:04	SGB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2427260	1	01/03/25 11:57	01/04/25 12:00	MEW	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2426623	1	12/31/24 10:54	12/31/24 22:30	RDH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2426620	1	12/31/24 11:02	01/01/25 05:02	MBE	Mt. Juliet, TN

TRIP BLANK L1812692-03 GW

Collected by
Connor Anderson

Collected date/time
12/18/24 11:00

Received date/time
12/24/24 09:00

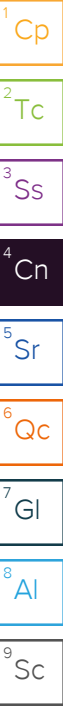
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425925	1	12/29/24 08:55	12/29/24 08:55	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2428154	1	01/03/25 15:49	01/03/25 15:49	JHH	Mt. Juliet, 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.



Brian Ford
Project Manager



Total Solids by Method 2540 G-2011

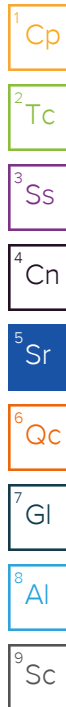
Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	73.5		1	12/27/2024 17:42	WG2425516

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	4.35	B	1.46	4.30	25	12/31/2024 03:08	WG2426606
(S) a,a,a-Trifluorotoluene(FID)	103			77.0-120		12/31/2024 03:08	WG2426606

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0628	0.0860	1	12/27/2024 20:24	WG2425137
Acrylonitrile	U		0.00621	0.0215	1	12/27/2024 20:24	WG2425137
Benzene	U		0.000803	0.00172	1	12/27/2024 20:24	WG2425137
Bromobenzene	U		0.00155	0.0215	1	12/27/2024 20:24	WG2425137
Bromodichloromethane	U		0.00125	0.00430	1	12/27/2024 20:24	WG2425137
Bromoform	U		0.00201	0.0430	1	12/27/2024 20:24	WG2425137
Bromomethane	U		0.00339	0.0215	1	12/27/2024 20:24	WG2425137
n-Butylbenzene	U		0.00903	0.0215	1	12/27/2024 20:24	WG2425137
sec-Butylbenzene	U		0.00495	0.0215	1	12/27/2024 20:24	WG2425137
tert-Butylbenzene	U		0.00335	0.00860	1	12/27/2024 20:24	WG2425137
Carbon tetrachloride	U		0.00154	0.00860	1	12/27/2024 20:24	WG2425137
Chlorobenzene	U		0.000361	0.00430	1	12/27/2024 20:24	WG2425137
Chlorodibromomethane	U		0.00105	0.00430	1	12/27/2024 20:24	WG2425137
Chloroethane	U		0.00292	0.00860	1	12/27/2024 20:24	WG2425137
Chloroform	U		0.00177	0.00430	1	12/27/2024 20:24	WG2425137
Chloromethane	U		0.00748	0.0215	1	12/27/2024 20:24	WG2425137
2-Chlorotoluene	U	J4	0.00149	0.00430	1	12/27/2024 20:24	WG2425137
4-Chlorotoluene	U	J4	0.000774	0.00860	1	12/27/2024 20:24	WG2425137
1,2-Dibromo-3-Chloropropane	U		0.00671	0.0430	1	12/27/2024 20:24	WG2425137
1,2-Dibromoethane	U		0.00111	0.00430	1	12/27/2024 20:24	WG2425137
Dibromomethane	U		0.00129	0.00860	1	12/27/2024 20:24	WG2425137
1,2-Dichlorobenzene	U		0.000731	0.00860	1	12/27/2024 20:24	WG2425137
1,3-Dichlorobenzene	U		0.00103	0.00860	1	12/27/2024 20:24	WG2425137
1,4-Dichlorobenzene	U		0.00120	0.00860	1	12/27/2024 20:24	WG2425137
Dichlorodifluoromethane	U		0.00277	0.00860	1	12/27/2024 20:24	WG2425137
1,1-Dichloroethane	U		0.000844	0.00430	1	12/27/2024 20:24	WG2425137
1,2-Dichloroethane	U		0.00112	0.00430	1	12/27/2024 20:24	WG2425137
1,1-Dichloroethene	U		0.00104	0.00430	1	12/27/2024 20:24	WG2425137
cis-1,2-Dichloroethene	U		0.00126	0.00430	1	12/27/2024 20:24	WG2425137
trans-1,2-Dichloroethene	U		0.00179	0.00860	1	12/27/2024 20:24	WG2425137
1,2-Dichloropropane	U		0.00244	0.00860	1	12/27/2024 20:24	WG2425137
1,1-Dichloropropene	U		0.00139	0.00430	1	12/27/2024 20:24	WG2425137
1,3-Dichloropropane	U		0.000862	0.00860	1	12/27/2024 20:24	WG2425137
cis-1,3-Dichloropropene	U		0.00130	0.00430	1	12/27/2024 20:24	WG2425137
trans-1,3-Dichloropropene	U		0.00196	0.00860	1	12/27/2024 20:24	WG2425137
2,2-Dichloropropane	U	C3	0.00237	0.00430	1	12/27/2024 20:24	WG2425137
Di-isopropyl ether	U		0.000705	0.00172	1	12/27/2024 20:24	WG2425137
Ethylbenzene	U		0.00127	0.00430	1	12/27/2024 20:24	WG2425137
Hexachloro-1,3-butadiene	U		0.0103	0.0430	1	12/27/2024 20:24	WG2425137
Isopropylbenzene	U		0.000731	0.00430	1	12/27/2024 20:24	WG2425137
p-Isopropyltoluene	0.0147		0.00439	0.00860	1	12/27/2024 20:24	WG2425137
2-Butanone (MEK)	U		0.109	0.172	1	12/27/2024 20:24	WG2425137
Methylene Chloride	U		0.0114	0.0430	1	12/27/2024 20:24	WG2425137
4-Methyl-2-pentanone (MIBK)	U		0.00392	0.0430	1	12/27/2024 20:24	WG2425137



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
Methyl tert-butyl ether	U		0.000602	0.00172	1	12/27/2024 20:24	WG2425137
Naphthalene	U		0.00839	0.0215	1	12/27/2024 20:24	WG2425137
n-Propylbenzene	U		0.00163	0.00860	1	12/27/2024 20:24	WG2425137
Styrene	U		0.000394	0.0215	1	12/27/2024 20:24	WG2425137
1,1,1,2-Tetrachloroethane	U		0.00163	0.00430	1	12/27/2024 20:24	WG2425137
1,1,2,2-Tetrachloroethane	U		0.00120	0.00430	1	12/27/2024 20:24	WG2425137
1,1,2-Trichlorotrifluoroethane	U		0.00130	0.00430	1	12/27/2024 20:24	WG2425137
Tetrachloroethene	U		0.00154	0.00430	1	12/27/2024 20:24	WG2425137
Toluene	0.00425	J	0.00224	0.00860	1	12/27/2024 20:24	WG2425137
1,2,3-Trichlorobenzene	U		0.0126	0.0215	1	12/27/2024 20:24	WG2425137
1,2,4-Trichlorobenzene	U		0.00757	0.0215	1	12/27/2024 20:24	WG2425137
1,1,1-Trichloroethane	U		0.00159	0.00430	1	12/27/2024 20:24	WG2425137
1,1,2-Trichloroethane	U		0.00103	0.00430	1	12/27/2024 20:24	WG2425137
Trichloroethene	U		0.00100	0.00172	1	12/27/2024 20:24	WG2425137
Trichlorofluoromethane	U		0.00142	0.00430	1	12/27/2024 20:24	WG2425137
1,2,3-Trichloropropane	U		0.00279	0.0215	1	12/27/2024 20:24	WG2425137
1,2,4-Trimethylbenzene	U		0.00272	0.00860	1	12/27/2024 20:24	WG2425137
1,2,3-Trimethylbenzene	U		0.00272	0.00860	1	12/27/2024 20:24	WG2425137
1,3,5-Trimethylbenzene	U		0.00344	0.00860	1	12/27/2024 20:24	WG2425137
Vinyl chloride	U		0.00199	0.00430	1	12/27/2024 20:24	WG2425137
Xylenes, Total	U		0.00151	0.0112	1	12/27/2024 20:24	WG2425137
(S) Toluene-d8	107			75.0-131		12/27/2024 20:24	WG2425137
(S) 4-Bromofluorobenzene	93.9			67.0-138		12/27/2024 20:24	WG2425137
(S) 1,2-Dichloroethane-d4	93.1			70.0-130		12/27/2024 20:24	WG2425137

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.0		1	12/31/2024 12:11	WG2426905

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0421	<u>J</u>	0.0222	0.0430	1	01/02/2025 13:55	WG2427192

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.743	2.15	1	01/02/2025 10:10	WG2427250
Arsenic	3.28		0.900	2.15	1	01/02/2025 10:10	WG2427250
Beryllium	0.623		0.0513	0.215	1	01/02/2025 10:10	WG2427250
Cadmium	0.325	<u>J</u>	0.0702	0.538	1	01/02/2025 10:10	WG2427250
Chromium	81.9		0.230	1.08	1	01/02/2025 10:10	WG2427250
Copper	49.6		0.384	2.15	1	01/02/2025 10:10	WG2427250
Lead	21.3		0.351	0.538	1	01/02/2025 10:10	WG2427250
Nickel	78.2		0.215	2.15	1	01/02/2025 10:10	WG2427250
Selenium	U		1.15	2.15	1	01/02/2025 10:10	WG2427250
Silver	0.156	<u>J</u>	0.137	1.08	1	01/02/2025 10:10	WG2427250
Thallium	U		0.557	2.15	1	01/02/2025 10:10	WG2427250
Zinc	134		1.05	5.38	1	01/02/2025 10:10	WG2427250

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	94.2		28.6	86.0	20	12/31/2024 18:04	WG2426694
Residual Range Organics (RRO)	263		71.6	215	20	12/31/2024 18:04	WG2426694
(S) o-Terphenyl	248	<u>J7</u>		18.0-148		12/31/2024 18:04	WG2426694

Sample Narrative:

L1812692-02 WG2426694: Sample resembles laboratory standards for Diesel and Hydraulic oil. Surrogate failure due to matrix.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
2,4-D	U		0.0276	0.0753	1	01/04/2025 12:00	WG2427260
Dalapon	U		0.0473	0.0753	1	01/04/2025 12:00	WG2427260
2,4-DB	U		0.0200	0.0753	1	01/04/2025 12:00	WG2427260
Dicamba	U		0.0243	0.0753	1	01/04/2025 12:00	WG2427260
Dichloroprop	U		0.0197	0.0753	1	01/04/2025 12:00	WG2427260
Dinoseb	U		0.0274	0.0753	1	01/04/2025 12:00	WG2427260
MCPA	U		2.00	6.99	1	01/04/2025 12:00	WG2427260
MCPP	U		2.18	6.99	1	01/04/2025 12:00	WG2427260
2,4,5-T	U		0.0254	0.0753	1	01/04/2025 12:00	WG2427260
2,4,5-TP (Silvex)	U		0.0201	0.0753	1	01/04/2025 12:00	WG2427260
(S) 2,4-Dichlorophenyl Acetic Acid	89.8			22.0-132		01/04/2025 12:00	WG2427260

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00694	0.0215	1	12/31/2024 22:30	WG2426623
Alpha BHC	U		0.00685	0.0215	1	12/31/2024 22:30	WG2426623
Beta BHC	U		0.00678	0.0215	1	12/31/2024 22:30	WG2426623
Delta BHC	U		0.00683	0.0215	1	12/31/2024 22:30	WG2426623
Gamma BHC	U		0.00727	0.0215	1	12/31/2024 22:30	WG2426623
Chlordane	U		0.106	0.323	1	12/31/2024 22:30	WG2426623
4,4-DDD	U		0.00742	0.0215	1	12/31/2024 22:30	WG2426623
4,4-DDE	U		0.00724	0.0215	1	12/31/2024 22:30	WG2426623
4,4-DDT	U		0.00824	0.0215	1	12/31/2024 22:30	WG2426623
Dieldrin	U		0.00750	0.0215	1	12/31/2024 22:30	WG2426623
Endosulfan I	U		0.00650	0.0215	1	12/31/2024 22:30	WG2426623
Endosulfan II	U		0.00711	0.0215	1	12/31/2024 22:30	WG2426623
Endosulfan sulfate	U		0.00690	0.0215	1	12/31/2024 22:30	WG2426623
Endrin	U		0.00802	0.0215	1	12/31/2024 22:30	WG2426623
Endrin aldehyde	U		0.00635	0.0215	1	12/31/2024 22:30	WG2426623
Endrin ketone	U		0.00747	0.0215	1	12/31/2024 22:30	WG2426623
Hexachlorobenzene	U		0.00654	0.0215	1	12/31/2024 22:30	WG2426623
Heptachlor	U		0.00745	0.0215	1	12/31/2024 22:30	WG2426623
Heptachlor epoxide	U		0.00699	0.0215	1	12/31/2024 22:30	WG2426623
Methoxychlor	U		0.00867	0.0215	1	12/31/2024 22:30	WG2426623
Toxaphene	U		0.230	0.430	1	12/31/2024 22:30	WG2426623
(S) Decachlorobiphenyl	77.2			10.0-135		12/31/2024 22:30	WG2426623
(S) Tetrachloro-m-xylene	72.2			10.0-139		12/31/2024 22:30	WG2426623

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

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		0.00247	0.00645	1	01/01/2025 05:02	WG2426620
Acenaphthene	U		0.00225	0.00645	1	01/01/2025 05:02	WG2426620
Acenaphthylene	U		0.00232	0.00645	1	01/01/2025 05:02	WG2426620
Benzo(a)anthracene	U		0.00186	0.00645	1	01/01/2025 05:02	WG2426620
Benzo(a)pyrene	U		0.00193	0.00645	1	01/01/2025 05:02	WG2426620
Benzo(b)fluoranthene	U		0.00165	0.00645	1	01/01/2025 05:02	WG2426620
Benzo(g,h,i)perylene	U		0.00190	0.00645	1	01/01/2025 05:02	WG2426620
Benzo(k)fluoranthene	U		0.00231	0.00645	1	01/01/2025 05:02	WG2426620
Chrysene	U		0.00250	0.00645	1	01/01/2025 05:02	WG2426620
Dibenz(a,h)anthracene	U		0.00185	0.00645	1	01/01/2025 05:02	WG2426620
Fluoranthene	U		0.00244	0.00645	1	01/01/2025 05:02	WG2426620
Fluorene	U		0.00220	0.00645	1	01/01/2025 05:02	WG2426620
Indeno(1,2,3-cd)pyrene	U		0.00195	0.00645	1	01/01/2025 05:02	WG2426620
Naphthalene	U		0.00439	0.0215	1	01/01/2025 05:02	WG2426620
Phenanthrene	U		0.00248	0.00645	1	01/01/2025 05:02	WG2426620
Pyrene	U		0.00215	0.00645	1	01/01/2025 05:02	WG2426620
1-Methylnaphthalene	U		0.00483	0.0215	1	01/01/2025 05:02	WG2426620
2-Methylnaphthalene	U		0.00459	0.0215	1	01/01/2025 05:02	WG2426620
2-Chloronaphthalene	U		0.00501	0.0215	1	01/01/2025 05:02	WG2426620
(S) p-Terphenyl-d14	70.4			23.0-120		01/01/2025 05:02	WG2426620
(S) Nitrobenzene-d5	90.4			14.0-149		01/01/2025 05:02	WG2426620
(S) 2-Fluorobiphenyl	74.7			34.0-125		01/01/2025 05:02	WG2426620

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	12/29/2024 08:55	WG2425925
Toluene	U		0.278	1.00	1	01/03/2025 15:49	WG2428154
Ethylbenzene	U		0.137	1.00	1	12/29/2024 08:55	WG2425925
Total Xylenes	U		0.174	3.00	1	12/29/2024 08:55	WG2425925
(S) Toluene-d8	102			80.0-120		12/29/2024 08:55	WG2425925
(S) Toluene-d8	107			80.0-120		01/03/2025 15:49	WG2428154
(S) 4-Bromofluorobenzene	92.3			77.0-126		12/29/2024 08:55	WG2425925
(S) 4-Bromofluorobenzene	93.6			77.0-126		01/03/2025 15:49	WG2428154
(S) 1,2-Dichloroethane-d4	123			70.0-130		12/29/2024 08:55	WG2425925
(S) 1,2-Dichloroethane-d4	95.7			70.0-130		01/03/2025 15:49	WG2428154

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162532-1 12/27/24 17:42

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

L1812926-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1812926-06 12/27/24 17:42 • (DUP) R4162532-3 12/27/24 17:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	83.2	87.6	1	5.18		10

Laboratory Control Sample (LCS)

(LCS) R4162532-2 12/27/24 17:42

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163674-1 12/31/24 12:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Total Solids	0.000			

L1812779-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1812779-02 12/31/24 12:11 • (DUP) R4163674-3 12/31/24 12:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Total Solids	93.7	93.6	1	0.0870		10

Laboratory Control Sample (LCS)

(LCS) R4163674-2 12/31/24 12:11

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Total Solids	50.0	50.0	100	90.0-110	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163828-1 01/02/25 12:50

	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) R4163828-2 01/02/25 12:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.466	93.1	80.0-120	

L1811286-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811286-08 01/02/25 12:55 • (MS) R4163828-4 01/02/25 13:00 • (MSD) R4163828-5 01/02/25 13:03

	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	0.663	0.0944	0.715	0.750	93.6	98.9	1	75.0-125			4.75	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163794-1 01/02/25 09:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.691	2.00
Arsenic	U		0.837	2.00
Beryllium	U		0.0477	0.200
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Copper	U		0.357	2.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Selenium	U		1.07	2.00
Silver	U		0.127	1.00
Thallium	U		0.518	2.00
Zinc	U		0.974	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163794-2 01/02/25 09:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	89.4	89.4	80.0-120	
Arsenic	100	97.3	97.3	80.0-120	
Beryllium	100	96.7	96.7	80.0-120	
Cadmium	100	95.9	95.9	80.0-120	
Chromium	100	99.5	99.5	80.0-120	
Copper	100	104	104	80.0-120	
Lead	100	95.5	95.5	80.0-120	
Nickel	100	97.3	97.3	80.0-120	
Selenium	100	96.9	96.9	80.0-120	
Silver	20.0	19.5	97.7	80.0-120	
Thallium	100	95.8	95.8	80.0-120	
Zinc	100	99.0	99.0	80.0-120	

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

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 %
Antimony	100	U	79.5	79.4	79.5	79.4	1	75.0-125			0.152	20
Arsenic	100	3.87	109	114	105	110	1	75.0-125			4.52	20
Beryllium	100	0.286	100	105	100	105	1	75.0-125			4.90	20

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

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 %
Cadmium	100	0.224	100	105	99.9	105	1	75.0-125			4.70	20
Chromium	100	8.62	110	111	102	102	1	75.0-125			0.393	20
Copper	100	4.61	112	113	108	109	1	75.0-125			0.883	20
Lead	100	13.4	120	121	106	108	1	75.0-125			1.45	20
Nickel	100	9.83	123	122	113	112	1	75.0-125			0.774	20
Selenium	100	U	104	111	104	111	1	75.0-125			5.67	20
Silver	20.0	1.31	22.8	24.0	108	114	1	75.0-125			5.03	20
Thallium	100	U	102	104	102	104	1	75.0-125			2.23	20
Zinc	100	23.5	122	122	98.4	98.1	1	75.0-125			0.168	20

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4163231-2 12/30/24 21:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	1.26	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4163231-1 12/30/24 20:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.00	5.51	110	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			108	77.0-120	

L1813295-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813295-02 12/31/24 05:28 • (MS) R4163231-3 12/31/24 06:07 • (MSD) R4163231-4 12/31/24 06:26

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 %
Gasoline Range Organics-NWTPH	132	18.7	188	172	128	116	25.5	50.0-150			8.60	27
(S) a,a,a-Trifluorotoluene(FID)					105	104		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	0.0107	U	0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	93.8			67.0-138
(S) 1,2-Dichloroethane-d4	108			70.0-130

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

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	0.625	0.674	0.728	108	116	10.0-160			7.70	31
Acrylonitrile	0.625	0.745	0.731	119	117	45.0-153			1.90	22
Benzene	0.125	0.114	0.121	91.2	96.8	70.0-123			5.96	20
Bromobenzene	0.125	0.140	0.146	112	117	73.0-121			4.20	20
Bromodichloromethane	0.125	0.129	0.135	103	108	73.0-121			4.55	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

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	0.125	0.107	0.114	85.6	91.2	64.0-132			6.33	20
Bromomethane	0.125	0.107	0.108	85.6	86.4	56.0-147			0.930	20
n-Butylbenzene	0.125	0.130	0.141	104	113	68.0-135			8.12	20
sec-Butylbenzene	0.125	0.132	0.149	106	119	74.0-130			12.1	20
tert-Butylbenzene	0.125	0.139	0.149	111	119	75.0-127			6.94	20
Carbon tetrachloride	0.125	0.114	0.124	91.2	99.2	66.0-128			8.40	20
Chlorobenzene	0.125	0.115	0.121	92.0	96.8	76.0-128			5.08	20
Chlorodibromomethane	0.125	0.122	0.130	97.6	104	74.0-127			6.35	20
Chloroethane	0.125	0.107	0.110	85.6	88.0	61.0-134			2.76	20
Chloroform	0.125	0.114	0.119	91.2	95.2	72.0-123			4.29	20
Chloromethane	0.125	0.129	0.141	103	113	51.0-138			8.89	20
2-Chlorotoluene	0.125	0.147	0.158	118	126	75.0-124		J4	7.21	20
4-Chlorotoluene	0.125	0.148	0.160	118	128	75.0-124		J4	7.79	20
1,2-Dibromo-3-Chloropropane	0.125	0.132	0.131	106	105	59.0-130			0.760	20
1,2-Dibromoethane	0.125	0.129	0.137	103	110	74.0-128			6.02	20
Dibromomethane	0.125	0.128	0.131	102	105	75.0-122			2.32	20
1,2-Dichlorobenzene	0.125	0.129	0.135	103	108	76.0-124			4.55	20
1,3-Dichlorobenzene	0.125	0.127	0.134	102	107	76.0-125			5.36	20
1,4-Dichlorobenzene	0.125	0.136	0.146	109	117	77.0-121			7.09	20
Dichlorodifluoromethane	0.125	0.124	0.135	99.2	108	43.0-156			8.49	20
1,1-Dichloroethane	0.125	0.126	0.132	101	106	70.0-127			4.65	20
1,2-Dichloroethane	0.125	0.137	0.140	110	112	65.0-131			2.17	20
1,1-Dichloroethene	0.125	0.126	0.133	101	106	65.0-131			5.41	20
cis-1,2-Dichloroethene	0.125	0.112	0.116	89.6	92.8	73.0-125			3.51	20
trans-1,2-Dichloroethene	0.125	0.110	0.115	88.0	92.0	71.0-125			4.44	20
1,2-Dichloropropane	0.125	0.133	0.141	106	113	74.0-125			5.84	20
1,1-Dichloropropene	0.125	0.126	0.136	101	109	73.0-125			7.63	20
1,3-Dichloropropane	0.125	0.134	0.140	107	112	80.0-125			4.38	20
cis-1,3-Dichloropropene	0.125	0.124	0.133	99.2	106	76.0-127			7.00	20
trans-1,3-Dichloropropene	0.125	0.137	0.143	110	114	73.0-127			4.29	20
2,2-Dichloropropane	0.125	0.0957	0.0953	76.6	76.2	59.0-135			0.419	20
Di-isopropyl ether	0.125	0.142	0.148	114	118	60.0-136			4.14	20
Ethylbenzene	0.125	0.119	0.129	95.2	103	74.0-126			8.06	20
Hexachloro-1,3-butadiene	0.125	0.107	0.115	85.6	92.0	57.0-150			7.21	20
Isopropylbenzene	0.125	0.118	0.129	94.4	103	72.0-127			8.91	20
p-Isopropyltoluene	0.125	0.137	0.152	110	122	72.0-133			10.4	20
2-Butanone (MEK)	0.625	0.788	0.824	126	132	30.0-160			4.47	24
Methylene Chloride	0.125	0.112	0.117	89.6	93.6	68.0-123			4.37	20
4-Methyl-2-pentanone (MIBK)	0.625	0.741	0.763	119	122	56.0-143			2.93	20
Methyl tert-butyl ether	0.125	0.132	0.132	106	106	66.0-132			0.000	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	0.125	0.129	0.135	103	108	59.0-130			4.55	20
n-Propylbenzene	0.125	0.131	0.143	105	114	74.0-126			8.76	20
Styrene	0.125	0.127	0.135	102	108	72.0-127			6.11	20
1,1,1,2-Tetrachloroethane	0.125	0.124	0.128	99.2	102	74.0-129			3.17	20
1,1,2,2-Tetrachloroethane	0.125	0.152	0.158	122	126	68.0-128			3.87	20
1,1,2-Trichlorotrifluoroethane	0.125	0.114	0.123	91.2	98.4	61.0-139			7.59	20
Tetrachloroethene	0.125	0.113	0.126	90.4	101	70.0-136			10.9	20
Toluene	0.125	0.118	0.125	94.4	100	75.0-121			5.76	20
1,2,3-Trichlorobenzene	0.125	0.127	0.133	102	106	59.0-139			4.62	20
1,2,4-Trichlorobenzene	0.125	0.117	0.125	93.6	100	62.0-137			6.61	20
1,1,1-Trichloroethane	0.125	0.123	0.127	98.4	102	69.0-126			3.20	20
1,1,2-Trichloroethane	0.125	0.125	0.135	100	108	78.0-123			7.69	20
Trichloroethene	0.125	0.121	0.129	96.8	103	76.0-126			6.40	20
Trichlorofluoromethane	0.125	0.128	0.135	102	108	61.0-142			5.32	20
1,2,3-Trichloropropane	0.125	0.160	0.161	128	129	67.0-129			0.623	20
1,2,4-Trimethylbenzene	0.125	0.144	0.156	115	125	70.0-126			8.00	20
1,2,3-Trimethylbenzene	0.125	0.143	0.152	114	122	74.0-124			6.10	20
1,3,5-Trimethylbenzene	0.125	0.139	0.148	111	118	73.0-127			6.27	20
Vinyl chloride	0.125	0.131	0.143	105	114	63.0-134			8.76	20
Xylenes, Total	0.375	0.349	0.374	93.1	99.7	72.0-127			6.92	20
(S) Toluene-d8				96.8	98.4	75.0-131				
(S) 4-Bromofluorobenzene				95.3	94.8	67.0-138				
(S) 1,2-Dichloroethane-d4				117	120	70.0-130				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4164167-3 12/29/24 08:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	97.5			77.0-126
(S) 1,2-Dichloroethane-d4	120			70.0-130

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

(LCS) R4164167-1 12/29/24 07:06 • (LCSD) R4164167-2 12/29/24 07:28

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 %
Benzene	5.00	4.30	3.74	86.0	74.8	70.0-123			13.9	20
Ethylbenzene	5.00	4.40	4.09	88.0	81.8	79.0-123			7.30	20
Total Xylenes	15.0	13.6	12.3	90.7	82.0	79.0-123			10.0	20
(S) Toluene-d8				102	102	80.0-120				
(S) 4-Bromofluorobenzene				95.4	93.4	77.0-126				
(S) 1,2-Dichloroethane-d4				122	123	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164380-2 01/03/25 11:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.278	1.00
(S) Toluene-d8	106			80.0-120
(S) 4-Bromofluorobenzene	90.3			77.0-126
(S) 1,2-Dichloroethane-d4	100			70.0-130

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

(LCS) R4164380-1 01/03/25 10:34 • (LCSD) R4164380-3 01/03/25 12:37

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 %
Toluene	5.00	4.47	4.78	89.4	95.6	79.0-120			6.70	20
(S) Toluene-d8				102	106	80.0-120				
(S) 4-Bromofluorobenzene				93.0	95.7	77.0-126				
(S) 1,2-Dichloroethane-d4				99.6	93.4	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163691-1 12/31/24 15:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	90.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4163691-2 12/31/24 15:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	43.9	87.8	50.0-150	
(S) o-Terphenyl			93.2	18.0-148	

L1812209-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-20 12/31/24 16:26 • (MS) R4163691-3 12/31/24 16:38 • (MSD) R4163691-4 12/31/24 16:51

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 %
Diesel Range Organics (DRO)	48.3	1.97	32.3	39.6	62.8	77.6	1	50.0-150		J3	20.3	20
(S) o-Terphenyl					72.2	83.6		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164555-1 01/04/25 10:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.0257	0.0700
Dalapon	U		0.0440	0.0700
2,4-DB	U		0.0186	0.0700
Dicamba	U		0.0226	0.0700
Dichloroprop	U		0.0183	0.0700
Dinoseb	U		0.0255	0.0700
MCPA	U		1.86	6.50
MCPP	U		2.03	6.50
2,4,5-T	U		0.0236	0.0700
2,4,5-TP (Silvex)	U		0.0187	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	88.6			22.0-132

Laboratory Control Sample (LCS)

(LCS) R4164555-2 01/04/25 10:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.0833	0.0677	81.3	40.0-120	
Dalapon	0.0833	0.0257	30.9	15.0-120	
2,4-DB	0.0833	0.118	142	25.0-143	P
Dicamba	0.0833	0.0664	79.7	43.0-120	
Dichloroprop	0.0833	0.0636	76.4	32.0-129	
Dinoseb	0.0833	0.0254	30.5	10.0-120	
MCPA	8.33	7.29	87.5	31.0-121	
MCPP	8.33	9.29	112	28.0-133	
2,4,5-T	0.0833	0.0644	77.3	41.0-120	
2,4,5-TP (Silvex)	0.0833	0.0683	82.0	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			80.8	22.0-132	

L1813391-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813391-01 01/04/25 12:22 • (MS) R4164555-3 01/04/25 12:33 • (MSD) R4164555-4 01/04/25 12:45

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 %
2,4-D	0.0833	U	U	U	0.000	0.000	1	10.0-160	J6	J6	0.000	24
Dalapon	0.0833	U	U	U	0.000	0.000	1	10.0-121	J6	J6	0.000	27
2,4-DB	0.0833	U	U	U	0.000	0.000	1	10.0-160	J6	J6	0.000	22

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1813391-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813391-01 01/04/25 12:22 • (MS) R4164555-3 01/04/25 12:33 • (MSD) R4164555-4 01/04/25 12:45

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 %
Dicamba	0.0833	U	U	U	0.000	0.000	1	10.0-154	J6	J6	0.000	21
Dichloroprop	0.0833	U	U	U	0.000	0.000	1	10.0-158	J6	J6	0.000	20
Dinoseb	0.0833	U	U	U	0.000	0.000	1	10.0-120	J6	J6	0.000	40
MCPA	8.33	U	U	U	0.000	0.000	1	10.0-160	J6	J6	0.000	40
MCPP	8.33	U	U	U	0.000	0.000	1	10.0-160	J6	J6	0.000	40
2,4,5-T	0.0833	U	U	U	0.000	0.000	1	10.0-157	J6	J6	0.000	20
2,4,5-TP (Silvex)	0.0833	U	U	U	0.000	0.000	1	10.0-156	J6	J6	0.000	20
(S) 2,4-Dichlorophenyl Acetic Acid					3.98	4.45		22.0-132	J2	J2		

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163677-1 12/31/24 20:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00645	0.0200
Alpha BHC	U		0.00637	0.0200
Beta BHC	U		0.00630	0.0200
Delta BHC	U		0.00635	0.0200
Gamma BHC	U		0.00676	0.0200
Chlordane	U		0.0990	0.300
4,4-DDD	U		0.00690	0.0200
4,4-DDE	U		0.00673	0.0200
4,4-DDT	U		0.00766	0.0200
Dieldrin	U		0.00697	0.0200
Endosulfan I	U		0.00604	0.0200
Endosulfan II	U		0.00661	0.0200
Endosulfan sulfate	U		0.00642	0.0200
Endrin	U		0.00746	0.0200
Endrin aldehyde	U		0.00590	0.0200
Endrin ketone	U		0.00695	0.0200
Hexachlorobenzene	U		0.00608	0.0200
Heptachlor	U		0.00693	0.0200
Heptachlor epoxide	U		0.00650	0.0200
Methoxychlor	U		0.00806	0.0200
Toxaphene	U		0.214	0.400
(S) Decachlorobiphenyl	86.0			10.0-135
(S) Tetrachloro-m-xylene	89.3			10.0-139

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0583	87.5	34.0-136	
Alpha BHC	0.0666	0.0597	89.6	34.0-139	
Beta BHC	0.0666	0.0571	85.7	34.0-133	
Delta BHC	0.0666	0.0458	68.8	34.0-135	
Gamma BHC	0.0666	0.0602	90.4	34.0-136	
4,4-DDD	0.0666	0.0614	92.2	33.0-141	
4,4-DDE	0.0666	0.0568	85.3	34.0-134	
4,4-DDT	0.0666	0.0574	86.2	30.0-143	
Dieldrin	0.0666	0.0585	87.8	35.0-137	
Endosulfan I	0.0666	0.0633	95.0	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0581	87.2	35.0-132	
Endosulfan sulfate	0.0666	0.0556	83.5	35.0-132	
Endrin	0.0666	0.0607	91.1	34.0-137	
Endrin aldehyde	0.0666	0.0482	72.4	23.0-121	
Endrin ketone	0.0666	0.0604	90.7	35.0-144	
Hexachlorobenzene	0.0666	0.0529	79.4	33.0-129	
Heptachlor	0.0666	0.0500	75.1	36.0-141	
Heptachlor epoxide	0.0666	0.0579	86.9	36.0-134	
Methoxychlor	0.0666	0.0556	83.5	28.0-150	
(S) Decachlorobiphenyl			81.4	10.0-135	
(S) Tetrachloro-m-xylene			88.3	10.0-139	

L1811713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811713-01 12/31/24 22:58 • (MS) R4163677-3 12/31/24 23:07 • (MSD) R4163677-4 12/31/24 23:16

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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.0708	U	0.0602	0.0513	85.0	72.1	1	20.0-135			15.8	37
Alpha BHC	0.0708	U	0.0678	0.0570	95.8	80.1	1	27.0-140			17.2	35
Beta BHC	0.0708	U	0.0606	0.0511	85.6	71.8	1	23.0-141			16.9	37
Delta BHC	0.0708	U	0.0490	0.0409	69.2	57.5	1	21.0-138			17.9	35
Gamma BHC	0.0708	U	0.0667	0.0561	94.2	78.7	1	27.0-137			17.3	36
4,4-DDD	0.0708	U	0.0607	0.0520	85.7	73.0	1	15.0-152			15.4	39
4,4-DDE	0.0708	U	0.0576	0.0480	81.3	67.4	1	10.0-152			18.1	40
4,4-DDT	0.0708	U	0.0582	0.0494	82.2	69.4	1	10.0-151			16.4	40
Dieldrin	0.0708	U	0.0607	0.0513	85.7	72.1	1	17.0-145			16.7	37
Endosulfan I	0.0708	U	0.0656	0.0539	92.7	75.7	1	20.0-137			19.6	36
Endosulfan II	0.0708	U	0.0607	0.0509	85.7	71.5	1	15.0-141			17.5	37
Endosulfan sulfate	0.0708	U	0.0593	0.0504	83.8	70.7	1	15.0-143			16.3	38
Endrin	0.0708	U	0.0649	0.0538	91.7	75.6	1	19.0-143			18.6	37
Endrin aldehyde	0.0708	U	0.0536	0.0441	75.7	62.0	1	10.0-139			19.3	40
Endrin ketone	0.0708	U	0.0617	0.0505	87.1	70.9	1	17.0-149			19.9	38
Hexachlorobenzene	0.0708	U	0.0593	0.0502	83.8	70.4	1	25.0-126			16.7	35
Heptachlor	0.0708	U	0.0584	0.0520	82.5	73.0	1	22.0-138			11.7	37
Heptachlor epoxide	0.0708	U	0.0600	0.0504	84.8	70.7	1	22.0-138			17.5	36
Methoxychlor	0.0708	U	0.0557	0.0486	78.8	68.2	1	10.0-159			13.8	40
(S) Decachlorobiphenyl					77.7	73.0		10.0-135				
(S) Tetrachloro-m-xylene					85.6	73.9		10.0-139				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164024-2 12/31/24 15:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	114			23.0-120
(S) Nitrobenzene-d5	112			14.0-149
(S) 2-Fluorobiphenyl	115			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0774	96.8	50.0-126	
Acenaphthene	0.0800	0.0744	93.0	50.0-120	
Acenaphthylene	0.0800	0.0780	97.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0758	94.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0733	91.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0810	101	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0802	100	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0771	96.4	49.0-125	
Chrysene	0.0800	0.0799	99.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0788	98.5	47.0-125	
Fluoranthene	0.0800	0.0813	102	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0813	102	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0748	93.5	46.0-125	
Naphthalene	0.0800	0.0750	93.8	50.0-120	
Phenanthrene	0.0800	0.0806	101	47.0-120	
Pyrene	0.0800	0.0780	97.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0788	98.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0766	95.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0851	106	50.0-120	
(S) p-Terphenyl-d14			103	23.0-120	
(S) Nitrobenzene-d5			100	14.0-149	
(S) 2-Fluorobiphenyl			106	34.0-125	

L1813004-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813004-06 01/03/25 04:47 • (MS) R4164389-1 01/03/25 05:04 • (MSD) R4164389-2 01/03/25 05:22

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	0.0952	U	0.0387	0.0531	40.6	55.2	1	10.0-145	U3		31.4	30
Acenaphthene	0.0952	U	0.0488	0.0615	51.3	64.0	1	14.0-127			23.0	27
Acenaphthylene	0.0952	U	0.0458	0.0577	48.1	60.0	1	21.0-124			23.1	25
Benzo(a)anthracene	0.0952	U	0.0375	0.0533	39.4	55.5	1	10.0-139	U3		34.9	30
Benzo(a)pyrene	0.0952	U	0.0409	0.0582	42.9	60.5	1	10.0-141	U3		35.0	31
Benzo(b)fluoranthene	0.0952	U	0.0472	0.0655	49.6	68.1	1	10.0-140			32.5	36
Benzo(g,h,i)perylene	0.0952	U	0.0530	0.0742	55.6	77.2	1	10.0-140	U3		33.4	33
Benzo(k)fluoranthene	0.0952	U	0.0425	0.0636	44.6	66.1	1	10.0-137	U3		39.8	31
Chrysene	0.0952	U	0.0453	0.0649	47.6	67.5	1	10.0-145	U3		35.7	30
Dibenz(a,h)anthracene	0.0952	U	0.0502	0.0708	52.7	73.6	1	10.0-132	U3		34.1	31
Fluoranthene	0.0952	U	0.0443	0.0619	46.5	64.3	1	10.0-153	U3		33.1	33
Fluorene	0.0952	U	0.0499	0.0649	52.4	67.5	1	11.0-130			26.1	29
Indeno(1,2,3-cd)pyrene	0.0952	U	0.0481	0.0676	50.5	70.3	1	10.0-137	U3		33.8	32
Naphthalene	0.0952	U	0.0616	0.0682	63.7	69.9	1	10.0-135			10.2	27
Phenanthrene	0.0952	U	0.0461	0.0629	48.5	65.4	1	10.0-144			30.7	31
Pyrene	0.0952	U	0.0459	0.0644	48.2	67.0	1	10.0-148			33.6	35
1-Methylnaphthalene	0.0952	U	0.0576	0.0684	59.8	70.3	1	10.0-142			17.1	28
2-Methylnaphthalene	0.0952	U	0.0561	0.0670	58.1	68.8	1	10.0-137			17.6	28
2-Chloronaphthalene	0.0952	U	0.0539	0.0666	56.6	69.2	1	29.0-120			21.1	24
(S) p-Terphenyl-d14					53.9	150		23.0-120	U1			
(S) Nitrobenzene-d5					62.9	145		14.0-149				
(S) 2-Fluorobiphenyl					64.9	155		34.0-125	U1			

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

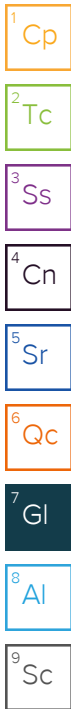
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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
B	The same analyte is found in the associated blank.
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.
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.
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.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.



GLOSSARY OF TERMS

Qualifier	Description
P	RPD between the primary and confirmatory analysis exceeded 40%.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

ACCREDITATIONS & LOCATIONS

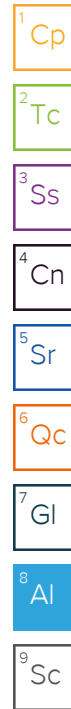
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



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Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812727
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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

SAMPLE SUMMARY

EQUIPMENT RINSATE L1812727-01 GW

Collected by
Connor Anderson

Collected date/time
12/20/24 21:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG2426119	1	12/31/24 14:38	01/01/25 13:50	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2426131	1	12/31/24 09:59	12/31/24 16:24	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426192	1	12/30/24 01:31	12/30/24 01:31	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2427487	1	01/02/25 11:48	01/02/25 11:48	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2426650	1	12/31/24 20:37	01/02/25 19:28	MAA	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2425575	1	12/27/24 22:39	12/30/24 21:39	BMC	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2425081	1	12/27/24 01:08	12/27/24 18:52	LJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2424808	1	12/26/24 08:18	12/28/24 23:00	MBE	Mt. Juliet, TN

TRIP BLANK L1812727-02 GW

Collected by
Connor Anderson

Collected date/time
12/20/24 00:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425237	1	12/27/24 01:55	12/27/24 01:55	JHH	Mt. Juliet, TN

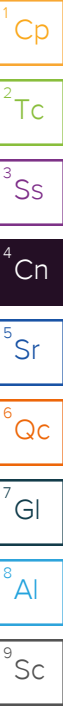


CASE NARRATIVE

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.



Brian Ford
Project Manager



EQUIPMENT RINSATE

Collected date/time: 12/20/24 21:00

SAMPLE RESULTS - 01

L1812727

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	01/01/2025 13:50	WG2426119

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		5.06	10.0	1	12/31/2024 16:24	WG2426131
Arsenic	U		7.83	10.0	1	12/31/2024 16:24	WG2426131
Beryllium	U		0.501	2.00	1	12/31/2024 16:24	WG2426131
Cadmium	0.983	B J	0.538	2.00	1	12/31/2024 16:24	WG2426131
Chromium	U		1.51	10.0	1	12/31/2024 16:24	WG2426131
Copper	U		2.26	10.0	1	12/31/2024 16:24	WG2426131
Lead	U		2.43	6.00	1	12/31/2024 16:24	WG2426131
Nickel	2.54	J	1.96	10.0	1	12/31/2024 16:24	WG2426131
Selenium	U		6.16	10.0	1	12/31/2024 16:24	WG2426131
Silver	U		2.89	5.00	1	12/31/2024 16:24	WG2426131
Thallium	U		6.63	10.0	1	12/31/2024 16:24	WG2426131
Zinc	U		4.67	50.0	1	12/31/2024 16:24	WG2426131

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	U		31.6	100	1	12/30/2024 01:31	WG2426192
(S) a,a,a-Trifluorotoluene(FID)	103			78.0-120		12/30/2024 01:31	WG2426192

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		11.3	50.0	1	01/02/2025 11:48	WG2427487
Acrylonitrile	U		0.671	10.0	1	01/02/2025 11:48	WG2427487
Benzene	0.122	J	0.0941	1.00	1	01/02/2025 11:48	WG2427487
Bromobenzene	U		0.118	1.00	1	01/02/2025 11:48	WG2427487
Bromodichloromethane	U		0.136	1.00	1	01/02/2025 11:48	WG2427487
Bromoform	U		0.129	1.00	1	01/02/2025 11:48	WG2427487
Bromomethane	U	C3	0.605	5.00	1	01/02/2025 11:48	WG2427487
n-Butylbenzene	U		0.157	1.00	1	01/02/2025 11:48	WG2427487
sec-Butylbenzene	U		0.125	1.00	1	01/02/2025 11:48	WG2427487
tert-Butylbenzene	U		0.127	1.00	1	01/02/2025 11:48	WG2427487
Carbon tetrachloride	U		0.128	1.00	1	01/02/2025 11:48	WG2427487
Chlorobenzene	U		0.116	1.00	1	01/02/2025 11:48	WG2427487
Chlorodibromomethane	U		0.140	1.00	1	01/02/2025 11:48	WG2427487
Chloroethane	U		0.192	5.00	1	01/02/2025 11:48	WG2427487
Chloroform	U		0.111	5.00	1	01/02/2025 11:48	WG2427487
Chloromethane	U		0.960	2.50	1	01/02/2025 11:48	WG2427487
2-Chlorotoluene	U		0.106	1.00	1	01/02/2025 11:48	WG2427487
4-Chlorotoluene	U		0.114	1.00	1	01/02/2025 11:48	WG2427487
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	01/02/2025 11:48	WG2427487
1,2-Dibromoethane	U		0.126	1.00	1	01/02/2025 11:48	WG2427487
Dibromomethane	U		0.122	1.00	1	01/02/2025 11:48	WG2427487
1,2-Dichlorobenzene	U		0.107	1.00	1	01/02/2025 11:48	WG2427487
1,3-Dichlorobenzene	U		0.110	1.00	1	01/02/2025 11:48	WG2427487
1,4-Dichlorobenzene	U		0.120	1.00	1	01/02/2025 11:48	WG2427487
Dichlorodifluoromethane	U		0.374	5.00	1	01/02/2025 11:48	WG2427487
1,1-Dichloroethane	U		0.100	1.00	1	01/02/2025 11:48	WG2427487

ACCOUNT:

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EQUIPMENT RINSATE

Collected date/time: 12/20/24 21:00

SAMPLE RESULTS - 01

L1812727

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichloroethane	U		0.0819	1.00	1	01/02/2025 11:48	WG2427487
1,1-Dichloroethene	U		0.188	1.00	1	01/02/2025 11:48	WG2427487
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/02/2025 11:48	WG2427487
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/02/2025 11:48	WG2427487
1,2-Dichloropropane	U		0.149	1.00	1	01/02/2025 11:48	WG2427487
1,1-Dichloropropene	U		0.142	1.00	1	01/02/2025 11:48	WG2427487
1,3-Dichloropropane	U		0.110	1.00	1	01/02/2025 11:48	WG2427487
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/02/2025 11:48	WG2427487
trans-1,3-Dichloropropene	U		0.118	1.00	1	01/02/2025 11:48	WG2427487
2,2-Dichloropropane	U		0.161	1.00	1	01/02/2025 11:48	WG2427487
Di-isopropyl ether	U		0.105	1.00	1	01/02/2025 11:48	WG2427487
Ethylbenzene	U		0.137	1.00	1	01/02/2025 11:48	WG2427487
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/02/2025 11:48	WG2427487
Isopropylbenzene	U		0.105	1.00	1	01/02/2025 11:48	WG2427487
p-Isopropyltoluene	U		0.120	1.00	1	01/02/2025 11:48	WG2427487
2-Butanone (MEK)	U		1.19	10.0	1	01/02/2025 11:48	WG2427487
Methylene Chloride	U		0.430	5.00	1	01/02/2025 11:48	WG2427487
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/02/2025 11:48	WG2427487
Methyl tert-butyl ether	U		0.101	1.00	1	01/02/2025 11:48	WG2427487
Naphthalene	U		1.00	5.00	1	01/02/2025 11:48	WG2427487
n-Propylbenzene	U		0.0993	1.00	1	01/02/2025 11:48	WG2427487
Styrene	U		0.118	1.00	1	01/02/2025 11:48	WG2427487
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/02/2025 11:48	WG2427487
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/02/2025 11:48	WG2427487
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	01/02/2025 11:48	WG2427487
Tetrachloroethene	U		0.300	1.00	1	01/02/2025 11:48	WG2427487
Toluene	0.299	U	0.278	1.00	1	01/02/2025 11:48	WG2427487
1,2,3-Trichlorobenzene	U		0.230	1.00	1	01/02/2025 11:48	WG2427487
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/02/2025 11:48	WG2427487
1,1,1-Trichloroethane	U		0.149	1.00	1	01/02/2025 11:48	WG2427487
1,1,2-Trichloroethane	U		0.158	1.00	1	01/02/2025 11:48	WG2427487
Trichloroethene	U		0.190	1.00	1	01/02/2025 11:48	WG2427487
Trichlorofluoromethane	U		0.160	5.00	1	01/02/2025 11:48	WG2427487
1,2,3-Trichloropropane	U		0.237	2.50	1	01/02/2025 11:48	WG2427487
1,2,4-Trimethylbenzene	U		0.322	1.00	1	01/02/2025 11:48	WG2427487
1,2,3-Trimethylbenzene	U		0.104	1.00	1	01/02/2025 11:48	WG2427487
1,3,5-Trimethylbenzene	U		0.104	1.00	1	01/02/2025 11:48	WG2427487
Vinyl chloride	U		0.234	1.00	1	01/02/2025 11:48	WG2427487
Xylenes, Total	0.227	U	0.174	3.00	1	01/02/2025 11:48	WG2427487
(S) Toluene-d8	103			80.0-120		01/02/2025 11:48	WG2427487
(S) 4-Bromofluorobenzene	97.0			77.0-126		01/02/2025 11:48	WG2427487
(S) 1,2-Dichloroethane-d4	100			70.0-130		01/02/2025 11:48	WG2427487

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	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	78.1	U	67.8	100	1	01/02/2025 19:28	WG2426650
Residual Range Organics (RRO)	U		96.1	250	1	01/02/2025 19:28	WG2426650
(S) o-Terphenyl	75.0			31.0-160		01/02/2025 19:28	WG2426650

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Oregon Dept. of Env. Quality - ODEQ

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EQUIPMENT RINSATE

SAMPLE RESULTS - 01

Collected date/time: 12/20/24 21:00

L1812727

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4-D	U		0.671	2.00	1	12/30/2024 21:39	WG2425575
Dalapon	U	J3	0.734	2.00	1	12/30/2024 21:39	WG2425575
2,4-DB	U		0.686	2.00	1	12/30/2024 21:39	WG2425575
Dicamba	U		0.395	2.00	1	12/30/2024 21:39	WG2425575
Dichloroprop	U	J4	0.954	2.00	1	12/30/2024 21:39	WG2425575
Dinoseb	U		0.455	2.00	1	12/30/2024 21:39	WG2425575
MCPA	U		85.8	100	1	12/30/2024 21:39	WG2425575
MCPP	U		74.3	100	1	12/30/2024 21:39	WG2425575
2,4,5-T	U		0.858	2.00	1	12/30/2024 21:39	WG2425575
2,4,5-TP (Silvex)	U		0.505	2.00	1	12/30/2024 21:39	WG2425575
(S) 2,4-Dichlorophenyl Acetic Acid	27.0			14.0-158		12/30/2024 21:39	WG2425575

Pesticides (GC) by Method 8081B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aldrin	U		0.0249	0.0500	1	12/27/2024 18:52	WG2425081
Alpha BHC	U		0.0277	0.0500	1	12/27/2024 18:52	WG2425081
Beta BHC	U		0.0326	0.0500	1	12/27/2024 18:52	WG2425081
Delta BHC	U		0.0403	0.0500	1	12/27/2024 18:52	WG2425081
Gamma BHC	U		0.0267	0.0500	1	12/27/2024 18:52	WG2425081
Chlordane	U		0.700	5.00	1	12/27/2024 18:52	WG2425081
4,4-DDD	U		0.0297	0.0500	1	12/27/2024 18:52	WG2425081
4,4-DDE	U		0.0276	0.0500	1	12/27/2024 18:52	WG2425081
4,4-DDT	U		0.0211	0.0500	1	12/27/2024 18:52	WG2425081
Dieldrin	U		0.0298	0.0500	1	12/27/2024 18:52	WG2425081
Endosulfan I	U		0.0306	0.0500	1	12/27/2024 18:52	WG2425081
Endosulfan II	U		0.0311	0.0500	1	12/27/2024 18:52	WG2425081
Endosulfan sulfate	U		0.0306	0.0500	1	12/27/2024 18:52	WG2425081
Endrin	U		0.0329	0.0500	1	12/27/2024 18:52	WG2425081
Endrin aldehyde	U		0.0358	0.0500	1	12/27/2024 18:52	WG2425081
Endrin ketone	U		0.0322	0.0500	1	12/27/2024 18:52	WG2425081
Hexachlorobenzene	U		0.0425	0.0500	1	12/27/2024 18:52	WG2425081
Heptachlor	U		0.0290	0.0500	1	12/27/2024 18:52	WG2425081
Heptachlor epoxide	U		0.0307	0.0500	1	12/27/2024 18:52	WG2425081
Methoxychlor	U		0.0400	0.0500	1	12/27/2024 18:52	WG2425081
Toxaphene	U		0.400	0.500	1	12/27/2024 18:52	WG2425081
(S) Decachlorobiphenyl	64.0			10.0-128		12/27/2024 18:52	WG2425081
(S) Tetrachloro-m-xylene	89.4			10.0-127		12/27/2024 18:52	WG2425081

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	12/28/2024 23:00	WG2424808
Acenaphthene	U		0.0190	0.0500	1	12/28/2024 23:00	WG2424808
Acenaphthylene	U		0.0171	0.0500	1	12/28/2024 23:00	WG2424808
Benzo(a)anthracene	U		0.0203	0.0500	1	12/28/2024 23:00	WG2424808
Benzo(a)pyrene	U		0.0184	0.0500	1	12/28/2024 23:00	WG2424808
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/28/2024 23:00	WG2424808
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/28/2024 23:00	WG2424808
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/28/2024 23:00	WG2424808
Chrysene	U		0.0179	0.0500	1	12/28/2024 23:00	WG2424808
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/28/2024 23:00	WG2424808
Fluoranthene	U		0.0270	0.100	1	12/28/2024 23:00	WG2424808
Fluorene	U		0.0169	0.0500	1	12/28/2024 23:00	WG2424808
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/28/2024 23:00	WG2424808

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	U		0.0917	0.250	1	12/28/2024 23:00	WG2424808
Phenanthrene	U		0.0180	0.0500	1	12/28/2024 23:00	WG2424808
Pyrene	U		0.0169	0.0500	1	12/28/2024 23:00	WG2424808
1-Methylnaphthalene	U		0.0687	0.250	1	12/28/2024 23:00	WG2424808
2-Methylnaphthalene	U		0.0674	0.250	1	12/28/2024 23:00	WG2424808
2-Chloronaphthalene	U		0.0682	0.250	1	12/28/2024 23:00	WG2424808
(S) Nitrobenzene-d5	97.9			31.0-160		12/28/2024 23:00	WG2424808
(S) 2-Fluorobiphenyl	105			48.0-148		12/28/2024 23:00	WG2424808
(S) p-Terphenyl-d14	101			37.0-146		12/28/2024 23:00	WG2424808

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	12/27/2024 01:55	WG2425237
Toluene	U		0.278	1.00	1	12/27/2024 01:55	WG2425237
Ethylbenzene	U		0.137	1.00	1	12/27/2024 01:55	WG2425237
Total Xylenes	U		0.174	3.00	1	12/27/2024 01:55	WG2425237
(S) Toluene-d8	95.1			80.0-120		12/27/2024 01:55	WG2425237
(S) 4-Bromofluorobenzene	91.0			77.0-126		12/27/2024 01:55	WG2425237
(S) 1,2-Dichloroethane-d4	125			70.0-130		12/27/2024 01:55	WG2425237

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163596-1 01/01/25 13:21

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

Laboratory Control Sample (LCS)

(LCS) R4163596-2 01/01/25 13:25

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Mercury	3.00	3.47	116	80.0-120	

L1812908-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812908-02 01/01/25 13:28 • (MS) R4163596-4 01/01/25 13:33 • (MSD) R4163596-5 01/01/25 13:36

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	U	3.42	3.44	114	115	1	75.0-125			0.524	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163516-1 12/31/24 16:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		5.06	10.0
Arsenic	U		7.83	10.0
Beryllium	U		0.501	2.00
Cadmium	0.618	J	0.538	2.00
Chromium	U		1.51	10.0
Copper	U		2.26	10.0
Lead	U		2.43	6.00
Nickel	U		1.96	10.0
Selenium	U		6.16	10.0
Silver	U		2.89	5.00
Thallium	U		6.63	10.0
Zinc	U		4.67	50.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163516-2 12/31/24 16:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	1000	972	97.2	80.0-120	
Arsenic	1000	976	97.6	80.0-120	
Beryllium	1000	994	99.4	80.0-120	
Cadmium	1000	992	99.2	80.0-120	
Chromium	1000	1010	101	80.0-120	
Copper	1000	1070	107	80.0-120	
Lead	1000	960	96.0	80.0-120	
Nickel	1000	957	95.7	80.0-120	
Selenium	1000	964	96.4	80.0-120	
Silver	200	198	99.1	80.0-120	
Thallium	1000	977	97.7	80.0-120	
Zinc	1000	1030	103	80.0-120	

L1812713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812713-01 12/31/24 16:35 • (MS) R4163516-4 12/31/24 16:38 • (MSD) R4163516-5 12/31/24 16:40

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 %
Antimony	1000	U	1000	1020	100	102	1	75.0-125			1.82	20
Arsenic	1000	U	1020	1030	102	103	1	75.0-125			1.47	20
Beryllium	1000	U	999	1010	99.9	101	1	75.0-125			1.11	20

L1812713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812713-01 12/31/24 16:35 • (MS) R4163516-4 12/31/24 16:38 • (MSD) R4163516-5 12/31/24 16:40

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Cadmium	1000	0.736	1020	1040	102	104	1	75.0-125			1.94	20
Chromium	1000	1.55	1020	1030	102	103	1	75.0-125			0.427	20
Copper	1000	24.5	1090	1100	106	108	1	75.0-125			1.15	20
Lead	1000	5.51	991	1000	98.6	99.7	1	75.0-125			1.14	20
Nickel	1000	38.5	1030	1060	99.5	102	1	75.0-125			2.47	20
Selenium	1000	U	1020	1020	102	102	1	75.0-125			0.507	20
Silver	200	U	203	206	101	103	1	75.0-125			1.44	20
Thallium	1000	U	967	980	96.7	98.0	1	75.0-125			1.28	20
Zinc	1000	156	1210	1230	106	107	1	75.0-125			1.34	20

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4163121-3 12/29/24 22:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	45.4	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	103			78.0-120

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

(LCS) R4163121-1 12/29/24 21:00 • (LCSD) R4163121-2 12/29/24 21:23

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	5150	5320	103	106	70.0-124			3.25	20
(S) a,a,a-Trifluorotoluene(FID)				108	109	78.0-120				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4164376-3 12/27/24 01:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
(S) Toluene-d8	102			80.0-120
(S) 4-Bromofluorobenzene	93.2			77.0-126
(S) 1,2-Dichloroethane-d4	124			70.0-130

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

(LCS) R4164376-1 12/27/24 00:31 • (LCSD) R4164376-2 12/27/24 00:52

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 %
Benzene	5.00	5.33	5.08	107	102	70.0-123			4.80	20
Toluene	5.00	4.80	4.90	96.0	98.0	79.0-120			2.06	20
Ethylbenzene	5.00	4.31	4.54	86.2	90.8	79.0-123			5.20	20
Total Xylenes	15.0	13.3	13.6	88.7	90.7	79.0-123			2.23	20
(S) Toluene-d8				96.5	98.7	80.0-120				
(S) 4-Bromofluorobenzene				91.8	93.6	77.0-126				
(S) 1,2-Dichloroethane-d4				124	120	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4164397-4 01/02/25 11:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4164397-4 01/02/25 11:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	104			80.0-120
(S) 4-Bromofluorobenzene	102			77.0-126
(S) 1,2-Dichloroethane-d4	91.1			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

(LCS) R4164397-1 01/02/25 09:34 • (LCSD) R4164397-2 01/02/25 09:54

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	25.0	22.0	19.8	88.0	79.2	19.0-160	J	J	10.5	27
Acrylonitrile	25.0	21.7	20.2	86.8	80.8	55.0-149			7.16	20
Benzene	5.00	5.32	5.26	106	105	70.0-123			1.13	20
Bromobenzene	5.00	5.31	5.34	106	107	73.0-121			0.563	20
Bromodichloromethane	5.00	4.89	5.04	97.8	101	75.0-120			3.02	20

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

(LCS) R4164397-1 01/02/25 09:34 • (LCSD) R4164397-2 01/02/25 09:54

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 %
Bromoform	5.00	4.37	4.39	87.4	87.8	68.0-132			0.457	20
Bromomethane	5.00	2.92	3.12	58.4	62.4	10.0-160	U	U	6.62	25
n-Butylbenzene	5.00	5.46	5.48	109	110	73.0-125			0.366	20
sec-Butylbenzene	5.00	5.63	5.59	113	112	75.0-125			0.713	20
tert-Butylbenzene	5.00	5.49	5.55	110	111	76.0-124			1.09	20
Carbon tetrachloride	5.00	4.93	4.71	98.6	94.2	68.0-126			4.56	20
Chlorobenzene	5.00	5.54	5.35	111	107	80.0-121			3.49	20
Chlorodibromomethane	5.00	4.81	4.79	96.2	95.8	77.0-125			0.417	20
Chloroethane	5.00	5.47	5.41	109	108	47.0-150			1.10	20
Chloroform	5.00	4.99	5.12	99.8	102	73.0-120	U		2.57	20
Chloromethane	5.00	6.80	6.34	136	127	41.0-142			7.00	20
2-Chlorotoluene	5.00	5.33	5.47	107	109	76.0-123			2.59	20
4-Chlorotoluene	5.00	5.20	5.43	104	109	75.0-122			4.33	20
1,2-Dibromo-3-Chloropropane	5.00	4.18	3.96	83.6	79.2	58.0-134	U	U	5.41	20
1,2-Dibromoethane	5.00	5.16	5.19	103	104	80.0-122			0.580	20
Dibromomethane	5.00	4.94	4.87	98.8	97.4	80.0-120			1.43	20
1,2-Dichlorobenzene	5.00	5.43	5.67	109	113	79.0-121			4.32	20
1,3-Dichlorobenzene	5.00	5.44	5.44	109	109	79.0-120			0.000	20
1,4-Dichlorobenzene	5.00	5.21	5.50	104	110	79.0-120			5.42	20
Dichlorodifluoromethane	5.00	5.43	5.26	109	105	51.0-149			3.18	20
1,1-Dichloroethane	5.00	5.12	5.24	102	105	70.0-126			2.32	20
1,2-Dichloroethane	5.00	5.20	5.24	104	105	70.0-128			0.766	20
1,1-Dichloroethene	5.00	5.52	5.54	110	111	71.0-124			0.362	20
cis-1,2-Dichloroethene	5.00	5.08	5.08	102	102	73.0-120			0.000	20
trans-1,2-Dichloroethene	5.00	5.01	5.16	100	103	73.0-120			2.95	20
1,2-Dichloropropane	5.00	5.30	5.39	106	108	77.0-125			1.68	20
1,1-Dichloropropene	5.00	5.67	5.52	113	110	74.0-126			2.68	20
1,3-Dichloropropane	5.00	5.35	5.43	107	109	80.0-120			1.48	20
cis-1,3-Dichloropropene	5.00	5.22	5.22	104	104	80.0-123			0.000	20
trans-1,3-Dichloropropene	5.00	5.12	5.24	102	105	78.0-124			2.32	20
2,2-Dichloropropane	5.00	4.87	4.94	97.4	98.8	58.0-130			1.43	20
Di-isopropyl ether	5.00	5.09	5.04	102	101	58.0-138			0.987	20
Ethylbenzene	5.00	5.46	5.32	109	106	79.0-123			2.60	20
Hexachloro-1,3-butadiene	5.00	5.39	5.63	108	113	54.0-138			4.36	20
Isopropylbenzene	5.00	5.47	5.38	109	108	76.0-127			1.66	20
p-Isopropyltoluene	5.00	5.80	5.56	116	111	76.0-125			4.23	20
2-Butanone (MEK)	25.0	21.3	20.6	85.2	82.4	44.0-160			3.34	20
Methylene Chloride	5.00	5.16	5.37	103	107	67.0-120			3.99	20
4-Methyl-2-pentanone (MIBK)	25.0	25.8	24.4	103	97.6	68.0-142			5.58	20
Methyl tert-butyl ether	5.00	5.02	5.32	100	106	68.0-125			5.80	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R4164397-1 01/02/25 09:34 • (LCSD) R4164397-2 01/02/25 09:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	5.00	4.58	4.65	91.6	93.0	54.0-135	U	U	1.52	20
n-Propylbenzene	5.00	5.42	5.52	108	110	77.0-124			1.83	20
Styrene	5.00	4.90	4.91	98.0	98.2	73.0-130			0.204	20
1,1,1,2-Tetrachloroethane	5.00	4.98	4.91	99.6	98.2	75.0-125			1.42	20
1,1,2,2-Tetrachloroethane	5.00	5.21	5.24	104	105	65.0-130			0.574	20
1,1,2-Trichlorotrifluoroethane	5.00	5.60	5.45	112	109	69.0-132			2.71	20
Tetrachloroethene	5.00	5.44	5.53	109	111	72.0-132			1.64	20
Toluene	5.00	5.37	5.35	107	107	79.0-120			0.373	20
1,2,3-Trichlorobenzene	5.00	5.28	5.32	106	106	50.0-138			0.755	20
1,2,4-Trichlorobenzene	5.00	4.81	5.05	96.2	101	57.0-137			4.87	20
1,1,1-Trichloroethane	5.00	5.47	5.37	109	107	73.0-124			1.85	20
1,1,2-Trichloroethane	5.00	5.46	5.34	109	107	80.0-120			2.22	20
Trichloroethene	5.00	5.36	5.27	107	105	78.0-124			1.69	20
Trichlorofluoromethane	5.00	4.99	4.78	99.8	95.6	59.0-147	U	U	4.30	20
1,2,3-Trichloropropane	5.00	5.40	5.24	108	105	73.0-130			3.01	20
1,2,4-Trimethylbenzene	5.00	5.36	5.25	107	105	76.0-121			2.07	20
1,2,3-Trimethylbenzene	5.00	5.42	5.55	108	111	77.0-120			2.37	20
1,3,5-Trimethylbenzene	5.00	5.31	5.32	106	106	76.0-122			0.188	20
Vinyl chloride	5.00	5.50	5.45	110	109	67.0-131			0.913	20
Xylenes, Total	15.0	16.2	15.8	108	105	79.0-123			2.50	20
(S) Toluene-d8				98.8	98.8	80.0-120				
(S) 4-Bromofluorobenzene				98.9	101	77.0-126				
(S) 1,2-Dichloroethane-d4				98.8	96.5	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164399-1 01/02/25 16:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		67.8	100
Residual Range Organics (RRO)	U		96.1	250
(S) o-Terphenyl	78.0			31.0-160

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

(LCS) R4164399-2 01/02/25 16:51 • (LCSD) R4164399-3 01/02/25 17:10

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	1360	1130	90.7	75.3	50.0-150			18.5	20
(S) o-Terphenyl				94.0	84.0	31.0-160				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163168-1 12/30/24 16:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
2,4-D	U		0.671	2.00
Dalapon	U		0.734	2.00
2,4-DB	U		0.686	2.00
Dicamba	U		0.395	2.00
Dichloroprop	U		0.954	2.00
Dinoseb	U		0.455	2.00
MCPA	U		85.8	100
MCPP	U		74.3	100
2,4,5-T	U		0.858	2.00
2,4,5-TP (Silvex)	U		0.505	2.00
(S) 2,4-Dichlorophenyl Acetic Acid	91.6			14.0-158

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

(LCS) R4163168-2 12/30/24 16:47 • (LCSD) R4163168-3 12/30/24 16:58

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 %
2,4-D	2.50	2.68	2.48	107	99.2	50.0-120			7.75	20
Dalapon	2.50	2.33	1.76	93.2	70.4	32.0-120		J J3	27.9	20
2,4-DB	2.50	2.48	2.62	99.2	105	53.0-140			5.49	20
Dicamba	2.50	2.24	2.13	89.6	85.2	51.0-120			5.03	20
Dichloroprop	2.50	3.44	3.13	138	125	55.0-127	J4		9.44	20
Dinoseb	2.50	1.26	1.25	50.4	50.0	36.0-134	J	J	0.797	20
MCPA	250	241	234	96.4	93.6	10.0-160			2.95	40
MCPP	250	148	140	59.2	56.0	10.0-160			5.56	23
2,4,5-T	2.50	1.77	1.77	70.8	70.8	54.0-120	J	J	0.000	20
2,4,5-TP (Silvex)	2.50	2.41	2.32	96.4	92.8	50.0-125			3.81	20
(S) 2,4-Dichlorophenyl Acetic Acid				82.6	78.2	14.0-158				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163043-1 12/27/24 15:51

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Aldrin	U		0.0249	0.0500
Alpha BHC	U		0.0277	0.0500
Beta BHC	U		0.0326	0.0500
Delta BHC	U		0.0403	0.0500
Gamma BHC	U		0.0267	0.0500
Chlordane	U		0.700	5.00
4,4-DDD	U		0.0297	0.0500
4,4-DDE	U		0.0276	0.0500
4,4-DDT	U		0.0211	0.0500
Dieldrin	U		0.0298	0.0500
Endosulfan I	U		0.0306	0.0500
Endosulfan II	U		0.0311	0.0500
Endosulfan sulfate	U		0.0306	0.0500
Endrin	U		0.0329	0.0500
Endrin aldehyde	U		0.0358	0.0500
Endrin ketone	U		0.0322	0.0500
Hexachlorobenzene	U		0.0425	0.0500
Heptachlor	U		0.0290	0.0500
Heptachlor epoxide	U		0.0307	0.0500
Methoxychlor	U		0.0400	0.0500
Toxaphene	U		0.400	0.500
(S) Decachlorobiphenyl	83.1			10.0-128
(S) Tetrachloro-m-xylene	75.2			10.0-127

¹Cp

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⁶Qc

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

(LCS) R4163043-2 12/27/24 16:00 • (LCSD) R4163043-3 12/27/24 16:10

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 %
Aldrin	1.00	0.982	1.02	98.2	102	22.0-124			3.80	34
Alpha BHC	1.00	1.00	1.08	100	108	54.0-130			7.69	23
Beta BHC	1.00	0.975	1.05	97.5	105	53.0-136			7.41	20
Delta BHC	1.00	0.800	0.865	80.0	86.5	54.0-133			7.81	20
Gamma BHC	1.00	1.05	1.13	105	113	55.0-129			7.34	20
4,4-DDD	1.00	1.18	1.28	118	128	56.0-140			8.13	22
4,4-DDE	1.00	1.04	1.13	104	113	52.0-128			8.29	22
4,4-DDT	1.00	1.24	1.34	124	134	50.0-141			7.75	23
Dieldrin	1.00	1.06	1.13	106	113	59.0-133			6.39	20
Endosulfan I	1.00	1.10	1.18	110	118	57.0-131			7.02	20

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

(LCS) R4163043-2 12/27/24 16:00 • (LCSD) R4163043-3 12/27/24 16:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Endosulfan II	1.00	1.10	1.17	110	117	58.0-133			6.17	20
Endosulfan sulfate	1.00	1.04	1.10	104	110	58.0-133			5.61	21
Endrin	1.00	1.09	1.16	109	116	57.0-134			6.22	21
Endrin aldehyde	1.00	1.06	1.12	106	112	53.0-129			5.50	20
Endrin ketone	1.00	1.14	1.21	114	121	60.0-145			5.96	20
Hexachlorobenzene	1.00	0.884	0.925	88.4	92.5	30.0-114			4.53	30
Heptachlor	1.00	1.20	1.29	120	129	27.0-132			7.23	31
Heptachlor epoxide	1.00	1.06	1.14	106	114	57.0-130			7.27	20
Methoxychlor	1.00	1.32	1.35	132	135	54.0-155			2.25	24
(S) Decachlorobiphenyl				78.2	83.8	10.0-128				
(S) Tetrachloro-m-xylene				88.1	80.7	10.0-127				

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Method Blank (MB)

(MB) R4164022-3 12/28/24 14:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	105			31.0-160
(S) 2-Fluorobiphenyl	110			48.0-148
(S) p-Terphenyl-d14	102			37.0-146

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

(LCS) R4164022-1 12/28/24 13:29 • (LCSD) R4164022-2 12/28/24 13:47

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	1.71	1.73	85.5	86.5	67.0-150			1.16	20
Acenaphthene	2.00	1.88	1.93	94.0	96.5	65.0-138			2.62	20
Acenaphthylene	2.00	1.88	1.92	94.0	96.0	66.0-140			2.11	20
Benzo(a)anthracene	2.00	1.66	1.68	83.0	84.0	61.0-140			1.20	20
Benzo(a)pyrene	2.00	1.65	1.70	82.5	85.0	60.0-143			2.99	20
Benzo(b)fluoranthene	2.00	1.84	1.88	92.0	94.0	58.0-141			2.15	20
Benzo(g,h,i)perylene	2.00	1.81	1.88	90.5	94.0	52.0-153			3.79	20
Benzo(k)fluoranthene	2.00	1.71	1.74	85.5	87.0	58.0-148			1.74	20
Chrysene	2.00	1.90	1.97	95.0	98.5	64.0-144			3.62	20
Dibenz(a,h)anthracene	2.00	1.61	1.70	80.5	85.0	52.0-155			5.44	20
Fluoranthene	2.00	2.04	2.09	102	104	69.0-153			2.42	20

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

(LCS) R4164022-1 12/28/24 13:29 • (LCSD) R4164022-2 12/28/24 13:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	1.96	2.00	98.0	100	64.0-136			2.02	20
Indeno(1,2,3-cd)pyrene	2.00	1.46	1.59	73.0	79.5	54.0-153			8.52	20
Naphthalene	2.00	1.97	2.01	98.5	100	61.0-137			2.01	20
Phenanthrene	2.00	1.92	1.99	96.0	99.5	62.0-137			3.58	20
Pyrene	2.00	2.08	2.15	104	107	60.0-142			3.31	20
1-Methylnaphthalene	2.00	2.05	2.09	103	104	66.0-142			1.93	20
2-Methylnaphthalene	2.00	1.96	2.01	98.0	100	62.0-136			2.52	20
2-Chloronaphthalene	2.00	2.00	2.04	100	102	64.0-140			1.98	20
(S) Nitrobenzene-d5				103	103	31.0-160				
(S) 2-Fluorobiphenyl				106	107	48.0-148				
(S) p-Terphenyl-d14				97.0	99.0	37.0-146				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

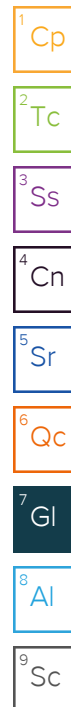
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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
B	The same analyte is found in the associated blank.
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.
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.



ACCREDITATIONS & LOCATIONS

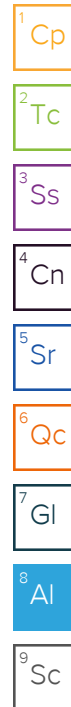
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



☐ Other

07

*Priority Pollutant Metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.

Time & Date: 12/24/24 0905

COC Seal Present/Intact:	~~Y~~ N	If Applicable	~~Y~~ N
COC Signed/Accurate:	~~Y~~ N	VOA Zero HeadSpace:	~~Y~~ N
Bottles arrive intact:	~~Y~~ N	Pres. Correct/Check:	~~Y~~ N
Correct bottles used:	~~Y~~ N		
Sufficient volume sent:	~~Y~~ N	12 TOTAL	
RA Screen <0.5 mR/hr:	~~Y~~ N		

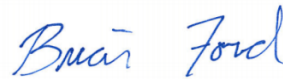
ATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY FLICTING T'S AND C'S, EXPRESS OR IMPLIED.

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812728
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	³ Ss
Gl: Glossary of Terms	5	⁴ Cn
Al: Accreditations & Locations	6	⁵ Gl
Sc: Sample Chain of Custody	7	⁶ Al
		⁷ Sc

SAMPLE SUMMARY

EQUIPMENT RINSATE L1812728-01 GW

Collected by
Connor Anderson

Collected date/time
12/20/24 21:00

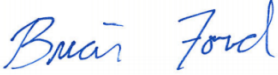
Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2424963	1	02/05/25 00:00	02/05/25 00:00	-	Subcontract

¹Cp ${}^2\text{Tc}$ ${}^3S_S$ ${}^4\text{Cn}$ ${}^5\text{Gl}$ ${}^6\text{Al}$ ${}^7\text{Sc}$

CASE NARRATIVE

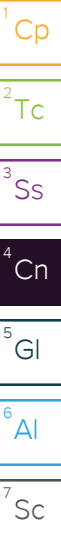
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples 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.



Brian Ford
Project Manager

Project Narrative

L1812728 -01 contains subout data that is included after the chain of custody.



GLOSSARY OF TERMS

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Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

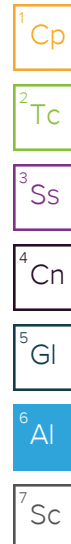
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Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	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

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



COC Seal Present/Intact:	☒ Y ☐ N	If Applicable	
COC Signed/Accurate:	☒ Y ☐ N	VOA Zero Headspace:	☒ Y ☐ N
Bottles arrive intact:	☒ Y ☐ N	Pres. Correct/Check:	☒ Y ☐ N
Correct bottles used:	☒ Y ☐ N		
Sufficient volume sent:	☒ Y ☐ N		
RA Screen <0.5 mR/hr:	☒ Y ☐ N		

17 TOTAL

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PREPARED FOR

Attn: Jimmy Huckaba
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

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JOB DESCRIPTION

Oregon samples

JOB NUMBER

320-118083-1

Eurofins Sacramento

Job Notes

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2/6/2025 11:47:05 AM

Authorized for release by
Nathaniel Horner, Project Manager I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

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Definitions/Glossary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Glossary

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

Case Narrative

Client: Pace Analytical National
Project: Oregon samples

Job ID: 320-118083-1

Job ID: 320-118083-1

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Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 1/7/2025 9:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

Dioxin

Method 1613B: The beginning resolution check indicated that the instrument was at slightly less than 10,000 resolution for several masses; however, the ending resolution check showed that the resolution was above 10,000. The samples were evaluated for high mass fragmentation breakthrough and none was found. There is no adverse impact on the data. The following samples are affected: EQUIPMENT RINSATE (320-118083-1), (CCV 320-831139/2), (LCS 320-829865/2-A), (LCSD 320-829865/3-A) and (MB 320-829865/1-A).

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: EQUIPMENT RINSATE (320-118083-1), (CCV 320-831139/2), (LCS 320-829865/2-A) and (LCSD 320-829865/3-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

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

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Detection Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Client Sample ID: EQUIPMENT RINSATE Lab Sample ID: 320-118083-1

No Detections.

- 1
- 2
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This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Client Sample ID: EQUIPMENT RINSATE

Lab Sample ID: 320-118083-1

Date Collected: 12/20/24 21:00

Matrix: Water

Date Received: 01/07/25 09:10

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.0000100		ug/L		01/28/25 09:38	02/04/25 04:50	1
2,3,7,8-TCDF	ND		0.0000100		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,7,8-PeCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,7,8-PeCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
2,3,4,7,8-PeCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,4,7,8-HxCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,6,7,8-HxCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,7,8,9-HxCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,4,7,8-HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,6,7,8-HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,7,8,9-HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
2,3,4,6,7,8-HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,4,6,7,8-HpCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,4,6,7,8-HpCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
1,2,3,4,7,8,9-HpCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
OCDD	ND		0.000100		ug/L		01/28/25 09:38	02/04/25 04:50	1
OCDF	ND		0.000100		ug/L		01/28/25 09:38	02/04/25 04:50	1
Total TCDD	ND		0.0000100		ug/L		01/28/25 09:38	02/04/25 04:50	1
Total TCDF	ND		0.0000100		ug/L		01/28/25 09:38	02/04/25 04:50	1
Total PeCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
Total PeCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
Total HxCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
Total HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
Total HpCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1
Total HpCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 04:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	83		25 - 164	01/28/25 09:38	02/04/25 04:50	1
13C-2,3,7,8-TCDF	69		24 - 169	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,7,8-PeCDD	86		25 - 181	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,7,8-PeCDF	83		24 - 185	01/28/25 09:38	02/04/25 04:50	1
13C-2,3,4,7,8-PeCDF	78		21 - 178	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,4,7,8-HxCDD	79		32 - 141	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,6,7,8-HxCDD	83		28 - 130	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,4,7,8-HxCDF	78		26 - 152	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,6,7,8-HxCDF	78		26 - 123	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,7,8,9-HxCDF	74		29 - 147	01/28/25 09:38	02/04/25 04:50	1
13C-2,3,4,6,7,8-HxCDF	76		28 - 136	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,4,6,7,8-HpCDD	95		23 - 140	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,4,6,7,8-HpCDF	85		28 - 143	01/28/25 09:38	02/04/25 04:50	1
13C-1,2,3,4,7,8,9-HpCDF	80		26 - 138	01/28/25 09:38	02/04/25 04:50	1
13C-OCDD	87		17 - 157	01/28/25 09:38	02/04/25 04:50	1
13C-OCDF	80		17 - 157	01/28/25 09:38	02/04/25 04:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	89		35 - 197	01/28/25 09:38	02/04/25 04:50	1

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Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Client Sample ID: EQUIPMENT RINSATE

Lab Sample ID: 320-118083-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						ND = ½ EDL		
						TEF	TEQ	
2,3,7,8-TCDD	ND		0.0000100		ug/L	1	0.000000172	1613B
2,3,7,8-TCDF	ND		0.0000100		ug/L	0.1	0.000000008	1613B
1,2,3,7,8-PeCDD	ND		0.0000500		ug/L	1	0.000000448	1613B
1,2,3,7,8-PeCDF	ND		0.0000500		ug/L	0.03	0.000000006	1613B
2,3,4,7,8-PeCDF	ND		0.0000500		ug/L	0.3	0.000000078	1613B
1,2,3,4,7,8-HxCDD	ND		0.0000500		ug/L	0.1	0.000000042	1613B
1,2,3,6,7,8-HxCDD	ND		0.0000500		ug/L	0.1	0.000000040	1613B
1,2,3,7,8,9-HxCDD	ND		0.0000500		ug/L	0.1	0.000000038	1613B
1,2,3,4,7,8-HxCDF	ND		0.0000500		ug/L	0.1	0.000000025	1613B
1,2,3,6,7,8-HxCDF	ND		0.0000500		ug/L	0.1	0.000000023	1613B
1,2,3,7,8,9-HxCDF	ND		0.0000500		ug/L	0.1	0.000000024	1613B
2,3,4,6,7,8-HxCDF	ND		0.0000500		ug/L	0.1	0.000000023	1613B
1,2,3,4,6,7,8-HpCDD	ND		0.0000500		ug/L	0.01	0.000000000	1613B
1,2,3,4,6,7,8-HpCDF	ND		0.0000500		ug/L	0.01	0.000000004	1613B
1,2,3,4,7,8,9-HpCDF	ND		0.0000500		ug/L	0.01	0.000000005	1613B
OCDD	ND		0.000100		ug/L	0.0003	0.000000000	1613B
OCDF	ND		0.000100		ug/L	0.0003	0.000000000	1613B
Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						ND = ½ EDL		
						TEF	TEQ	
Total Dioxin/Furan TEQ					ug/L		0.000000944	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

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Surrogate Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-118083-1	EQUIPMENT RINSATE	89
MB 320-829865/1-A	Method Blank	85

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-829865/2-A	Lab Control Sample	82
LCSD 320-829865/3-A	Lab Control Sample Dup	83

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-118083-1	EQUIPMENT RINSATE	83	69	86	83	78	79	83	78
MB 320-829865/1-A	Method Blank	76	63	74	73	66	75	78	73

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)	OCDF (17-157)
320-118083-1	EQUIPMENT RINSATE	78	74	76	95	85	80	87	80
MB 320-829865/1-A	Method Blank	74	69	71	91	83	78	86	78

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD
 OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-829865/2-A	Lab Control Sample	73	61	72	71	64	70	74	71
LCSD 320-829865/3-A	Lab Control Sample Dup	73	59	73	71	66	72	73	71

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)	OCDF (13-199)
LCS 320-829865/2-A	Lab Control Sample	70	66	68	85	77	73	79	73
LCSD 320-829865/3-A	Lab Control Sample Dup	70	66	66	84	77	72	80	74

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF

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Isotope Dilution Summary

Client: Pace Analytical National

Project/Site: Oregon samples

HxCf = 13C-1,2,3,7,8,9-HxCDF

13CHxCf = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

Job ID: 320-118083-1

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-829865/1-A

Matrix: Water

Analysis Batch: 831139

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 829865

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.0000100		ug/L		01/28/25 09:38	02/04/25 01:36	1
2,3,7,8-TCDF	ND		0.0000100		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,7,8-PeCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,7,8-PeCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
2,3,4,7,8-PeCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,4,7,8-HxCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,6,7,8-HxCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,7,8,9-HxCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,4,7,8-HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,6,7,8-HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,7,8,9-HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
2,3,4,6,7,8-HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,4,6,7,8-HpCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,4,6,7,8-HpCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
1,2,3,4,7,8,9-HpCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
OCDD	ND		0.000100		ug/L		01/28/25 09:38	02/04/25 01:36	1
OCDF	ND		0.000100		ug/L		01/28/25 09:38	02/04/25 01:36	1
Total TCDD	ND		0.0000100		ug/L		01/28/25 09:38	02/04/25 01:36	1
Total TCDF	ND		0.0000100		ug/L		01/28/25 09:38	02/04/25 01:36	1
Total PeCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
Total PeCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
Total HxCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
Total HxCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
Total HpCDD	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1
Total HpCDF	ND		0.0000500		ug/L		01/28/25 09:38	02/04/25 01:36	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	76		25 - 164	01/28/25 09:38	02/04/25 01:36	1
13C-2,3,7,8-TCDF	63		24 - 169	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,7,8-PeCDD	74		25 - 181	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,7,8-PeCDF	73		24 - 185	01/28/25 09:38	02/04/25 01:36	1
13C-2,3,4,7,8-PeCDF	66		21 - 178	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,4,7,8-HxCDD	75		32 - 141	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,6,7,8-HxCDD	78		28 - 130	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,4,7,8-HxCDF	73		26 - 152	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,6,7,8-HxCDF	74		26 - 123	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,7,8,9-HxCDF	69		29 - 147	01/28/25 09:38	02/04/25 01:36	1
13C-2,3,4,6,7,8-HxCDF	71		28 - 136	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,4,6,7,8-HpCDD	91		23 - 140	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,4,6,7,8-HpCDF	83		28 - 143	01/28/25 09:38	02/04/25 01:36	1
13C-1,2,3,4,7,8,9-HpCDF	78		26 - 138	01/28/25 09:38	02/04/25 01:36	1
13C-OCDD	86		17 - 157	01/28/25 09:38	02/04/25 01:36	1
13C-OCDF	78		17 - 157	01/28/25 09:38	02/04/25 01:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	85		35 - 197	01/28/25 09:38	02/04/25 01:36	1

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-829865/2-A

Matrix: Water

Analysis Batch: 831139

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 829865

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	0.000200	0.0001879		ug/L		94	67 - 158
2,3,7,8-TCDF	0.000200	0.0002011		ug/L		101	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.001039		ug/L		104	70 - 142
1,2,3,7,8-PeCDF	0.00100	0.0009205		ug/L		92	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.0009680		ug/L		97	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.0009717		ug/L		97	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.0009207		ug/L		92	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.0009730		ug/L		97	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.001070		ug/L		107	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.001011		ug/L		101	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.0009776		ug/L		98	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.0009998		ug/L		100	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.0009076		ug/L		91	70 - 140
1,2,3,4,6,7,8-HpCDF	0.00100	0.0009248		ug/L		92	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.0009561		ug/L		96	78 - 138
OCDD	0.00200	0.001745		ug/L		87	78 - 144
OCDF	0.00200	0.001720		ug/L		86	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	73		20 - 175
13C-2,3,7,8-TCDF	61		22 - 152
13C-1,2,3,7,8-PeCDD	72		21 - 227
13C-1,2,3,7,8-PeCDF	71		21 - 192
13C-2,3,4,7,8-PeCDF	64		13 - 328
13C-1,2,3,4,7,8-HxCDD	70		21 - 193
13C-1,2,3,6,7,8-HxCDD	74		25 - 163
13C-1,2,3,4,7,8-HxCDF	71		19 - 202
13C-1,2,3,6,7,8-HxCDF	70		21 - 159
13C-1,2,3,7,8,9-HxCDF	66		17 - 205
13C-2,3,4,6,7,8-HxCDF	68		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	85		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	77		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	73		20 - 186
13C-OCDD	79		13 - 199
13C-OCDF	73		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	82		31 - 191

Lab Sample ID: LCSD 320-829865/3-A

Matrix: Water

Analysis Batch: 831139

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 829865

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD	0.000200	0.0001893		ug/L		95	67 - 158	1	50
2,3,7,8-TCDF	0.000200	0.0001971		ug/L		99	75 - 158	2	50
1,2,3,7,8-PeCDD	0.00100	0.001016		ug/L		102	70 - 142	2	50
1,2,3,7,8-PeCDF	0.00100	0.0009133		ug/L		91	80 - 134	1	50

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-829865/3-A

Matrix: Water

Analysis Batch: 831139

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 829865

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,4,7,8-PeCDF	0.00100	0.0009644		ug/L		96	68 - 160	0	50
1,2,3,4,7,8-HxCDD	0.00100	0.0009409		ug/L		94	70 - 164	3	50
1,2,3,6,7,8-HxCDD	0.00100	0.0009269		ug/L		93	76 - 134	1	50
1,2,3,7,8,9-HxCDD	0.00100	0.0009407		ug/L		94	64 - 162	3	50
1,2,3,4,7,8-HxCDF	0.00100	0.001050		ug/L		105	72 - 134	2	50
1,2,3,6,7,8-HxCDF	0.00100	0.0009820		ug/L		98	84 - 130	3	50
1,2,3,7,8,9-HxCDF	0.00100	0.0009509		ug/L		95	78 - 130	3	50
2,3,4,6,7,8-HxCDF	0.00100	0.0009884		ug/L		99	70 - 156	1	50
1,2,3,4,6,7,8-HpCDD	0.00100	0.0008903		ug/L		89	70 - 140	2	50
1,2,3,4,6,7,8-HpCDF	0.00100	0.0009014		ug/L		90	82 - 122	3	50
1,2,3,4,7,8,9-HpCDF	0.00100	0.0009353		ug/L		94	78 - 138	2	50
OCDD	0.00200	0.001699		ug/L		85	78 - 144	3	50
OCDF	0.00200	0.001672		ug/L		84	63 - 170	3	50

Isotope Dilution	%Recovery	LCSD Qualifier	LCSD Limits
13C-2,3,7,8-TCDD	73		20 - 175
13C-2,3,7,8-TCDF	59		22 - 152
13C-1,2,3,7,8-PeCDD	73		21 - 227
13C-1,2,3,7,8-PeCDF	71		21 - 192
13C-2,3,4,7,8-PeCDF	66		13 - 328
13C-1,2,3,4,7,8-HxCDD	72		21 - 193
13C-1,2,3,6,7,8-HxCDD	73		25 - 163
13C-1,2,3,4,7,8-HxCDF	71		19 - 202
13C-1,2,3,6,7,8-HxCDF	70		21 - 159
13C-1,2,3,7,8,9-HxCDF	66		17 - 205
13C-2,3,4,6,7,8-HxCDF	66		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	84		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	77		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	72		20 - 186
13C-OCDD	80		13 - 199
13C-OCDF	74		13 - 199

Surrogate	%Recovery	LCSD Qualifier	LCSD Limits
37Cl4-2,3,7,8-TCDD	83		31 - 191

Eurofins Sacramento

QC Association Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Specialty Organics

Prep Batch: 829865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118083-1	EQUIPMENT RINSATE	Total/NA	Water	1613B	
MB 320-829865/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-829865/2-A	Lab Control Sample	Total/NA	Water	1613B	
LCSD 320-829865/3-A	Lab Control Sample Dup	Total/NA	Water	1613B	

Analysis Batch: 831139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118083-1	EQUIPMENT RINSATE	Total/NA	Water	1613B	829865
MB 320-829865/1-A	Method Blank	Total/NA	Water	1613B	829865
LCS 320-829865/2-A	Lab Control Sample	Total/NA	Water	1613B	829865
LCSD 320-829865/3-A	Lab Control Sample Dup	Total/NA	Water	1613B	829865

Lab Chronicle

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Client Sample ID: EQUIPMENT RINSATE
Date Collected: 12/20/24 21:00
Date Received: 01/07/25 09:10

Lab Sample ID: 320-118083-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			972.9 mL	20.0 uL	829865	01/28/25 09:38	EXR	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	831139	02/04/25 04:50	K1D	EET SAC

Laboratory References:
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200060	03-31-25

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

Analysis Method	Prep Method	Matrix	Analyte
TEQ		Water	Total Dioxin/Furan TEQ

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

Method Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	EET SAC
TEQ	Total TEQ Calculation	Lab SOP	EET SAC
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	EPA	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118083-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118083-1	EQUIPMENT RINSATE	Water	12/20/24 21:00	01/07/25 09:10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Sub-Contract Chain of Custody

Batch Date/Time: 12/26/24 10 47

Sub-Contract Lab: TAWSCA

Address: 880 Riverside Parkway

City/State: West Sacramento, CA
95605

Contact:

Nathaniel Horner@et eurofinsus.com

Owner Lab: PACEMTJL

Address: 12065 Lebanon Rd

City/State: Mt Juliet, TN 37122

Phone: (615) 773-9756

Fax: (615) 758-5859

WO: WG2424963

Email: MTJLSuboutTeam@pacelabs.com

Results Due Date: 01/31/25

ESC Purchase Order #: L1812728

Send Reports to: James C Huckaba



12065 Lebanon Rd

Mt Juliet, TN 37122

Phone (615) 773-9756

Fax (615) 758-5859

Sample ID Container ID	Matrix	State	Collect Date	Description	Method	Sample Number Lab Use Only	Sample Comments Lab Use Only
EQUIPMENT RINSATE							
1L-Amb-NoPres - 50396082	GW	OR	12/20/24 21:00	Dioxins and Furans 1613	1613	1. L1812728-01	TEQ, Equis EDD and Premium EDD.
1L-Amb-NoPres - 50396083							

*= Container used for multiple Samples and/or Analyses

Relinquished by: _____ Date 1-6-25

Received by: S. E. Taylor Date 1/7/25 0910

Relinquished by: _____ Date _____

Received by: _____ Date _____



320-118083 Chain of Custody



Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Loc 320

118083

Tracking # 4301 1543 7069

Job _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm ID 001 Corr Factor: (+/-) N/A °C

Ice ☒ Wet ☒ Gel _____ Other _____

Cooler Custody Seal Seal

Cooler ID _____

Temp Observed 0.6 °C Corrected: 0.6 °C

From Temp Blank ☒ Sandwich ☐ Sidewall ☐

Opening/Processing The Shipment Yes No NA

Cooler compromised/tampered with? ☐ ☒ ☐

Cooler Temperature is acceptable? ☒ ☐ ☐

Frozen samples show signs of thaw? ☐ ☐ ☒

Initials SD Date 11/2/24

Unpacking/Labeling The Samples Yes No NA

Containers are not broken or leaking? ☒ ☐ ☐

Samples compromised/tampered with? ☐ ☒ ☐

COC is complete w/o discrepancies ☒ ☐ ☐

Sample custody seal? ☐ ☐ ☒

Sample containers have legible labels? ☒ ☐ ☐

Sample date/times are provided? ☒ ☐ ☐

Appropriate containers are used? ☒ ☐ ☐

Sample bottles are completely filled? ☒ ☐ ☐

Sample preservatives verified? ☐ ☐ ☒

Is the Field Sampler's name on COC? ☐ ☐ ☒

Samples w/o discrepancies? ☒ ☐ ☐

Zero headspace?* ☐ ☐ ☒

Alkalinity has no headspace? ☐ ☐ ☒

Perchlorate has headspace? ☐ ☐ ☒

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

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

Initials DM Date 01/07/25

Notes. _____

Trizma Lot #(s). _____

Ammonium

Acetate Lot #(s) _____

Login Completion

Receipt Temperature on COC? Yes ☒ No ☐ NA ☐

NCM Filed? ☐ ☐ ☒

Samples received within hold time? ☒ ☐ ☐

Log Release checked in TALS? ☒ ☐ ☐

Initials DM Date 01/07/25

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812777
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

DU3-ISM L1812777-01 Solid

Collected by
Connor Anderson

Collected date/time
12/23/24 09:30

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2425516	1	12/27/24 17:34	12/27/24 17:42	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426606	25	12/26/24 08:31	12/31/24 03:27	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2426184	1	12/26/24 08:31	12/29/24 22:03	DWR	Mt. Juliet, TN

DU3-ISM L1812777-02 Solid

Collected by
Connor Anderson

Collected date/time
12/23/24 09:30

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2426905	1	12/31/24 11:49	12/31/24 12:11	CMB	Mt. Juliet, TN
Mercury by Method 7471B	WG2427192	1	01/01/25 10:11	01/02/25 13:58	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2427250	1	01/01/25 14:30	01/02/25 10:11	JTM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2426695	2	12/31/24 10:29	01/02/25 18:41	SGB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2426593	1	01/01/25 15:14	01/06/25 16:48	LJD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2426623	1	12/31/24 10:54	12/31/24 22:39	RDH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2426620	1	12/31/24 11:02	01/01/25 05:19	MBE	Mt. Juliet, TN

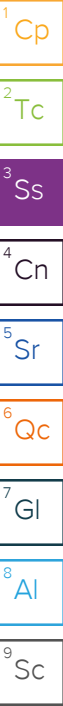
TRIP BLANK L1812777-03 GW

Collected by
Connor Anderson

Collected date/time
12/23/24 09:30

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2426046	1	12/29/24 10:31	12/29/24 10:31	DYW	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.



Brian Ford
Project Manager



Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	77.6		1	12/27/2024 17:42	WG2425516

Volatile Organic Compounds (GC) by Method NWTPHGX

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	2.87	B J	1.34	3.95	25	12/31/2024 03:27	WG2426606
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120		12/31/2024 03:27	WG2426606

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0576	0.0789	1	12/29/2024 22:03	WG2426184
Acrylonitrile	U		0.00570	0.0197	1	12/29/2024 22:03	WG2426184
Benzene	0.00431		0.000737	0.00158	1	12/29/2024 22:03	WG2426184
Bromobenzene	U		0.00142	0.0197	1	12/29/2024 22:03	WG2426184
Bromodichloromethane	U		0.00114	0.00395	1	12/29/2024 22:03	WG2426184
Bromoform	U	C3	0.00185	0.0395	1	12/29/2024 22:03	WG2426184
Bromomethane	U		0.00311	0.0197	1	12/29/2024 22:03	WG2426184
n-Butylbenzene	U		0.00829	0.0197	1	12/29/2024 22:03	WG2426184
sec-Butylbenzene	U		0.00455	0.0197	1	12/29/2024 22:03	WG2426184
tert-Butylbenzene	U		0.00308	0.00789	1	12/29/2024 22:03	WG2426184
Carbon tetrachloride	U		0.00142	0.00789	1	12/29/2024 22:03	WG2426184
Chlorobenzene	U		0.000332	0.00395	1	12/29/2024 22:03	WG2426184
Chlorodibromomethane	U	C3	0.000966	0.00395	1	12/29/2024 22:03	WG2426184
Chloroethane	U		0.00268	0.00789	1	12/29/2024 22:03	WG2426184
Chloroform	U		0.00163	0.00395	1	12/29/2024 22:03	WG2426184
Chloromethane	U	J4	0.00687	0.0197	1	12/29/2024 22:03	WG2426184
2-Chlorotoluene	U		0.00137	0.00395	1	12/29/2024 22:03	WG2426184
4-Chlorotoluene	U		0.000710	0.00789	1	12/29/2024 22:03	WG2426184
1,2-Dibromo-3-Chloropropane	U	C3	0.00616	0.0395	1	12/29/2024 22:03	WG2426184
1,2-Dibromoethane	U		0.00102	0.00395	1	12/29/2024 22:03	WG2426184
Dibromomethane	U		0.00118	0.00789	1	12/29/2024 22:03	WG2426184
1,2-Dichlorobenzene	U		0.000671	0.00789	1	12/29/2024 22:03	WG2426184
1,3-Dichlorobenzene	U		0.000947	0.00789	1	12/29/2024 22:03	WG2426184
1,4-Dichlorobenzene	U		0.00111	0.00789	1	12/29/2024 22:03	WG2426184
Dichlorodifluoromethane	U		0.00254	0.00789	1	12/29/2024 22:03	WG2426184
1,1-Dichloroethane	U		0.000775	0.00395	1	12/29/2024 22:03	WG2426184
1,2-Dichloroethane	U		0.00102	0.00395	1	12/29/2024 22:03	WG2426184
1,1-Dichloroethene	U	J4	0.000957	0.00395	1	12/29/2024 22:03	WG2426184
cis-1,2-Dichloroethene	U		0.00116	0.00395	1	12/29/2024 22:03	WG2426184
trans-1,2-Dichloroethene	U		0.00164	0.00789	1	12/29/2024 22:03	WG2426184
1,2-Dichloropropane	U		0.00224	0.00789	1	12/29/2024 22:03	WG2426184
1,1-Dichloropropene	U		0.00128	0.00395	1	12/29/2024 22:03	WG2426184
1,3-Dichloropropane	U		0.000791	0.00789	1	12/29/2024 22:03	WG2426184
cis-1,3-Dichloropropene	U		0.00120	0.00395	1	12/29/2024 22:03	WG2426184
trans-1,3-Dichloropropene	U		0.00180	0.00789	1	12/29/2024 22:03	WG2426184
2,2-Dichloropropane	U		0.00218	0.00395	1	12/29/2024 22:03	WG2426184
Di-isopropyl ether	U		0.000647	0.00158	1	12/29/2024 22:03	WG2426184
Ethylbenzene	0.00232	J	0.00116	0.00395	1	12/29/2024 22:03	WG2426184
Hexachloro-1,3-butadiene	U		0.00947	0.0395	1	12/29/2024 22:03	WG2426184
Isopropylbenzene	U		0.000671	0.00395	1	12/29/2024 22:03	WG2426184
p-Isopropyltoluene	0.00703	J	0.00403	0.00789	1	12/29/2024 22:03	WG2426184
2-Butanone (MEK)	U		0.100	0.158	1	12/29/2024 22:03	WG2426184
Methylene Chloride	U		0.0105	0.0395	1	12/29/2024 22:03	WG2426184
4-Methyl-2-pentanone (MIBK)	U		0.00360	0.0395	1	12/29/2024 22:03	WG2426184

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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
Methyl tert-butyl ether	U		0.000553	0.00158	1	12/29/2024 22:03	WG2426184
Naphthalene	U	C3	0.00770	0.0197	1	12/29/2024 22:03	WG2426184
n-Propylbenzene	U		0.00150	0.00789	1	12/29/2024 22:03	WG2426184
Styrene	U		0.000362	0.0197	1	12/29/2024 22:03	WG2426184
1,1,1,2-Tetrachloroethane	U		0.00150	0.00395	1	12/29/2024 22:03	WG2426184
1,1,2,2-Tetrachloroethane	U		0.00110	0.00395	1	12/29/2024 22:03	WG2426184
1,1,2-Trichlorotrifluoroethane	U		0.00119	0.00395	1	12/29/2024 22:03	WG2426184
Tetrachloroethene	U	C3	0.00141	0.00395	1	12/29/2024 22:03	WG2426184
Toluene	0.00489	C3 J	0.00205	0.00789	1	12/29/2024 22:03	WG2426184
1,2,3-Trichlorobenzene	U	C3	0.0116	0.0197	1	12/29/2024 22:03	WG2426184
1,2,4-Trichlorobenzene	U		0.00695	0.0197	1	12/29/2024 22:03	WG2426184
1,1,1-Trichloroethane	U		0.00146	0.00395	1	12/29/2024 22:03	WG2426184
1,1,2-Trichloroethane	U		0.000943	0.00395	1	12/29/2024 22:03	WG2426184
Trichloroethene	U		0.000922	0.00158	1	12/29/2024 22:03	WG2426184
Trichlorofluoromethane	U		0.00131	0.00395	1	12/29/2024 22:03	WG2426184
1,2,3-Trichloropropane	U		0.00256	0.0197	1	12/29/2024 22:03	WG2426184
1,2,4-Trimethylbenzene	0.00363	J	0.00249	0.00789	1	12/29/2024 22:03	WG2426184
1,2,3-Trimethylbenzene	U		0.00249	0.00789	1	12/29/2024 22:03	WG2426184
1,3,5-Trimethylbenzene	U		0.00316	0.00789	1	12/29/2024 22:03	WG2426184
Vinyl chloride	U		0.00183	0.00395	1	12/29/2024 22:03	WG2426184
Xylenes, Total	0.00766	J	0.00139	0.0103	1	12/29/2024 22:03	WG2426184
(S) Toluene-d8	95.4			75.0-131		12/29/2024 22:03	WG2426184
(S) 4-Bromofluorobenzene	104			67.0-138		12/29/2024 22:03	WG2426184
(S) 1,2-Dichloroethane-d4	105			70.0-130		12/29/2024 22:03	WG2426184

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.5		1	12/31/2024 12:11	WG2426905

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0638		0.0218	0.0423	1	01/02/2025 13:58	WG2427192

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.731	2.12	1	01/02/2025 10:11	WG2427250
Arsenic	2.45		0.886	2.12	1	01/02/2025 10:11	WG2427250
Beryllium	0.445		0.0505	0.212	1	01/02/2025 10:11	WG2427250
Cadmium	0.877		0.0691	0.529	1	01/02/2025 10:11	WG2427250
Chromium	108		0.227	1.06	1	01/02/2025 10:11	WG2427250
Copper	94.5		0.378	2.12	1	01/02/2025 10:11	WG2427250
Lead	44.6		0.345	0.529	1	01/02/2025 10:11	WG2427250
Nickel	125		0.212	2.12	1	01/02/2025 10:11	WG2427250
Selenium	U		1.13	2.12	1	01/02/2025 10:11	WG2427250
Silver	0.268	J	0.134	1.06	1	01/02/2025 10:11	WG2427250
Thallium	U		0.548	2.12	1	01/02/2025 10:11	WG2427250
Zinc	285		1.03	5.29	1	01/02/2025 10:11	WG2427250

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	16.6		2.82	8.47	2	01/02/2025 18:41	WG2426695
Residual Range Organics (RRO)	98.4		7.05	21.2	2	01/02/2025 18:41	WG2426695
(S) o-Terphenyl	60.9			18.0-148		01/02/2025 18:41	WG2426695

Sample Narrative:

L1812777-02 WG2426695: Sample resembles laboratory standard for Hydraulic Oil.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
2,4-D	U		0.0272	0.0741	1	01/06/2025 16:48	WG2426593
Dalapon	U		0.0466	0.0741	1	01/06/2025 16:48	WG2426593
2,4-DB	U		0.0197	0.0741	1	01/06/2025 16:48	WG2426593
Dicamba	U		0.0239	0.0741	1	01/06/2025 16:48	WG2426593
Dichloroprop	U	J4	0.0194	0.0741	1	01/06/2025 16:48	WG2426593
Dinoseb	U		0.0270	0.0741	1	01/06/2025 16:48	WG2426593
MCPA	U		1.97	6.88	1	01/06/2025 16:48	WG2426593
MCPP	U		2.15	6.88	1	01/06/2025 16:48	WG2426593
2,4,5-T	U		0.0250	0.0741	1	01/06/2025 16:48	WG2426593
2,4,5-TP (Silvex)	U		0.0198	0.0741	1	01/06/2025 16:48	WG2426593
(S) 2,4-Dichlorophenyl Acetic Acid	100			22.0-132		01/06/2025 16:48	WG2426593

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00683	0.0212	1	12/31/2024 22:39	WG2426623
Alpha BHC	U		0.00674	0.0212	1	12/31/2024 22:39	WG2426623
Beta BHC	U		0.00667	0.0212	1	12/31/2024 22:39	WG2426623
Delta BHC	U		0.00672	0.0212	1	12/31/2024 22:39	WG2426623
Gamma BHC	U		0.00716	0.0212	1	12/31/2024 22:39	WG2426623
Chlordane	U		0.105	0.318	1	12/31/2024 22:39	WG2426623
4,4-DDD	U		0.00730	0.0212	1	12/31/2024 22:39	WG2426623
4,4-DDE	U		0.00712	0.0212	1	12/31/2024 22:39	WG2426623
4,4-DDT	U		0.00811	0.0212	1	12/31/2024 22:39	WG2426623
Dieldrin	U		0.00738	0.0212	1	12/31/2024 22:39	WG2426623
Endosulfan I	U		0.00639	0.0212	1	12/31/2024 22:39	WG2426623
Endosulfan II	U		0.00700	0.0212	1	12/31/2024 22:39	WG2426623
Endosulfan sulfate	U		0.00680	0.0212	1	12/31/2024 22:39	WG2426623
Endrin	U		0.00790	0.0212	1	12/31/2024 22:39	WG2426623
Endrin aldehyde	U		0.00625	0.0212	1	12/31/2024 22:39	WG2426623
Endrin ketone	U		0.00736	0.0212	1	12/31/2024 22:39	WG2426623
Hexachlorobenzene	U		0.00644	0.0212	1	12/31/2024 22:39	WG2426623
Heptachlor	U		0.00734	0.0212	1	12/31/2024 22:39	WG2426623
Heptachlor epoxide	U		0.00688	0.0212	1	12/31/2024 22:39	WG2426623
Methoxychlor	U		0.00853	0.0212	1	12/31/2024 22:39	WG2426623
Toxaphene	U		0.227	0.423	1	12/31/2024 22:39	WG2426623
(S) Decachlorobiphenyl	78.9			10.0-135		12/31/2024 22:39	WG2426623
(S) Tetrachloro-m-xylene	69.1			10.0-139		12/31/2024 22:39	WG2426623

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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		0.00243	0.00635	1	01/01/2025 05:19	WG2426620
Acenaphthene	U		0.00221	0.00635	1	01/01/2025 05:19	WG2426620
Acenaphthylene	U		0.00229	0.00635	1	01/01/2025 05:19	WG2426620
Benzo(a)anthracene	U		0.00183	0.00635	1	01/01/2025 05:19	WG2426620
Benzo(a)pyrene	U		0.00189	0.00635	1	01/01/2025 05:19	WG2426620
Benzo(b)fluoranthene	0.00199	LC	0.00162	0.00635	1	01/01/2025 05:19	WG2426620
Benzo(g,h,i)perylene	U		0.00187	0.00635	1	01/01/2025 05:19	WG2426620
Benzo(k)fluoranthene	U		0.00228	0.00635	1	01/01/2025 05:19	WG2426620
Chrysene	U		0.00246	0.00635	1	01/01/2025 05:19	WG2426620
Dibenz(a,h)anthracene	U		0.00182	0.00635	1	01/01/2025 05:19	WG2426620
Fluoranthene	0.00403	LC	0.00240	0.00635	1	01/01/2025 05:19	WG2426620
Fluorene	U		0.00217	0.00635	1	01/01/2025 05:19	WG2426620
Indeno(1,2,3-cd)pyrene	U		0.00192	0.00635	1	01/01/2025 05:19	WG2426620
Naphthalene	0.00894	LC	0.00432	0.0212	1	01/01/2025 05:19	WG2426620
Phenanthrene	0.00711		0.00245	0.00635	1	01/01/2025 05:19	WG2426620
Pyrene	0.00310	LC	0.00212	0.00635	1	01/01/2025 05:19	WG2426620
1-Methylnaphthalene	U		0.00475	0.0212	1	01/01/2025 05:19	WG2426620
2-Methylnaphthalene	U		0.00452	0.0212	1	01/01/2025 05:19	WG2426620
2-Chloronaphthalene	U		0.00493	0.0212	1	01/01/2025 05:19	WG2426620
(S) p-Terphenyl-d14	79.7			23.0-120		01/01/2025 05:19	WG2426620
(S) Nitrobenzene-d5	105			14.0-149		01/01/2025 05:19	WG2426620
(S) 2-Fluorobiphenyl	86.0			34.0-125		01/01/2025 05:19	WG2426620

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	0.197	J	0.0941	1.00	1	12/29/2024 10:31	WG2426046
Toluene	U		0.278	1.00	1	12/29/2024 10:31	WG2426046
Ethylbenzene	U		0.137	1.00	1	12/29/2024 10:31	WG2426046
Total Xylenes	U		0.174	3.00	1	12/29/2024 10:31	WG2426046
(S) Toluene-d8	116			80.0-120		12/29/2024 10:31	WG2426046
(S) 4-Bromofluorobenzene	102			77.0-126		12/29/2024 10:31	WG2426046
(S) 1,2-Dichloroethane-d4	93.8			70.0-130		12/29/2024 10:31	WG2426046

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162532-1 12/27/24 17:42

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

L1812926-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1812926-06 12/27/24 17:42 • (DUP) R4162532-3 12/27/24 17:42

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	83.2	87.6	1	5.18		10

Laboratory Control Sample (LCS)

(LCS) R4162532-2 12/27/24 17:42

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163674-1 12/31/24 12:11

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1812779-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1812779-02 12/31/24 12:11 • (DUP) R4163674-3 12/31/24 12:11

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	93.7	93.6	1	0.0870		10

Laboratory Control Sample (LCS)

(LCS) R4163674-2 12/31/24 12:11

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163828-1 01/02/25 12:50

	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) R4163828-2 01/02/25 12:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.466	93.1	80.0-120	

L1811286-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811286-08 01/02/25 12:55 • (MS) R4163828-4 01/02/25 13:00 • (MSD) R4163828-5 01/02/25 13:03

	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	0.663	0.0944	0.715	0.750	93.6	98.9	1	75.0-125			4.75	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163794-1 01/02/25 09:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.691	2.00
Arsenic	U		0.837	2.00
Beryllium	U		0.0477	0.200
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Copper	U		0.357	2.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Selenium	U		1.07	2.00
Silver	U		0.127	1.00
Thallium	U		0.518	2.00
Zinc	U		0.974	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163794-2 01/02/25 09:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	89.4	89.4	80.0-120	
Arsenic	100	97.3	97.3	80.0-120	
Beryllium	100	96.7	96.7	80.0-120	
Cadmium	100	95.9	95.9	80.0-120	
Chromium	100	99.5	99.5	80.0-120	
Copper	100	104	104	80.0-120	
Lead	100	95.5	95.5	80.0-120	
Nickel	100	97.3	97.3	80.0-120	
Selenium	100	96.9	96.9	80.0-120	
Silver	20.0	19.5	97.7	80.0-120	
Thallium	100	95.8	95.8	80.0-120	
Zinc	100	99.0	99.0	80.0-120	

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

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 %
Antimony	100	U	79.5	79.4	79.5	79.4	1	75.0-125			0.152	20
Arsenic	100	3.87	109	114	105	110	1	75.0-125			4.52	20
Beryllium	100	0.286	100	105	100	105	1	75.0-125			4.90	20

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Cadmium	100	0.224	100	105	99.9	105	1	75.0-125			4.70	20
Chromium	100	8.62	110	111	102	102	1	75.0-125			0.393	20
Copper	100	4.61	112	113	108	109	1	75.0-125			0.883	20
Lead	100	13.4	120	121	106	108	1	75.0-125			1.45	20
Nickel	100	9.83	123	122	113	112	1	75.0-125			0.774	20
Selenium	100	U	104	111	104	111	1	75.0-125			5.67	20
Silver	20.0	1.31	22.8	24.0	108	114	1	75.0-125			5.03	20
Thallium	100	U	102	104	102	104	1	75.0-125			2.23	20
Zinc	100	23.5	122	122	98.4	98.1	1	75.0-125			0.168	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163231-2 12/30/24 21:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	1.26	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4163231-1 12/30/24 20:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.00	5.51	110	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			108	77.0-120	

L1813295-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813295-02 12/31/24 05:28 • (MS) R4163231-3 12/31/24 06:07 • (MSD) R4163231-4 12/31/24 06:26

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 %
Gasoline Range Organics-NWTPH	132	18.7	188	172	128	116	25.5	50.0-150			8.60	27
(S) a,a,a-Trifluorotoluene(FID)					105	104		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163521-4 12/29/24 09:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
(S) Toluene-d8	111			80.0-120
(S) 4-Bromofluorobenzene	103			77.0-126
(S) 1,2-Dichloroethane-d4	94.6			70.0-130

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

(LCS) R4163521-1 12/29/24 07:52 • (LCSD) R4163521-2 12/29/24 08:14

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 %
Benzene	5.00	4.81	4.67	96.2	93.4	70.0-123			2.95	20
Toluene	5.00	4.81	4.89	96.2	97.8	79.0-120			1.65	20
Ethylbenzene	5.00	5.08	5.10	102	102	79.0-123			0.393	20
Total Xylenes	15.0	15.0	15.3	100	102	79.0-123			1.98	20
(S) Toluene-d8				103	104	80.0-120				
(S) 4-Bromofluorobenzene				94.2	97.1	77.0-126				
(S) 1,2-Dichloroethane-d4				92.8	93.3	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163779-2 12/29/24 19:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163779-2 12/29/24 19:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	95.9			75.0-131
(S) 4-Bromofluorobenzene	107			67.0-138
(S) 1,2-Dichloroethane-d4	97.1			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163779-1 12/29/24 18:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.730	117	10.0-160	
Acrylonitrile	0.625	0.676	108	45.0-153	
Benzene	0.125	0.120	96.0	70.0-123	
Bromobenzene	0.125	0.103	82.4	73.0-121	
Bromodichloromethane	0.125	0.116	92.8	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R4163779-1 12/29/24 18:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromoform	0.125	0.0899	71.9	64.0-132	
Bromomethane	0.125	0.103	82.4	56.0-147	
n-Butylbenzene	0.125	0.119	95.2	68.0-135	
sec-Butylbenzene	0.125	0.114	91.2	74.0-130	
tert-Butylbenzene	0.125	0.115	92.0	75.0-127	
Carbon tetrachloride	0.125	0.120	96.0	66.0-128	
Chlorobenzene	0.125	0.108	86.4	76.0-128	
Chlorodibromomethane	0.125	0.0982	78.6	74.0-127	
Chloroethane	0.125	0.101	80.8	61.0-134	
Chloroform	0.125	0.119	95.2	72.0-123	
Chloromethane	0.125	0.181	145	51.0-138	J4
2-Chlorotoluene	0.125	0.113	90.4	75.0-124	
4-Chlorotoluene	0.125	0.111	88.8	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.0851	68.1	59.0-130	
1,2-Dibromoethane	0.125	0.100	80.0	74.0-128	
Dibromomethane	0.125	0.115	92.0	75.0-122	
1,2-Dichlorobenzene	0.125	0.112	89.6	76.0-124	
1,3-Dichlorobenzene	0.125	0.111	88.8	76.0-125	
1,4-Dichlorobenzene	0.125	0.108	86.4	77.0-121	
Dichlorodifluoromethane	0.125	0.117	93.6	43.0-156	
1,1-Dichloroethane	0.125	0.145	116	70.0-127	
1,2-Dichloroethane	0.125	0.123	98.4	65.0-131	
1,1-Dichloroethene	0.125	0.165	132	65.0-131	J4
cis-1,2-Dichloroethene	0.125	0.118	94.4	73.0-125	
trans-1,2-Dichloroethene	0.125	0.129	103	71.0-125	
1,2-Dichloropropane	0.125	0.125	100	74.0-125	
1,1-Dichloropropene	0.125	0.124	99.2	73.0-125	
1,3-Dichloropropane	0.125	0.105	84.0	80.0-125	
cis-1,3-Dichloropropene	0.125	0.115	92.0	76.0-127	
trans-1,3-Dichloropropene	0.125	0.108	86.4	73.0-127	
2,2-Dichloropropane	0.125	0.129	103	59.0-135	
Di-isopropyl ether	0.125	0.154	123	60.0-136	
Ethylbenzene	0.125	0.109	87.2	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.102	81.6	57.0-150	
Isopropylbenzene	0.125	0.113	90.4	72.0-127	
p-Isopropyltoluene	0.125	0.120	96.0	72.0-133	
2-Butanone (MEK)	0.625	0.666	107	30.0-160	
Methylene Chloride	0.125	0.130	104	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.565	90.4	56.0-143	
Methyl tert-butyl ether	0.125	0.131	105	66.0-132	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4163779-1 12/29/24 18:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Naphthalene	0.125	0.0979	78.3	59.0-130	
n-Propylbenzene	0.125	0.113	90.4	74.0-126	
Styrene	0.125	0.112	89.6	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.101	80.8	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.100	80.0	68.0-128	
1,1,2-Trichlorotrifluoroethane	0.125	0.142	114	61.0-139	
Tetrachloroethene	0.125	0.0974	77.9	70.0-136	
Toluene	0.125	0.0992	79.4	75.0-121	
1,2,3-Trichlorobenzene	0.125	0.0983	78.6	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.113	90.4	62.0-137	
1,1,1-Trichloroethane	0.125	0.129	103	69.0-126	
1,1,2-Trichloroethane	0.125	0.102	81.6	78.0-123	
Trichloroethene	0.125	0.115	92.0	76.0-126	
Trichlorofluoromethane	0.125	0.120	96.0	61.0-142	
1,2,3-Trichloropropane	0.125	0.106	84.8	67.0-129	
1,2,4-Trimethylbenzene	0.125	0.109	87.2	70.0-126	
1,2,3-Trimethylbenzene	0.125	0.112	89.6	74.0-124	
1,3,5-Trimethylbenzene	0.125	0.108	86.4	73.0-127	
Vinyl chloride	0.125	0.112	89.6	63.0-134	
Xylenes, Total	0.375	0.325	86.7	72.0-127	
(S) Toluene-d8			92.8	75.0-131	
(S) 4-Bromofluorobenzene			104	67.0-138	
(S) 1,2-Dichloroethane-d4			106	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163906-1 01/02/25 09:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	80.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4163906-2 01/02/25 09:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	44.4	88.8	50.0-150	
(S) o-Terphenyl			112	18.0-148	

L1813127-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813127-01 01/02/25 10:08 • (MS) R4163906-3 01/02/25 10:22 • (MSD) R4163906-4 01/02/25 10:34

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 %
Diesel Range Organics (DRO)	52.2	U	39.8	37.9	76.3	72.5	1	50.0-150			4.86	20
(S) o-Terphenyl					102	95.3		18.0-148				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4165087-1 01/06/25 15:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.0257	0.0700
Dalapon	U		0.0440	0.0700
2,4-DB	U		0.0186	0.0700
Dicamba	U		0.0226	0.0700
Dichloroprop	U		0.0183	0.0700
Dinoseb	U		0.0255	0.0700
MCPA	U		1.86	6.50
MCPP	U		2.03	6.50
2,4,5-T	U		0.0236	0.0700
2,4,5-TP (Silvex)	U		0.0187	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	87.4			22.0-132

Laboratory Control Sample (LCS)

(LCS) R4165087-2 01/06/25 15:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.0833	0.0958	115	40.0-120	P
Dalapon	0.0833	0.0335	40.2	15.0-120	J
2,4-DB	0.0833	0.0791	95.0	25.0-143	
Dicamba	0.0833	0.0766	92.0	43.0-120	
Dichloroprop	0.0833	0.122	146	32.0-129	J4 P
Dinoseb	0.0833	0.0453	54.4	10.0-120	J
MCPA	8.33	7.05	84.6	31.0-121	
MCPP	8.33	8.02	96.3	28.0-133	
2,4,5-T	0.0833	0.0818	98.2	41.0-120	P
2,4,5-TP (Silvex)	0.0833	0.0738	88.6	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			91.0	22.0-132	

L1812209-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-10 01/06/25 15:57 • (MS) R4165087-3 01/06/25 16:07 • (MSD) R4165087-4 01/06/25 16:18

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 %
2,4-D	0.141	U	0.141	0.157	100	111	1	10.0-160	P	P	10.7	24
Dalapon	0.141	U	U	U	32.5	30.9	1	10.0-121	J	J	5.30	27
2,4-DB	0.141	U	0.135	0.144	95.7	102	1	10.0-160	P	P	6.20	22

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1812209-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-10 01/06/25 15:57 • (MS) R4165087-3 01/06/25 16:07 • (MSD) R4165087-4 01/06/25 16:18

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 %
Dicamba	0.141	U	0.117	0.128	82.7	90.9	1	10.0-154	J	P	9.41	21
Dichloroprop	0.141	U	0.197	0.212	139	150	1	10.0-158	P	P	7.47	20
Dinoseb	0.141	U	0.0675	0.0791	47.8	55.9	1	10.0-120	J	J	15.7	40
MCPA	14.1	U	12.8	11.7	90.3	82.8	1	10.0-160	P	P	8.60	40
MCPP	14.1	U	12.5	13.1	88.5	92.4	1	10.0-160			4.38	40
2,4,5-T	0.141	U	0.123	0.132	86.9	93.2	1	10.0-157	P	P	6.93	20
2,4,5-TP (Silvex)	0.141	U	0.116	0.127	82.4	90.2	1	10.0-156	J	P	9.05	20
(S) 2,4-Dichlorophenyl Acetic Acid					81.4	89.2		22.0-132				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163677-1 12/31/24 20:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00645	0.0200
Alpha BHC	U		0.00637	0.0200
Beta BHC	U		0.00630	0.0200
Delta BHC	U		0.00635	0.0200
Gamma BHC	U		0.00676	0.0200
Chlordane	U		0.0990	0.300
4,4-DDD	U		0.00690	0.0200
4,4-DDE	U		0.00673	0.0200
4,4-DDT	U		0.00766	0.0200
Dieldrin	U		0.00697	0.0200
Endosulfan I	U		0.00604	0.0200
Endosulfan II	U		0.00661	0.0200
Endosulfan sulfate	U		0.00642	0.0200
Endrin	U		0.00746	0.0200
Endrin aldehyde	U		0.00590	0.0200
Endrin ketone	U		0.00695	0.0200
Hexachlorobenzene	U		0.00608	0.0200
Heptachlor	U		0.00693	0.0200
Heptachlor epoxide	U		0.00650	0.0200
Methoxychlor	U		0.00806	0.0200
Toxaphene	U		0.214	0.400
(S) Decachlorobiphenyl	86.0			10.0-135
(S) Tetrachloro-m-xylene	89.3			10.0-139

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0583	87.5	34.0-136	
Alpha BHC	0.0666	0.0597	89.6	34.0-139	
Beta BHC	0.0666	0.0571	85.7	34.0-133	
Delta BHC	0.0666	0.0458	68.8	34.0-135	
Gamma BHC	0.0666	0.0602	90.4	34.0-136	
4,4-DDD	0.0666	0.0614	92.2	33.0-141	
4,4-DDE	0.0666	0.0568	85.3	34.0-134	
4,4-DDT	0.0666	0.0574	86.2	30.0-143	
Dieldrin	0.0666	0.0585	87.8	35.0-137	
Endosulfan I	0.0666	0.0633	95.0	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0581	87.2	35.0-132	
Endosulfan sulfate	0.0666	0.0556	83.5	35.0-132	
Endrin	0.0666	0.0607	91.1	34.0-137	
Endrin aldehyde	0.0666	0.0482	72.4	23.0-121	
Endrin ketone	0.0666	0.0604	90.7	35.0-144	
Hexachlorobenzene	0.0666	0.0529	79.4	33.0-129	
Heptachlor	0.0666	0.0500	75.1	36.0-141	
Heptachlor epoxide	0.0666	0.0579	86.9	36.0-134	
Methoxychlor	0.0666	0.0556	83.5	28.0-150	
(S) Decachlorobiphenyl			81.4	10.0-135	
(S) Tetrachloro-m-xylene			88.3	10.0-139	

L1811713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811713-01 12/31/24 22:58 • (MS) R4163677-3 12/31/24 23:07 • (MSD) R4163677-4 12/31/24 23:16

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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.0708	U	0.0602	0.0513	85.0	72.1	1	20.0-135			15.8	37
Alpha BHC	0.0708	U	0.0678	0.0570	95.8	80.1	1	27.0-140			17.2	35
Beta BHC	0.0708	U	0.0606	0.0511	85.6	71.8	1	23.0-141			16.9	37
Delta BHC	0.0708	U	0.0490	0.0409	69.2	57.5	1	21.0-138			17.9	35
Gamma BHC	0.0708	U	0.0667	0.0561	94.2	78.7	1	27.0-137			17.3	36
4,4-DDD	0.0708	U	0.0607	0.0520	85.7	73.0	1	15.0-152			15.4	39
4,4-DDE	0.0708	U	0.0576	0.0480	81.3	67.4	1	10.0-152			18.1	40
4,4-DDT	0.0708	U	0.0582	0.0494	82.2	69.4	1	10.0-151			16.4	40
Dieldrin	0.0708	U	0.0607	0.0513	85.7	72.1	1	17.0-145			16.7	37
Endosulfan I	0.0708	U	0.0656	0.0539	92.7	75.7	1	20.0-137			19.6	36
Endosulfan II	0.0708	U	0.0607	0.0509	85.7	71.5	1	15.0-141			17.5	37
Endosulfan sulfate	0.0708	U	0.0593	0.0504	83.8	70.7	1	15.0-143			16.3	38
Endrin	0.0708	U	0.0649	0.0538	91.7	75.6	1	19.0-143			18.6	37
Endrin aldehyde	0.0708	U	0.0536	0.0441	75.7	62.0	1	10.0-139			19.3	40
Endrin ketone	0.0708	U	0.0617	0.0505	87.1	70.9	1	17.0-149			19.9	38
Hexachlorobenzene	0.0708	U	0.0593	0.0502	83.8	70.4	1	25.0-126			16.7	35
Heptachlor	0.0708	U	0.0584	0.0520	82.5	73.0	1	22.0-138			11.7	37
Heptachlor epoxide	0.0708	U	0.0600	0.0504	84.8	70.7	1	22.0-138			17.5	36
Methoxychlor	0.0708	U	0.0557	0.0486	78.8	68.2	1	10.0-159			13.8	40
(S) Decachlorobiphenyl					77.7	73.0		10.0-135				
(S) Tetrachloro-m-xylene					85.6	73.9		10.0-139				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164024-2 12/31/24 15:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	114			23.0-120
(S) Nitrobenzene-d5	112			14.0-149
(S) 2-Fluorobiphenyl	115			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0774	96.8	50.0-126	
Acenaphthene	0.0800	0.0744	93.0	50.0-120	
Acenaphthylene	0.0800	0.0780	97.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0758	94.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0733	91.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0810	101	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0802	100	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0771	96.4	49.0-125	
Chrysene	0.0800	0.0799	99.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0788	98.5	47.0-125	
Fluoranthene	0.0800	0.0813	102	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0813	102	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0748	93.5	46.0-125	
Naphthalene	0.0800	0.0750	93.8	50.0-120	
Phenanthrene	0.0800	0.0806	101	47.0-120	
Pyrene	0.0800	0.0780	97.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0788	98.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0766	95.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0851	106	50.0-120	
(S) p-Terphenyl-d14			103	23.0-120	
(S) Nitrobenzene-d5			100	14.0-149	
(S) 2-Fluorobiphenyl			106	34.0-125	

L1813004-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813004-06 01/03/25 04:47 • (MS) R4164389-1 01/03/25 05:04 • (MSD) R4164389-2 01/03/25 05:22

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	0.0952	U	0.0387	0.0531	40.6	55.2	1	10.0-145	U3		31.4	30
Acenaphthene	0.0952	U	0.0488	0.0615	51.3	64.0	1	14.0-127			23.0	27
Acenaphthylene	0.0952	U	0.0458	0.0577	48.1	60.0	1	21.0-124			23.1	25
Benzo(a)anthracene	0.0952	U	0.0375	0.0533	39.4	55.5	1	10.0-139	U3		34.9	30
Benzo(a)pyrene	0.0952	U	0.0409	0.0582	42.9	60.5	1	10.0-141	U3		35.0	31
Benzo(b)fluoranthene	0.0952	U	0.0472	0.0655	49.6	68.1	1	10.0-140			32.5	36
Benzo(g,h,i)perylene	0.0952	U	0.0530	0.0742	55.6	77.2	1	10.0-140	U3		33.4	33
Benzo(k)fluoranthene	0.0952	U	0.0425	0.0636	44.6	66.1	1	10.0-137	U3		39.8	31
Chrysene	0.0952	U	0.0453	0.0649	47.6	67.5	1	10.0-145	U3		35.7	30
Dibenz(a,h)anthracene	0.0952	U	0.0502	0.0708	52.7	73.6	1	10.0-132	U3		34.1	31
Fluoranthene	0.0952	U	0.0443	0.0619	46.5	64.3	1	10.0-153	U3		33.1	33
Fluorene	0.0952	U	0.0499	0.0649	52.4	67.5	1	11.0-130			26.1	29
Indeno(1,2,3-cd)pyrene	0.0952	U	0.0481	0.0676	50.5	70.3	1	10.0-137	U3		33.8	32
Naphthalene	0.0952	U	0.0616	0.0682	63.7	69.9	1	10.0-135			10.2	27
Phenanthrene	0.0952	U	0.0461	0.0629	48.5	65.4	1	10.0-144			30.7	31
Pyrene	0.0952	U	0.0459	0.0644	48.2	67.0	1	10.0-148			33.6	35
1-Methylnaphthalene	0.0952	U	0.0576	0.0684	59.8	70.3	1	10.0-142			17.1	28
2-Methylnaphthalene	0.0952	U	0.0561	0.0670	58.1	68.8	1	10.0-137			17.6	28
2-Chloronaphthalene	0.0952	U	0.0539	0.0666	56.6	69.2	1	29.0-120			21.1	24
(S) p-Terphenyl-d14					53.9	150		23.0-120	U1			
(S) Nitrobenzene-d5					62.9	145		14.0-149				
(S) 2-Fluorobiphenyl					64.9	155		34.0-125	U1			

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

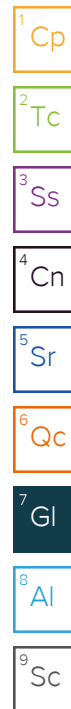
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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
B	The same analyte is found in the associated blank.
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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
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.
P	RPD between the primary and confirmatory analysis exceeded 40%.



ACCREDITATIONS & LOCATIONS

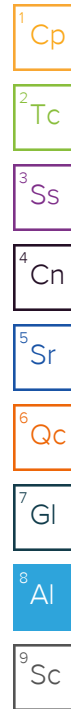
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



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Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812779
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
Project Manager

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Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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

SAMPLE SUMMARY

DU1-ISM-TRIP L1812779-01 Solid

Collected by
Connor Anderson

Collected date/time
12/20/24 07:50

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2425555	1	12/28/24 11:11	12/28/24 11:24	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426606	25	12/26/24 08:31	12/31/24 03:46	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425137	1	12/26/24 08:31	12/27/24 21:21	DWR	Mt. Juliet, TN

DU1-ISM-TRIP L1812779-02 Solid

Collected by
Connor Anderson

Collected date/time
12/20/24 07:50

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2426905	1	12/31/24 11:49	12/31/24 12:11	CMB	Mt. Juliet, TN
Mercury by Method 7471B	WG2427192	1	01/01/25 10:11	01/02/25 14:01	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2427250	1	01/01/25 14:30	01/02/25 10:13	JTM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2426695	2	12/31/24 10:29	01/02/25 15:25	SGB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2426593	1	01/01/25 15:14	01/06/25 16:58	LJD	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2426623	1	12/31/24 10:54	12/31/24 22:49	RDH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2426620	1	12/31/24 11:02	01/01/25 05:37	MBE	Mt. Juliet, TN

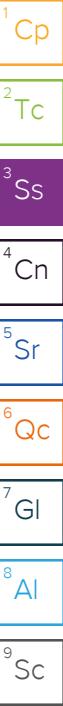
TRIP BLANK L1812779-03 GW

Collected by
Connor Anderson

Collected date/time
12/20/24 07:50

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425234	1	12/27/24 02:49	12/27/24 02:49	DYW	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.



Brian Ford
Project Manager

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	75.8		1	12/28/2024 11:24	WG2425555

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	2.26	B J	1.39	4.10	25	12/31/2024 03:46	WG2426606
(S) a,a,a-Trifluorotoluene(FID)	105			77.0-120		12/31/2024 03:46	WG2426606

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0599	0.0820	1	12/27/2024 21:21	WG2425137
Acrylonitrile	U		0.00592	0.0205	1	12/27/2024 21:21	WG2425137
Benzene	U		0.000766	0.00164	1	12/27/2024 21:21	WG2425137
Bromobenzene	U		0.00148	0.0205	1	12/27/2024 21:21	WG2425137
Bromodichloromethane	U		0.00119	0.00410	1	12/27/2024 21:21	WG2425137
Bromoform	U		0.00192	0.0410	1	12/27/2024 21:21	WG2425137
Bromomethane	U		0.00323	0.0205	1	12/27/2024 21:21	WG2425137
n-Butylbenzene	U		0.00861	0.0205	1	12/27/2024 21:21	WG2425137
sec-Butylbenzene	U		0.00472	0.0205	1	12/27/2024 21:21	WG2425137
tert-Butylbenzene	U		0.00320	0.00820	1	12/27/2024 21:21	WG2425137
Carbon tetrachloride	U		0.00147	0.00820	1	12/27/2024 21:21	WG2425137
Chlorobenzene	U		0.000344	0.00410	1	12/27/2024 21:21	WG2425137
Chlorodibromomethane	U		0.00100	0.00410	1	12/27/2024 21:21	WG2425137
Chloroethane	U		0.00279	0.00820	1	12/27/2024 21:21	WG2425137
Chloroform	U		0.00169	0.00410	1	12/27/2024 21:21	WG2425137
Chloromethane	U		0.00714	0.0205	1	12/27/2024 21:21	WG2425137
2-Chlorotoluene	U	J4	0.00142	0.00410	1	12/27/2024 21:21	WG2425137
4-Chlorotoluene	U	J4	0.000738	0.00820	1	12/27/2024 21:21	WG2425137
1,2-Dibromo-3-Chloropropane	U		0.00640	0.0410	1	12/27/2024 21:21	WG2425137
1,2-Dibromoethane	U		0.00106	0.00410	1	12/27/2024 21:21	WG2425137
Dibromomethane	U		0.00123	0.00820	1	12/27/2024 21:21	WG2425137
1,2-Dichlorobenzene	U		0.000697	0.00820	1	12/27/2024 21:21	WG2425137
1,3-Dichlorobenzene	U		0.000984	0.00820	1	12/27/2024 21:21	WG2425137
1,4-Dichlorobenzene	U		0.00115	0.00820	1	12/27/2024 21:21	WG2425137
Dichlorodifluoromethane	U		0.00264	0.00820	1	12/27/2024 21:21	WG2425137
1,1-Dichloroethane	U		0.000805	0.00410	1	12/27/2024 21:21	WG2425137
1,2-Dichloroethane	U		0.00106	0.00410	1	12/27/2024 21:21	WG2425137
1,1-Dichloroethene	U		0.000994	0.00410	1	12/27/2024 21:21	WG2425137
cis-1,2-Dichloroethene	U		0.00120	0.00410	1	12/27/2024 21:21	WG2425137
trans-1,2-Dichloroethene	U		0.00171	0.00820	1	12/27/2024 21:21	WG2425137
1,2-Dichloropropane	U		0.00233	0.00820	1	12/27/2024 21:21	WG2425137
1,1-Dichloropropene	U		0.00133	0.00410	1	12/27/2024 21:21	WG2425137
1,3-Dichloropropane	U		0.000822	0.00820	1	12/27/2024 21:21	WG2425137
cis-1,3-Dichloropropene	U		0.00124	0.00410	1	12/27/2024 21:21	WG2425137
trans-1,3-Dichloropropene	U		0.00187	0.00820	1	12/27/2024 21:21	WG2425137
2,2-Dichloropropane	U	C3	0.00226	0.00410	1	12/27/2024 21:21	WG2425137
Di-isopropyl ether	U		0.000673	0.00164	1	12/27/2024 21:21	WG2425137
Ethylbenzene	U		0.00121	0.00410	1	12/27/2024 21:21	WG2425137
Hexachloro-1,3-butadiene	U		0.00984	0.0410	1	12/27/2024 21:21	WG2425137
Isopropylbenzene	U		0.000697	0.00410	1	12/27/2024 21:21	WG2425137
p-Isopropyltoluene	0.0131		0.00418	0.00820	1	12/27/2024 21:21	WG2425137
2-Butanone (MEK)	U		0.104	0.164	1	12/27/2024 21:21	WG2425137
Methylene Chloride	U		0.0109	0.0410	1	12/27/2024 21:21	WG2425137
4-Methyl-2-pentanone (MIBK)	U		0.00374	0.0410	1	12/27/2024 21:21	WG2425137

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

DU1-ISM-TRIP

Collected date/time: 12/20/24 07:50

SAMPLE RESULTS - 01

L1812779

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
Methyl tert-butyl ether	U		0.000574	0.00164	1	12/27/2024 21:21	WG2425137
Naphthalene	U		0.00801	0.0205	1	12/27/2024 21:21	WG2425137
n-Propylbenzene	U		0.00156	0.00820	1	12/27/2024 21:21	WG2425137
Styrene	U		0.000376	0.0205	1	12/27/2024 21:21	WG2425137
1,1,1,2-Tetrachloroethane	U		0.00156	0.00410	1	12/27/2024 21:21	WG2425137
1,1,2,2-Tetrachloroethane	U		0.00114	0.00410	1	12/27/2024 21:21	WG2425137
1,1,2-Trichlorotrifluoroethane	U		0.00124	0.00410	1	12/27/2024 21:21	WG2425137
Tetrachloroethene	U		0.00147	0.00410	1	12/27/2024 21:21	WG2425137
Toluene	0.00271	J	0.00213	0.00820	1	12/27/2024 21:21	WG2425137
1,2,3-Trichlorobenzene	U		0.0120	0.0205	1	12/27/2024 21:21	WG2425137
1,2,4-Trichlorobenzene	U		0.00722	0.0205	1	12/27/2024 21:21	WG2425137
1,1,1-Trichloroethane	U		0.00151	0.00410	1	12/27/2024 21:21	WG2425137
1,1,2-Trichloroethane	U		0.000979	0.00410	1	12/27/2024 21:21	WG2425137
Trichloroethene	U		0.000958	0.00164	1	12/27/2024 21:21	WG2425137
Trichlorofluoromethane	U		0.00136	0.00410	1	12/27/2024 21:21	WG2425137
1,2,3-Trichloropropane	U		0.00266	0.0205	1	12/27/2024 21:21	WG2425137
1,2,4-Trimethylbenzene	U		0.00259	0.00820	1	12/27/2024 21:21	WG2425137
1,2,3-Trimethylbenzene	U		0.00259	0.00820	1	12/27/2024 21:21	WG2425137
1,3,5-Trimethylbenzene	U		0.00328	0.00820	1	12/27/2024 21:21	WG2425137
Vinyl chloride	U		0.00190	0.00410	1	12/27/2024 21:21	WG2425137
Xylenes, Total	U		0.00144	0.0107	1	12/27/2024 21:21	WG2425137
(S) Toluene-d8	108			75.0-131		12/27/2024 21:21	WG2425137
(S) 4-Bromofluorobenzene	91.8			67.0-138		12/27/2024 21:21	WG2425137
(S) 1,2-Dichloroethane-d4	91.7			70.0-130		12/27/2024 21:21	WG2425137

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.7		1	12/31/2024 12:11	WG2426905

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.106		0.0220	0.0427	1	01/02/2025 14:01	WG2427192

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.738	2.13	1	01/02/2025 10:13	WG2427250
Arsenic	3.14		0.893	2.13	1	01/02/2025 10:13	WG2427250
Beryllium	0.189	J	0.0509	0.213	1	01/02/2025 10:13	WG2427250
Cadmium	0.847		0.0697	0.534	1	01/02/2025 10:13	WG2427250
Chromium	145		0.228	1.07	1	01/02/2025 10:13	WG2427250
Copper	85.4		0.381	2.13	1	01/02/2025 10:13	WG2427250
Lead	31.2		0.348	0.534	1	01/02/2025 10:13	WG2427250
Nickel	216		0.213	2.13	1	01/02/2025 10:13	WG2427250
Selenium	U		1.14	2.13	1	01/02/2025 10:13	WG2427250
Silver	0.237	J	0.136	1.07	1	01/02/2025 10:13	WG2427250
Thallium	U		0.553	2.13	1	01/02/2025 10:13	WG2427250
Zinc	351		1.04	5.34	1	01/02/2025 10:13	WG2427250

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	22.4		2.84	8.54	2	01/02/2025 15:25	WG2426695
Residual Range Organics (RRO)	179		7.11	21.3	2	01/02/2025 15:25	WG2426695
(S) o-Terphenyl	73.1			18.0-148		01/02/2025 15:25	WG2426695

Sample Narrative:

L1812779-02 WG2426695: Sample resembles laboratory standard for Hydraulic Oil.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
2,4-D	U		0.0274	0.0747	1	01/06/2025 16:58	WG2426593
Dalapon	U		0.0470	0.0747	1	01/06/2025 16:58	WG2426593
2,4-DB	U		0.0199	0.0747	1	01/06/2025 16:58	WG2426593
Dicamba	U		0.0241	0.0747	1	01/06/2025 16:58	WG2426593
Dichloroprop	U	J4	0.0195	0.0747	1	01/06/2025 16:58	WG2426593
Dinoseb	U		0.0272	0.0747	1	01/06/2025 16:58	WG2426593
MCPA	U		1.99	6.94	1	01/06/2025 16:58	WG2426593
MCPP	U		2.17	6.94	1	01/06/2025 16:58	WG2426593
2,4,5-T	U		0.0252	0.0747	1	01/06/2025 16:58	WG2426593
2,4,5-TP (Silvex)	U		0.0200	0.0747	1	01/06/2025 16:58	WG2426593
(S) 2,4-Dichlorophenyl Acetic Acid	93.3			22.0-132		01/06/2025 16:58	WG2426593

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00688	0.0213	1	12/31/2024 22:49	WG2426623
Alpha BHC	U		0.00680	0.0213	1	12/31/2024 22:49	WG2426623
Beta BHC	U		0.00672	0.0213	1	12/31/2024 22:49	WG2426623
Delta BHC	U		0.00678	0.0213	1	12/31/2024 22:49	WG2426623
Gamma BHC	U		0.00722	0.0213	1	12/31/2024 22:49	WG2426623
Chlordane	U		0.106	0.320	1	12/31/2024 22:49	WG2426623
4,4-DDD	U		0.00736	0.0213	1	12/31/2024 22:49	WG2426623
4,4-DDE	U		0.00718	0.0213	1	12/31/2024 22:49	WG2426623
4,4-DDT	U		0.00818	0.0213	1	12/31/2024 22:49	WG2426623
Dieldrin	U		0.00744	0.0213	1	12/31/2024 22:49	WG2426623
Endosulfan I	U		0.00645	0.0213	1	12/31/2024 22:49	WG2426623
Endosulfan II	U		0.00705	0.0213	1	12/31/2024 22:49	WG2426623
Endosulfan sulfate	U		0.00685	0.0213	1	12/31/2024 22:49	WG2426623
Endrin	U		0.00796	0.0213	1	12/31/2024 22:49	WG2426623
Endrin aldehyde	U		0.00630	0.0213	1	12/31/2024 22:49	WG2426623
Endrin ketone	U		0.00742	0.0213	1	12/31/2024 22:49	WG2426623
Hexachlorobenzene	U		0.00649	0.0213	1	12/31/2024 22:49	WG2426623
Heptachlor	U		0.00740	0.0213	1	12/31/2024 22:49	WG2426623
Heptachlor epoxide	U		0.00694	0.0213	1	12/31/2024 22:49	WG2426623
Methoxychlor	U		0.00860	0.0213	1	12/31/2024 22:49	WG2426623
Toxaphene	U		0.228	0.427	1	12/31/2024 22:49	WG2426623
(S) Decachlorobiphenyl	67.2			10.0-135		12/31/2024 22:49	WG2426623
(S) Tetrachloro-m-xylene	74.7			10.0-139		12/31/2024 22:49	WG2426623

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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		0.00245	0.00640	1	01/01/2025 05:37	WG2426620
Acenaphthene	U		0.00223	0.00640	1	01/01/2025 05:37	WG2426620
Acenaphthylene	U		0.00231	0.00640	1	01/01/2025 05:37	WG2426620
Benzo(a)anthracene	U		0.00185	0.00640	1	01/01/2025 05:37	WG2426620
Benzo(a)pyrene	U		0.00191	0.00640	1	01/01/2025 05:37	WG2426620
Benzo(b)fluoranthene	0.00231	LC	0.00163	0.00640	1	01/01/2025 05:37	WG2426620
Benzo(g,h,i)perylene	0.00304	LC	0.00189	0.00640	1	01/01/2025 05:37	WG2426620
Benzo(k)fluoranthene	U		0.00229	0.00640	1	01/01/2025 05:37	WG2426620
Chrysene	U		0.00248	0.00640	1	01/01/2025 05:37	WG2426620
Dibenz(a,h)anthracene	U		0.00184	0.00640	1	01/01/2025 05:37	WG2426620
Fluoranthene	0.00243	LC	0.00242	0.00640	1	01/01/2025 05:37	WG2426620
Fluorene	U		0.00219	0.00640	1	01/01/2025 05:37	WG2426620
Indeno(1,2,3-cd)pyrene	U		0.00193	0.00640	1	01/01/2025 05:37	WG2426620
Naphthalene	U		0.00435	0.0213	1	01/01/2025 05:37	WG2426620
Phenanthrene	0.00433	LC	0.00247	0.00640	1	01/01/2025 05:37	WG2426620
Pyrene	0.00220	LC	0.00213	0.00640	1	01/01/2025 05:37	WG2426620
1-Methylnaphthalene	U		0.00479	0.0213	1	01/01/2025 05:37	WG2426620
2-Methylnaphthalene	U		0.00456	0.0213	1	01/01/2025 05:37	WG2426620
2-Chloronaphthalene	U		0.00497	0.0213	1	01/01/2025 05:37	WG2426620
(S) p-Terphenyl-d14	82.0			23.0-120		01/01/2025 05:37	WG2426620
(S) Nitrobenzene-d5	106			14.0-149		01/01/2025 05:37	WG2426620
(S) 2-Fluorobiphenyl	90.1			34.0-125		01/01/2025 05:37	WG2426620

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	12/27/2024 02:49	WG2425234
Toluene	U		0.278	1.00	1	12/27/2024 02:49	WG2425234
Ethylbenzene	U		0.137	1.00	1	12/27/2024 02:49	WG2425234
Total Xylenes	U		0.174	3.00	1	12/27/2024 02:49	WG2425234
(S) Toluene-d8	111			80.0-120		12/27/2024 02:49	WG2425234
(S) 4-Bromofluorobenzene	97.1			77.0-126		12/27/2024 02:49	WG2425234
(S) 1,2-Dichloroethane-d4	107			70.0-130		12/27/2024 02:49	WG2425234

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162574-1 12/28/24 11:24

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1813004-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1813004-05 12/28/24 11:24 • (DUP) R4162574-3 12/28/24 11:24

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	90.5	90.0	1	0.558		10

Laboratory Control Sample (LCS)

(LCS) R4162574-2 12/28/24 11:24

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

Method Blank (MB)

(MB) R4163674-1 12/31/24 12:11

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Total Solids	0.000			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1812779-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1812779-02 12/31/24 12:11 • (DUP) R4163674-3 12/31/24 12:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Total Solids	93.7	93.6	1	0.0870		10

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R4163674-2 12/31/24 12:11

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Total Solids	50.0	50.0	100	90.0-110	

⁹Sc

Method Blank (MB)

(MB) R4163828-1 01/02/25 12:50

	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) R4163828-2 01/02/25 12:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.466	93.1	80.0-120	

L1811286-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811286-08 01/02/25 12:55 • (MS) R4163828-4 01/02/25 13:00 • (MSD) R4163828-5 01/02/25 13:03

	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	0.663	0.0944	0.715	0.750	93.6	98.9	1	75.0-125			4.75	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163794-1 01/02/25 09:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.691	2.00
Arsenic	U		0.837	2.00
Beryllium	U		0.0477	0.200
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Copper	U		0.357	2.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Selenium	U		1.07	2.00
Silver	U		0.127	1.00
Thallium	U		0.518	2.00
Zinc	U		0.974	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163794-2 01/02/25 09:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	89.4	89.4	80.0-120	
Arsenic	100	97.3	97.3	80.0-120	
Beryllium	100	96.7	96.7	80.0-120	
Cadmium	100	95.9	95.9	80.0-120	
Chromium	100	99.5	99.5	80.0-120	
Copper	100	104	104	80.0-120	
Lead	100	95.5	95.5	80.0-120	
Nickel	100	97.3	97.3	80.0-120	
Selenium	100	96.9	96.9	80.0-120	
Silver	20.0	19.5	97.7	80.0-120	
Thallium	100	95.8	95.8	80.0-120	
Zinc	100	99.0	99.0	80.0-120	

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

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 %
Antimony	100	U	79.5	79.4	79.5	79.4	1	75.0-125			0.152	20
Arsenic	100	3.87	109	114	105	110	1	75.0-125			4.52	20
Beryllium	100	0.286	100	105	100	105	1	75.0-125			4.90	20

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Cadmium	100	0.224	100	105	99.9	105	1	75.0-125			4.70	20
Chromium	100	8.62	110	111	102	102	1	75.0-125			0.393	20
Copper	100	4.61	112	113	108	109	1	75.0-125			0.883	20
Lead	100	13.4	120	121	106	108	1	75.0-125			1.45	20
Nickel	100	9.83	123	122	113	112	1	75.0-125			0.774	20
Selenium	100	U	104	111	104	111	1	75.0-125			5.67	20
Silver	20.0	1.31	22.8	24.0	108	114	1	75.0-125			5.03	20
Thallium	100	U	102	104	102	104	1	75.0-125			2.23	20
Zinc	100	23.5	122	122	98.4	98.1	1	75.0-125			0.168	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4163231-2 12/30/24 21:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	1.26	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4163231-1 12/30/24 20:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.00	5.51	110	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			108	77.0-120	

L1813295-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813295-02 12/31/24 05:28 • (MS) R4163231-3 12/31/24 06:07 • (MSD) R4163231-4 12/31/24 06:26

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 %
Gasoline Range Organics-NWTPH	132	18.7	188	172	128	116	25.5	50.0-150			8.60	27
(S) a,a,a-Trifluorotoluene(FID)					105	104		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	0.0107	U	0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	93.8			67.0-138
(S) 1,2-Dichloroethane-d4	108			70.0-130

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

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	0.625	0.674	0.728	108	116	10.0-160			7.70	31
Acrylonitrile	0.625	0.745	0.731	119	117	45.0-153			1.90	22
Benzene	0.125	0.114	0.121	91.2	96.8	70.0-123			5.96	20
Bromobenzene	0.125	0.140	0.146	112	117	73.0-121			4.20	20
Bromodichloromethane	0.125	0.129	0.135	103	108	73.0-121			4.55	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromoform	0.125	0.107	0.114	85.6	91.2	64.0-132			6.33	20
Bromomethane	0.125	0.107	0.108	85.6	86.4	56.0-147			0.930	20
n-Butylbenzene	0.125	0.130	0.141	104	113	68.0-135			8.12	20
sec-Butylbenzene	0.125	0.132	0.149	106	119	74.0-130			12.1	20
tert-Butylbenzene	0.125	0.139	0.149	111	119	75.0-127			6.94	20
Carbon tetrachloride	0.125	0.114	0.124	91.2	99.2	66.0-128			8.40	20
Chlorobenzene	0.125	0.115	0.121	92.0	96.8	76.0-128			5.08	20
Chlorodibromomethane	0.125	0.122	0.130	97.6	104	74.0-127			6.35	20
Chloroethane	0.125	0.107	0.110	85.6	88.0	61.0-134			2.76	20
Chloroform	0.125	0.114	0.119	91.2	95.2	72.0-123			4.29	20
Chloromethane	0.125	0.129	0.141	103	113	51.0-138			8.89	20
2-Chlorotoluene	0.125	0.147	0.158	118	126	75.0-124		J4	7.21	20
4-Chlorotoluene	0.125	0.148	0.160	118	128	75.0-124		J4	7.79	20
1,2-Dibromo-3-Chloropropane	0.125	0.132	0.131	106	105	59.0-130			0.760	20
1,2-Dibromoethane	0.125	0.129	0.137	103	110	74.0-128			6.02	20
Dibromomethane	0.125	0.128	0.131	102	105	75.0-122			2.32	20
1,2-Dichlorobenzene	0.125	0.129	0.135	103	108	76.0-124			4.55	20
1,3-Dichlorobenzene	0.125	0.127	0.134	102	107	76.0-125			5.36	20
1,4-Dichlorobenzene	0.125	0.136	0.146	109	117	77.0-121			7.09	20
Dichlorodifluoromethane	0.125	0.124	0.135	99.2	108	43.0-156			8.49	20
1,1-Dichloroethane	0.125	0.126	0.132	101	106	70.0-127			4.65	20
1,2-Dichloroethane	0.125	0.137	0.140	110	112	65.0-131			2.17	20
1,1-Dichloroethene	0.125	0.126	0.133	101	106	65.0-131			5.41	20
cis-1,2-Dichloroethene	0.125	0.112	0.116	89.6	92.8	73.0-125			3.51	20
trans-1,2-Dichloroethene	0.125	0.110	0.115	88.0	92.0	71.0-125			4.44	20
1,2-Dichloropropane	0.125	0.133	0.141	106	113	74.0-125			5.84	20
1,1-Dichloropropene	0.125	0.126	0.136	101	109	73.0-125			7.63	20
1,3-Dichloropropane	0.125	0.134	0.140	107	112	80.0-125			4.38	20
cis-1,3-Dichloropropene	0.125	0.124	0.133	99.2	106	76.0-127			7.00	20
trans-1,3-Dichloropropene	0.125	0.137	0.143	110	114	73.0-127			4.29	20
2,2-Dichloropropane	0.125	0.0957	0.0953	76.6	76.2	59.0-135			0.419	20
Di-isopropyl ether	0.125	0.142	0.148	114	118	60.0-136			4.14	20
Ethylbenzene	0.125	0.119	0.129	95.2	103	74.0-126			8.06	20
Hexachloro-1,3-butadiene	0.125	0.107	0.115	85.6	92.0	57.0-150			7.21	20
Isopropylbenzene	0.125	0.118	0.129	94.4	103	72.0-127			8.91	20
p-Isopropyltoluene	0.125	0.137	0.152	110	122	72.0-133			10.4	20
2-Butanone (MEK)	0.625	0.788	0.824	126	132	30.0-160			4.47	24
Methylene Chloride	0.125	0.112	0.117	89.6	93.6	68.0-123			4.37	20
4-Methyl-2-pentanone (MIBK)	0.625	0.741	0.763	119	122	56.0-143			2.93	20
Methyl tert-butyl ether	0.125	0.132	0.132	106	106	66.0-132			0.000	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	0.125	0.129	0.135	103	108	59.0-130			4.55	20
n-Propylbenzene	0.125	0.131	0.143	105	114	74.0-126			8.76	20
Styrene	0.125	0.127	0.135	102	108	72.0-127			6.11	20
1,1,1,2-Tetrachloroethane	0.125	0.124	0.128	99.2	102	74.0-129			3.17	20
1,1,2,2-Tetrachloroethane	0.125	0.152	0.158	122	126	68.0-128			3.87	20
1,1,2-Trichlorotrifluoroethane	0.125	0.114	0.123	91.2	98.4	61.0-139			7.59	20
Tetrachloroethene	0.125	0.113	0.126	90.4	101	70.0-136			10.9	20
Toluene	0.125	0.118	0.125	94.4	100	75.0-121			5.76	20
1,2,3-Trichlorobenzene	0.125	0.127	0.133	102	106	59.0-139			4.62	20
1,2,4-Trichlorobenzene	0.125	0.117	0.125	93.6	100	62.0-137			6.61	20
1,1,1-Trichloroethane	0.125	0.123	0.127	98.4	102	69.0-126			3.20	20
1,1,2-Trichloroethane	0.125	0.125	0.135	100	108	78.0-123			7.69	20
Trichloroethene	0.125	0.121	0.129	96.8	103	76.0-126			6.40	20
Trichlorofluoromethane	0.125	0.128	0.135	102	108	61.0-142			5.32	20
1,2,3-Trichloropropane	0.125	0.160	0.161	128	129	67.0-129			0.623	20
1,2,4-Trimethylbenzene	0.125	0.144	0.156	115	125	70.0-126			8.00	20
1,2,3-Trimethylbenzene	0.125	0.143	0.152	114	122	74.0-124			6.10	20
1,3,5-Trimethylbenzene	0.125	0.139	0.148	111	118	73.0-127			6.27	20
Vinyl chloride	0.125	0.131	0.143	105	114	63.0-134			8.76	20
Xylenes, Total	0.375	0.349	0.374	93.1	99.7	72.0-127			6.92	20
(S) Toluene-d8				96.8	98.4	75.0-131				
(S) 4-Bromofluorobenzene				95.3	94.8	67.0-138				
(S) 1,2-Dichloroethane-d4				117	120	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162769-3 12/27/24 01:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
(S) Toluene-d8	105			80.0-120
(S) 4-Bromofluorobenzene	96.6			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

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

(LCS) R4162769-1 12/26/24 23:39 • (LCSD) R4162769-2 12/26/24 23:59

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 %
Benzene	5.00	5.58	5.49	112	110	70.0-123			1.63	20
Toluene	5.00	4.90	4.93	98.0	98.6	79.0-120			0.610	20
Ethylbenzene	5.00	5.30	5.04	106	101	79.0-123			5.03	20
Total Xylenes	15.0	15.4	15.1	103	101	79.0-123			1.97	20
(S) Toluene-d8				95.0	97.3	80.0-120				
(S) 4-Bromofluorobenzene				91.1	90.9	77.0-126				
(S) 1,2-Dichloroethane-d4				105	107	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163906-1 01/02/25 09:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	80.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4163906-2 01/02/25 09:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	44.4	88.8	50.0-150	
(S) o-Terphenyl			112	18.0-148	

L1813127-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813127-01 01/02/25 10:08 • (MS) R4163906-3 01/02/25 10:22 • (MSD) R4163906-4 01/02/25 10:34

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 %
Diesel Range Organics (DRO)	52.2	U	39.8	37.9	76.3	72.5	1	50.0-150			4.86	20
(S) o-Terphenyl					102	95.3		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4165087-1 01/06/25 15:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.0257	0.0700
Dalapon	U		0.0440	0.0700
2,4-DB	U		0.0186	0.0700
Dicamba	U		0.0226	0.0700
Dichloroprop	U		0.0183	0.0700
Dinoseb	U		0.0255	0.0700
MCPA	U		1.86	6.50
MCPP	U		2.03	6.50
2,4,5-T	U		0.0236	0.0700
2,4,5-TP (Silvex)	U		0.0187	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	87.4			22.0-132

Laboratory Control Sample (LCS)

(LCS) R4165087-2 01/06/25 15:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.0833	0.0958	115	40.0-120	P
Dalapon	0.0833	0.0335	40.2	15.0-120	J
2,4-DB	0.0833	0.0791	95.0	25.0-143	
Dicamba	0.0833	0.0766	92.0	43.0-120	
Dichloroprop	0.0833	0.122	146	32.0-129	J4 P
Dinoseb	0.0833	0.0453	54.4	10.0-120	J
MCPA	8.33	7.05	84.6	31.0-121	
MCPP	8.33	8.02	96.3	28.0-133	
2,4,5-T	0.0833	0.0818	98.2	41.0-120	P
2,4,5-TP (Silvex)	0.0833	0.0738	88.6	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			91.0	22.0-132	

L1812209-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-10 01/06/25 15:57 • (MS) R4165087-3 01/06/25 16:07 • (MSD) R4165087-4 01/06/25 16:18

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 %
2,4-D	0.141	U	0.141	0.157	100	111	1	10.0-160	P	P	10.7	24
Dalapon	0.141	U	U	U	32.5	30.9	1	10.0-121	J	J	5.30	27
2,4-DB	0.141	U	0.135	0.144	95.7	102	1	10.0-160	P	P	6.20	22

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1812209-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-10 01/06/25 15:57 • (MS) R4165087-3 01/06/25 16:07 • (MSD) R4165087-4 01/06/25 16:18

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 %
Dicamba	0.141	U	0.117	0.128	82.7	90.9	1	10.0-154	J	P	9.41	21
Dichloroprop	0.141	U	0.197	0.212	139	150	1	10.0-158	P	P	7.47	20
Dinoseb	0.141	U	0.0675	0.0791	47.8	55.9	1	10.0-120	J	J	15.7	40
MCPA	14.1	U	12.8	11.7	90.3	82.8	1	10.0-160	P	P	8.60	40
MCPP	14.1	U	12.5	13.1	88.5	92.4	1	10.0-160			4.38	40
2,4,5-T	0.141	U	0.123	0.132	86.9	93.2	1	10.0-157	P	P	6.93	20
2,4,5-TP (Silvex)	0.141	U	0.116	0.127	82.4	90.2	1	10.0-156	J	P	9.05	20
(S) 2,4-Dichlorophenyl Acetic Acid					81.4	89.2		22.0-132				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163677-1 12/31/24 20:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00645	0.0200
Alpha BHC	U		0.00637	0.0200
Beta BHC	U		0.00630	0.0200
Delta BHC	U		0.00635	0.0200
Gamma BHC	U		0.00676	0.0200
Chlordane	U		0.0990	0.300
4,4-DDD	U		0.00690	0.0200
4,4-DDE	U		0.00673	0.0200
4,4-DDT	U		0.00766	0.0200
Dieldrin	U		0.00697	0.0200
Endosulfan I	U		0.00604	0.0200
Endosulfan II	U		0.00661	0.0200
Endosulfan sulfate	U		0.00642	0.0200
Endrin	U		0.00746	0.0200
Endrin aldehyde	U		0.00590	0.0200
Endrin ketone	U		0.00695	0.0200
Hexachlorobenzene	U		0.00608	0.0200
Heptachlor	U		0.00693	0.0200
Heptachlor epoxide	U		0.00650	0.0200
Methoxychlor	U		0.00806	0.0200
Toxaphene	U		0.214	0.400
(S) Decachlorobiphenyl	86.0			10.0-135
(S) Tetrachloro-m-xylene	89.3			10.0-139

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0583	87.5	34.0-136	
Alpha BHC	0.0666	0.0597	89.6	34.0-139	
Beta BHC	0.0666	0.0571	85.7	34.0-133	
Delta BHC	0.0666	0.0458	68.8	34.0-135	
Gamma BHC	0.0666	0.0602	90.4	34.0-136	
4,4-DDD	0.0666	0.0614	92.2	33.0-141	
4,4-DDE	0.0666	0.0568	85.3	34.0-134	
4,4-DDT	0.0666	0.0574	86.2	30.0-143	
Dieldrin	0.0666	0.0585	87.8	35.0-137	
Endosulfan I	0.0666	0.0633	95.0	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0581	87.2	35.0-132	
Endosulfan sulfate	0.0666	0.0556	83.5	35.0-132	
Endrin	0.0666	0.0607	91.1	34.0-137	
Endrin aldehyde	0.0666	0.0482	72.4	23.0-121	
Endrin ketone	0.0666	0.0604	90.7	35.0-144	
Hexachlorobenzene	0.0666	0.0529	79.4	33.0-129	
Heptachlor	0.0666	0.0500	75.1	36.0-141	
Heptachlor epoxide	0.0666	0.0579	86.9	36.0-134	
Methoxychlor	0.0666	0.0556	83.5	28.0-150	
(S) Decachlorobiphenyl			81.4	10.0-135	
(S) Tetrachloro-m-xylene			88.3	10.0-139	

L1811713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811713-01 12/31/24 22:58 • (MS) R4163677-3 12/31/24 23:07 • (MSD) R4163677-4 12/31/24 23:16

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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.0708	U	0.0602	0.0513	85.0	72.1	1	20.0-135			15.8	37
Alpha BHC	0.0708	U	0.0678	0.0570	95.8	80.1	1	27.0-140			17.2	35
Beta BHC	0.0708	U	0.0606	0.0511	85.6	71.8	1	23.0-141			16.9	37
Delta BHC	0.0708	U	0.0490	0.0409	69.2	57.5	1	21.0-138			17.9	35
Gamma BHC	0.0708	U	0.0667	0.0561	94.2	78.7	1	27.0-137			17.3	36
4,4-DDD	0.0708	U	0.0607	0.0520	85.7	73.0	1	15.0-152			15.4	39
4,4-DDE	0.0708	U	0.0576	0.0480	81.3	67.4	1	10.0-152			18.1	40
4,4-DDT	0.0708	U	0.0582	0.0494	82.2	69.4	1	10.0-151			16.4	40
Dieldrin	0.0708	U	0.0607	0.0513	85.7	72.1	1	17.0-145			16.7	37
Endosulfan I	0.0708	U	0.0656	0.0539	92.7	75.7	1	20.0-137			19.6	36
Endosulfan II	0.0708	U	0.0607	0.0509	85.7	71.5	1	15.0-141			17.5	37
Endosulfan sulfate	0.0708	U	0.0593	0.0504	83.8	70.7	1	15.0-143			16.3	38
Endrin	0.0708	U	0.0649	0.0538	91.7	75.6	1	19.0-143			18.6	37
Endrin aldehyde	0.0708	U	0.0536	0.0441	75.7	62.0	1	10.0-139			19.3	40
Endrin ketone	0.0708	U	0.0617	0.0505	87.1	70.9	1	17.0-149			19.9	38
Hexachlorobenzene	0.0708	U	0.0593	0.0502	83.8	70.4	1	25.0-126			16.7	35
Heptachlor	0.0708	U	0.0584	0.0520	82.5	73.0	1	22.0-138			11.7	37
Heptachlor epoxide	0.0708	U	0.0600	0.0504	84.8	70.7	1	22.0-138			17.5	36
Methoxychlor	0.0708	U	0.0557	0.0486	78.8	68.2	1	10.0-159			13.8	40
(S) Decachlorobiphenyl					77.7	73.0		10.0-135				
(S) Tetrachloro-m-xylene					85.6	73.9		10.0-139				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164024-2 12/31/24 15:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	114			23.0-120
(S) Nitrobenzene-d5	112			14.0-149
(S) 2-Fluorobiphenyl	115			34.0-125

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0774	96.8	50.0-126	
Acenaphthene	0.0800	0.0744	93.0	50.0-120	
Acenaphthylene	0.0800	0.0780	97.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0758	94.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0733	91.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0810	101	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0802	100	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0771	96.4	49.0-125	
Chrysene	0.0800	0.0799	99.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0788	98.5	47.0-125	
Fluoranthene	0.0800	0.0813	102	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0813	102	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0748	93.5	46.0-125	
Naphthalene	0.0800	0.0750	93.8	50.0-120	
Phenanthrene	0.0800	0.0806	101	47.0-120	
Pyrene	0.0800	0.0780	97.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0788	98.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0766	95.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0851	106	50.0-120	
(S) p-Terphenyl-d14			103	23.0-120	
(S) Nitrobenzene-d5			100	14.0-149	
(S) 2-Fluorobiphenyl			106	34.0-125	

L1813004-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813004-06 01/03/25 04:47 • (MS) R4164389-1 01/03/25 05:04 • (MSD) R4164389-2 01/03/25 05:22

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	0.0952	U	0.0387	0.0531	40.6	55.2	1	10.0-145	U3		31.4	30
Acenaphthene	0.0952	U	0.0488	0.0615	51.3	64.0	1	14.0-127			23.0	27
Acenaphthylene	0.0952	U	0.0458	0.0577	48.1	60.0	1	21.0-124			23.1	25
Benzo(a)anthracene	0.0952	U	0.0375	0.0533	39.4	55.5	1	10.0-139	U3		34.9	30
Benzo(a)pyrene	0.0952	U	0.0409	0.0582	42.9	60.5	1	10.0-141	U3		35.0	31
Benzo(b)fluoranthene	0.0952	U	0.0472	0.0655	49.6	68.1	1	10.0-140			32.5	36
Benzo(g,h,i)perylene	0.0952	U	0.0530	0.0742	55.6	77.2	1	10.0-140	U3		33.4	33
Benzo(k)fluoranthene	0.0952	U	0.0425	0.0636	44.6	66.1	1	10.0-137	U3		39.8	31
Chrysene	0.0952	U	0.0453	0.0649	47.6	67.5	1	10.0-145	U3		35.7	30
Dibenz(a,h)anthracene	0.0952	U	0.0502	0.0708	52.7	73.6	1	10.0-132	U3		34.1	31
Fluoranthene	0.0952	U	0.0443	0.0619	46.5	64.3	1	10.0-153	U3		33.1	33
Fluorene	0.0952	U	0.0499	0.0649	52.4	67.5	1	11.0-130			26.1	29
Indeno(1,2,3-cd)pyrene	0.0952	U	0.0481	0.0676	50.5	70.3	1	10.0-137	U3		33.8	32
Naphthalene	0.0952	U	0.0616	0.0682	63.7	69.9	1	10.0-135			10.2	27
Phenanthrene	0.0952	U	0.0461	0.0629	48.5	65.4	1	10.0-144			30.7	31
Pyrene	0.0952	U	0.0459	0.0644	48.2	67.0	1	10.0-148			33.6	35
1-Methylnaphthalene	0.0952	U	0.0576	0.0684	59.8	70.3	1	10.0-142			17.1	28
2-Methylnaphthalene	0.0952	U	0.0561	0.0670	58.1	68.8	1	10.0-137			17.6	28
2-Chloronaphthalene	0.0952	U	0.0539	0.0666	56.6	69.2	1	29.0-120			21.1	24
(S) p-Terphenyl-d14					53.9	150		23.0-120	U1			
(S) Nitrobenzene-d5					62.9	145		14.0-149				
(S) 2-Fluorobiphenyl					64.9	155		34.0-125	U1			

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

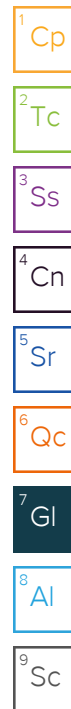
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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
B	The same analyte is found in the associated blank.
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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
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.
P	RPD between the primary and confirmatory analysis exceeded 40%.



ACCREDITATIONS & LOCATIONS

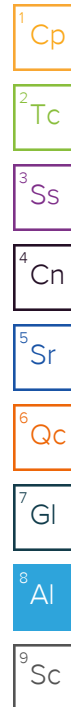
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: Oregon DEQ				Contract Laboratory Name: ESC				Lab Selection Criteria: ☐ Proximity (if TAT < 48 hrs) ☐ Prior work on same project ☒ Cost (for anticipated analyses) ☐ Other labs disqualified or unable to perform requested services ☐ Emergency work				Turn Around Time: ☒ 10 days (std.) ☐ 5 days ☐ 72 hours ☐ 48 hours ☐ 24 hours ☐ Other	
Send Lab Report To: Cathy Brown Address: 165 E. 7 th Avenue, Suite 100 Eugene, OR 97401 Tel. #: 503-753-6153 E-mail: cathy.brown@deq.oregon.gov				Lab Batch #: Invoice To: ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696									
Project Name: DEQ Forest Creek Sampler Name: Connor Anderson				Sample Preservative								L1812779	
Sample ID#	Collection Date/Time	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs EPA 8260D	SVOCs EPA 8270E-SIM	Dioxins/Furans EPA 1613B	*Priority Pollutant Metals EPA 6010D/7471B	Herbicides EPA 8151A	Pesticides EPA 8081B	BTEX EPA 8260D	Comments
DUI-ISM-TRIP	12/20/24; 07:50	S	13	X	X	X	X	X	X	X	X		ISM processing -01-02-03
4301/538 3850 Sample Receipt Checklist COC Seal Present/Intact: ☒ Y ☐ N If Applicable COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N RA Screen <0.5 mR/hr: ☒ Y ☐ N TCA 3.0-W=3.0													
TRIP BLANK												X	
*Priority Pollutant Metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.													
Relinquished By: Connor Anderson				Agency/Agent: MFA				Received By:				Agency/Agent:	
Signature: [Signature]				Time & Date: 12/23/24, 1100				Signature: [Signature]				Time & Date: 12/24/24 900	
Relinquished By:				Agency/Agent:				Received By:				Agency/Agent:	
Signature:				Time & Date:				Signature:				Time & Date:	

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1813314
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	³ Ss
Gl: Glossary of Terms	5	⁴ Cn
Al: Accreditations & Locations	6	⁵ Gl
Sc: Sample Chain of Custody	7	⁶ Al
		⁷ Sc

SAMPLE SUMMARY

DU1-ISM-DUP L1813314-01 Solid

Collected by
Connor Armstrong

Collected date/time
12/20/24 07:50

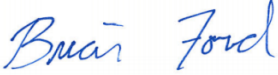
Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2429086	1	01/22/25 00:00	01/22/25 00:00	-	Subcontract

 ^1Cp ${}^2\text{Tc}$ ${}^3S_s$ ${}^4\text{Cn}$ ${}^5\text{Gl}$ ${}^6\text{Al}$ ${}^7\text{Sc}$

CASE NARRATIVE

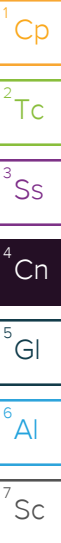
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples 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.



Brian Ford
Project Manager

Project Narrative

L1813314 -01 contains subout data that is included after the chain of custody.



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.

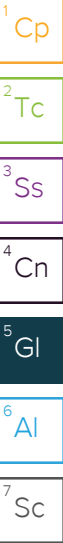
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

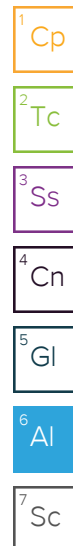
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.

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State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: Oregon DEQ				Contract Laboratory Name: ESC				Lab Selection Criteria: ☐ Proximity (if TAT < 48 hrs) ☐ Prior work on same project ☒ Cost (for anticipated analyses) ☐ Other labs disqualified or unable to perform requested services ☐ Emergency work				Turn Around Time: ☒ 10 days (std.) ☐ 5 days ☐ 72 hours ☐ 48 hours ☐ 24 hours ☐ Other	
Send Lab Report To: Cathy Brown Address: 165 E. 7 th Avenue, Suite 100 Eugene, OR 97401 Tel. #: 503-753-6153 E-mail: cathy.brown@deq.oregon.gov				Lab Batch #:				Invoice To: ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696					
Project Name: DEQ Forest Creek				Sample Preservative									
Sampler Name: Connor Anderson													
Sample ID#	Collection Date/Time	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs EPA 8260D	SVOCs EPA 8270E-SIM	Dioxins/Furans EPA 1613B	*Priority Pollutant Metals EPA 6010D/7471B	Herbicides EPA 8151A	Pesticides EPA 8081B	BTEX EPA 8260D	Comments
DUI-ISM-DUP	12/20/24; 07:50	S	13	X	X	X	X	X	X	X	X		ISM processing MS 12/30/24 L/S/20
TRIP BLANK												X	SB
*Priority Pollutant Metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.													
Relinquished By: Connor Anderson		Agency/Agent: MFA		Received By: CROSER		Agency/Agent:							
Signature: [Signature]		Time & Date: 12/23/24, 1100		Signature:		Time & Date: 12.24.24 0900							
Relinquished By:		Agency/Agent:		Received By:		Agency/Agent:							
Signature:		Time & Date:		Signature:		Time & Date:							

4301 1538 3840 Sample Receipt Checklist

COC Seal Present/Intact:	☒ Y ☐ N	If Applicable:	
COC Signed/Accurate:	☒ Y ☐ N	VOA Zero Headspace:	☒ Y ☐ N
Bottles arrive intact:	☒ Y ☐ N	Pres. Correct/Check:	☒ Y ☐ N
Correct bottles used:	☒ Y ☐ N		
Sufficient volume sent:	☒ Y ☐ N		
RA Screen <0.5 mR/hr:	☒ Y ☐ N		

17ED:17TLA9

ATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS ("S") CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO ALL BIDDING T'S AND C'S, EXPRESS OR IMPLIED.



ANALYTICAL REPORT

PREPARED FOR

Attn: Jimmy Huckaba
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

Generated 1/22/2025 5:22:16 PM

JOB DESCRIPTION

Oregon samples

JOB NUMBER

320-118080-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



Generated
1/22/2025 5:22:16 PM

Authorized for release by
Nathaniel Horner, Project Manager I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

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Definitions/Glossary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

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

Case Narrative

Client: Pace Analytical National
Project: Oregon samples

Job ID: 320-118080-1

Job ID: 320-118080-1

Eurofins Sacramento

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 1/7/2025 9:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

Dioxin

Method 1613B: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): DU1-ISM-DUP (320-118080-1). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

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

General Chemistry

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

Eurofins Sacramento

Detection Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Client Sample ID: DU1-ISM-DUP

Lab Sample ID: 320-118080-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,4,7,8-PeCDF	7.00		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,6,7,8-HxCDD	5.55		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,7,8-HxCDF	6.78		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,6,7,8-HxCDF	7.99		5.00		pg/g	1	✱	1613B	Total/NA
2,3,4,6,7,8-HxCDF	10.2		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	123		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	52.9	q	5.00		pg/g	1	✱	1613B	Total/NA
OCDD	1030	G	15.9		pg/g	1	✱	1613B	Total/NA
OCDF	49.5		10.0		pg/g	1	✱	1613B	Total/NA
Total TCDD	8.82	q	1.00		pg/g	1	✱	1613B	Total/NA
Total TCDF	54.5	q	1.00		pg/g	1	✱	1613B	Total/NA
Total PeCDF	52.3	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDD	44.4		5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDF	74.2		5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDD	229		5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDF	97.6	q	5.00		pg/g	1	✱	1613B	Total/NA
2,3,7,8-TCDF - RA	4.33		1.00		pg/g	1	✱	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Client Sample ID: DU1-ISM-DUP

Lab Sample ID: 320-118080-1

Date Collected: 12/20/24 07:50

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 94.0

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
2,3,4,7,8-PeCDF	7.00		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,6,7,8-HxCDD	5.55		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,4,7,8-HxCDF	6.78		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,6,7,8-HxCDF	7.99		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
2,3,4,6,7,8-HxCDF	10.2		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,4,6,7,8-HpCDD	123		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,4,6,7,8-HpCDF	52.9	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
OCDD	1030	G	15.9		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
OCDF	49.5		10.0		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
Total TCDD	8.82	q	1.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
Total TCDF	54.5	q	1.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
Total PeCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
Total PeCDF	52.3	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
Total HxCDD	44.4		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
Total HxCDF	74.2		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
Total HpCDD	229		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1
Total HpCDF	97.6	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		25 - 164	01/10/25 07:38	01/15/25 08:49	1
13C-2,3,7,8-TCDF	70		24 - 169	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,7,8-PeCDD	65		25 - 181	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,7,8-PeCDF	62		24 - 185	01/10/25 07:38	01/15/25 08:49	1
13C-2,3,4,7,8-PeCDF	62		21 - 178	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,4,7,8-HxCDD	56		32 - 141	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,6,7,8-HxCDD	70		28 - 130	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,4,7,8-HxCDF	61		26 - 152	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,6,7,8-HxCDF	63		26 - 123	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,7,8,9-HxCDF	63		29 - 147	01/10/25 07:38	01/15/25 08:49	1
13C-2,3,4,6,7,8-HxCDF	66		28 - 136	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,4,6,7,8-HpCDD	59		23 - 140	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,4,6,7,8-HpCDF	65		28 - 143	01/10/25 07:38	01/15/25 08:49	1
13C-1,2,3,4,7,8,9-HpCDF	56		26 - 138	01/10/25 07:38	01/15/25 08:49	1
13C-OCDD	54		17 - 157	01/10/25 07:38	01/15/25 08:49	1
13C-OCDF	66		17 - 157	01/10/25 07:38	01/15/25 08:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	95		35 - 197	01/10/25 07:38	01/15/25 08:49	1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	4.33		1.00		pg/g	☆	01/10/25 07:38	01/15/25 21:22	1

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Client Sample ID: DU1-ISM-DUP

Lab Sample ID: 320-118080-1

Date Collected: 12/20/24 07:50

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 94.0

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	82		24 - 169				01/10/25 07:38	01/15/25 21:22	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD	96		35 - 197				01/10/25 07:38	01/15/25 21:22	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	6.0		0.1		%			01/16/25 15:51	1
Percent Solids (ASTM D 2216)	94.0		0.1		%			01/16/25 15:51	1

Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Client Sample ID: DU1-ISM-DUP

Lab Sample ID: 320-118080-1

						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	ND		1.00		pg/g	1	0.0970	1613B
1,2,3,7,8-PeCDD	ND		5.00		pg/g	1	0.136	1613B
1,2,3,7,8-PeCDF	ND		5.00		pg/g	0.03	0.00987	1613B
2,3,4,7,8-PeCDF	7.00		5.00		pg/g	0.3	2.10	1613B
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0242	1613B
1,2,3,6,7,8-HxCDD	5.55		5.00		pg/g	0.1	0.555	1613B
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g	0.1	0.0202	1613B
1,2,3,4,7,8-HxCDF	6.78		5.00		pg/g	0.1	0.678	1613B
1,2,3,6,7,8-HxCDF	7.99		5.00		pg/g	0.1	0.799	1613B
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.0326	1613B
2,3,4,6,7,8-HxCDF	10.2		5.00		pg/g	0.1	1.02	1613B
1,2,3,4,6,7,8-HpCDD	123		5.00		pg/g	0.01	1.23	1613B
1,2,3,4,6,7,8-HpCDF	52.9	q	5.00		pg/g	0.01	0.529	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	0.01	0.00950	1613B
OCDD	1030	G	15.9		pg/g	0.0003	0.309	1613B
OCDF	49.5		10.0		pg/g	0.0003	0.0149	1613B
2,3,7,8-TCDF - RA	4.33		1.00		pg/g	0.1	0.433	1613B
						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		433	TEQ
Total TEQ					pg/g		433	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

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Surrogate Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-118080-1	DU1-ISM-DUP	95
320-118080-1 - RA	DU1-ISM-DUP	96
MB 320-826876/1-A	Method Blank	95

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-826876/2-A	Lab Control Sample	95
LCSD 320-826876/3-A	Lab Control Sample Dup	96

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-118080-1	DU1-ISM-DUP	65	70	65	62	62	56	70	61
320-118080-1 - RA	DU1-ISM-DUP		82						
MB 320-826876/1-A	Method Blank	60	68	56	61	58	53	65	57

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)	OCDF (17-157)
320-118080-1	DU1-ISM-DUP	63	63	66	59	65	56	54	66
320-118080-1 - RA	DU1-ISM-DUP								
MB 320-826876/1-A	Method Blank	61	59	59	56	64	53	61	64

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD
 OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-826876/2-A	Lab Control Sample	69	76	65	66	56	50	66	50
LCSD 320-826876/3-A	Lab Control Sample Dup	71	78	65	67	63	60	77	63

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)	OCDF (13-199)
LCS 320-826876/2-A	Lab Control Sample	55	71	69	68	62	70	78	79
LCSD 320-826876/3-A	Lab Control Sample Dup	67	72	72	68	76	71	75	81

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD

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Isotope Dilution Summary

Client: Pace Analytical National

Project/Site: Oregon samples

Job ID: 320-118080-1

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-826876/1-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 826876

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,7,8-TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDD	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDF	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,7,8-TCDF	68		24 - 169	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDD	56		25 - 181	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDF	61		24 - 185	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,7,8-PeCDF	58		21 - 178	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8,9-HxCDF	59		29 - 147	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138	01/10/25 07:38	01/14/25 16:53	1
13C-OCDD	61		17 - 157	01/10/25 07:38	01/14/25 16:53	1
13C-OCDF	64		17 - 157	01/10/25 07:38	01/14/25 16:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	95		35 - 197	01/10/25 07:38	01/14/25 16:53	1

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-826876/2-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	20.0	20.88		pg/g		104	67 - 158
2,3,7,8-TCDF	20.0	20.35		pg/g		102	75 - 158
1,2,3,7,8-PeCDD	100	105.1		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	107.9		pg/g		108	80 - 134
2,3,4,7,8-PeCDF	100	108.6		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	107.7		pg/g		108	70 - 164
1,2,3,6,7,8-HxCDD	100	106.5		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	135.5		pg/g		135	64 - 162
1,2,3,4,7,8-HxCDF	100	115.7		pg/g		116	72 - 134
1,2,3,6,7,8-HxCDF	100	112.9		pg/g		113	84 - 130
1,2,3,7,8,9-HxCDF	100	112.6		pg/g		113	78 - 130
2,3,4,6,7,8-HxCDF	100	111.7		pg/g		112	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111.2		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	105.9		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	116.4		pg/g		116	78 - 138
OCDD	200	206.8		pg/g		103	78 - 144
OCDF	200	218.2		pg/g		109	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	69		20 - 175
13C-2,3,7,8-TCDF	76		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	66		21 - 192
13C-2,3,4,7,8-PeCDF	56		13 - 328
13C-1,2,3,4,7,8-HxCDD	50		21 - 193
13C-1,2,3,6,7,8-HxCDD	66		25 - 163
13C-1,2,3,4,7,8-HxCDF	50		19 - 202
13C-1,2,3,6,7,8-HxCDF	55		21 - 159
13C-1,2,3,7,8,9-HxCDF	71		17 - 205
13C-2,3,4,6,7,8-HxCDF	69		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	62		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	70		20 - 186
13C-OCDD	78		13 - 199
13C-OCDF	79		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	95		31 - 191

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	21.85		pg/g		109	67 - 158	5	50
2,3,7,8-TCDF	20.0	21.35		pg/g		107	75 - 158	5	50
1,2,3,7,8-PeCDD	100	109.2		pg/g		109	70 - 142	4	50
1,2,3,7,8-PeCDF	100	114.1		pg/g		114	80 - 134	6	50

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,4,7,8-PeCDF	100	113.0		pg/g		113	68 - 160	4	50
1,2,3,4,7,8-HxCDD	100	111.7		pg/g		112	70 - 164	4	50
1,2,3,6,7,8-HxCDD	100	107.7		pg/g		108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	100	116.6		pg/g		117	64 - 162	15	50
1,2,3,4,7,8-HxCDF	100	119.5		pg/g		120	72 - 134	3	50
1,2,3,6,7,8-HxCDF	100	118.5		pg/g		118	84 - 130	5	50
1,2,3,7,8,9-HxCDF	100	112.0		pg/g		112	78 - 130	0	50
2,3,4,6,7,8-HxCDF	100	115.7		pg/g		116	70 - 156	4	50
1,2,3,4,6,7,8-HpCDD	100	116.1		pg/g		116	70 - 140	4	50
1,2,3,4,6,7,8-HpCDF	100	105.1		pg/g		105	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF	100	113.8		pg/g		114	78 - 138	2	50
OCDD	200	218.1		pg/g		109	78 - 144	5	50
OCDF	200	217.3		pg/g		109	63 - 170	0	50

LCSD LCSD			
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	71		20 - 175
13C-2,3,7,8-TCDF	78		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	67		21 - 192
13C-2,3,4,7,8-PeCDF	63		13 - 328
13C-1,2,3,4,7,8-HxCDD	60		21 - 193
13C-1,2,3,6,7,8-HxCDD	77		25 - 163
13C-1,2,3,4,7,8-HxCDF	63		19 - 202
13C-1,2,3,6,7,8-HxCDF	67		21 - 159
13C-1,2,3,7,8,9-HxCDF	72		17 - 205
13C-2,3,4,6,7,8-HxCDF	72		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	76		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	71		20 - 186
13C-OCDD	75		13 - 199
13C-OCDF	81		13 - 199

LCSD LCSD			
Surrogate	%Recovery	Qualifier	Limits
37Cl4-2,3,7,8-TCDD	96		31 - 191

Eurofins Sacramento

QC Association Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Specialty Organics

Prep Batch: 826876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118080-1	DU1-ISM-DUP	Total/NA	Solid	HRMS-Sox	
320-118080-1 - RA	DU1-ISM-DUP	Total/NA	Solid	HRMS-Sox	
MB 320-826876/1-A	Method Blank	Total/NA	Solid	HRMS-Sox	
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Sox	
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	HRMS-Sox	

Analysis Batch: 827323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-826876/1-A	Method Blank	Total/NA	Solid	1613B	826876
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	1613B	826876
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	1613B	826876

Analysis Batch: 827524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118080-1	DU1-ISM-DUP	Total/NA	Solid	1613B	826876

Analysis Batch: 827707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118080-1 - RA	DU1-ISM-DUP	Total/NA	Solid	1613B	826876

General Chemistry

Analysis Batch: 827913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118080-1	DU1-ISM-DUP	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Client Sample ID: DU1-ISM-DUP

Lab Sample ID: 320-118080-1

Date Collected: 12/20/24 07:50

Matrix: Solid

Date Received: 01/07/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: DU1-ISM-DUP

Lab Sample ID: 320-118080-1

Date Collected: 12/20/24 07:50

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 94.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.07 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827524	01/15/25 08:49	CB	EET SAC
Total/NA	Prep	HRMS-Sox	RA		10.07 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B	RA	1	1 uL	1 uL	827707	01/15/25 21:22	DB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200060	03-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
TEQ		Solid	Total Dioxin/Furan TEQ
TEQ		Solid	Total TEQ

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Method Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	EET SAC
TEQ	Total TEQ Calculation	Lab SOP	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
HRMS-Sox	Soxhlet Extraction	EPA	EET SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118080-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118080-1	DU1-ISM-DUP	Solid	12/20/24 07:50	01/07/25 09:10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Sub-Contract Chain of Custody

Batch Date/Time: 01/06/25 09 09

Sub-Contract Lab: TAWSCA

Address: 880 Riverside Parkway

City/State: West Sacramento, CA
95605

Contact:

Nathaniel Horner@et eurofinsus.com

Owner Lab: PACEMTJL

Address: 12065 Lebanon Rd

City/State: Mt Juliet, TN 37122

Phone: (615) 773-9756

Fax: (615) 758-5859

WO: WG2429086

Email: MTJLSuboutTeam@pacelabs.com

Results Due Date: 01/28/25

ESC Purchase Order #: L1813314

Send Reports to: James C Huckaba



12065 Lebanon Rd
Mt Juliet, TN 37122
Phone (615) 773-9756
Fax (615) 758-5859

Sample ID Container ID	Matrix	State	Collect Date	Description	Method	Sample Number Lab Use Only	Sample Comments Lab Use Only
DUI-ISM-DUP 4ozClr-NoPres - 50414526	SS	OR	12/20/24 07:50	Dioxins and Furans 1613	1613	2. L1813314-01	1613 dioxins/furans including TEQ, Equis EDD and Promium EDD

*= Container used for multiple Samples and/or Analyses

Relinquished by: [Signature] Date 1-6-25

Received by: [Signature] Date 11/7/24 0910

Relinquished by: _____ Date _____

Received by: _____ Date _____

06°C



320-118080 Chain of Custody



Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Loc 320

118080

Tracking # 4301 1543 7469

Job _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COCTherm ID 001 Corr Factor (+/- W/A) °CIce ☒ Wet ☒ Gel _____ Other _____Cooler Custody Seal Seal

Cooler ID _____

Temp Observed 0.6 °C Corrected 0.6 °CFrom Temp Blank ☒ Sandwich ☐ Sidewall ☐**Opening/Processing The Shipment** Yes No NACooler compromised/tampered with? ☐ ☒ ☐Cooler Temperature is acceptable? ☒ ☐ ☐Frozen samples show signs of thaw? ☐ ☐ ☒Initials SD Date: 11/2/24**Unpacking/Labeling The Samples** Yes No NAContainers are not broken or leaking? ☒ ☐ ☐Samples compromised/tampered with? ☐ ☒ ☐COC is complete w/o discrepancies ☒ ☐ ☐Sample custody seal? ☐ ☐ ☒Sample containers have legible labels? ☒ ☐ ☐Sample date/times are provided? ☒ ☐ ☐Appropriate containers are used? ☒ ☐ ☐Sample bottles are completely filled? ☒ ☐ ☐Sample preservatives verified? ☐ ☐ ☒Is the Field Sampler's name on COC? ☐ ☐ ☒Samples w/o discrepancies? ☒ ☐ ☐Zero headspace?* ☐ ☐ ☒Alkalinity has no headspace? ☐ ☐ ☒Perchlorate has headspace? ☐ ☐ ☒

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

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

Initials DM Date 01/07/25

Notes: _____

Trizma Lot #(s): _____

Ammonium

Acetate Lot #(s) _____

Login CompletionReceipt Temperature on COC? ☒ ☐ ☐NCM Filed? ☐ ☐ ☒Samples received within hold time? ☒ ☐ ☐Log Release checked in TALS? ☒ ☐ ☐Initials DM Date 01/07/25

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1813317
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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		⁶ Al
		⁷ Sc

SAMPLE SUMMARY

DU1-ISM L1813317-01 Solid

Collected by
Connor Anderson

Collected date/time
12/20/24 07:50

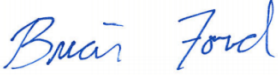
Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2429093	1	01/22/25 00:00	01/22/25 00:00	-	Subcontract

¹Cp ${}^2\text{Tc}$ ^3S_s ${}^4\text{Cn}$ ${}^5\text{G}_1$ ${}^6\text{Al}$ ${}^7\text{Sc}$

CASE NARRATIVE

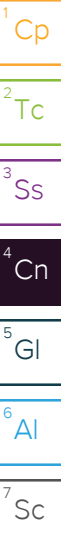
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples 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.



Brian Ford
Project Manager

Project Narrative

L1813317 -01 contains subout data that is included after the chain of custody.



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

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

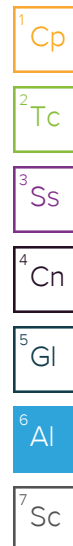
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



Signature:	Time & Date:	Signature:
THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.		



ANALYTICAL REPORT

PREPARED FOR

Attn: Jimmy Huckaba
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

Generated 1/22/2025 5:11:12 PM

JOB DESCRIPTION

Oregon samples

JOB NUMBER

320-118077-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



Generated
1/22/2025 5:11:12 PM

Authorized for release by
Nathaniel Horner, Project Manager I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

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Definitions/Glossary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

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

Case Narrative

Client: Pace Analytical National
Project: Oregon samples

Job ID: 320-118077-1

Job ID: 320-118077-1

Eurofins Sacramento

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 1/7/2025 9:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

Dioxin

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

General Chemistry

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

Eurofins Sacramento

Detection Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Client Sample ID: DU1-ISM

Lab Sample ID: 320-118077-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,4,7,8-PeCDF	8.81		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,6,7,8-HxCDD	5.15		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,7,8,9-HxCDD	5.79		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,7,8-HxCDF	9.18		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,6,7,8-HxCDF	9.77		5.00		pg/g	1	✱	1613B	Total/NA
2,3,4,6,7,8-HxCDF	10.5		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	102		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	52.5		5.00		pg/g	1	✱	1613B	Total/NA
OCDD	797		10.0		pg/g	1	✱	1613B	Total/NA
OCDF	40.2		10.0		pg/g	1	✱	1613B	Total/NA
Total TCDD	10.1	q	1.00		pg/g	1	✱	1613B	Total/NA
Total TCDF	67.7	q	1.00		pg/g	1	✱	1613B	Total/NA
Total PeCDD	18.5	q	5.00		pg/g	1	✱	1613B	Total/NA
Total PeCDF	72.9	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDD	50.1	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDF	84.3	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDD	183		5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDF	93.3		5.00		pg/g	1	✱	1613B	Total/NA
2,3,7,8-TCDF - RA	4.08		1.00		pg/g	1	✱	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Client Sample ID: DU1-ISM

Lab Sample ID: 320-118077-1

Date Collected: 12/20/24 07:50

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 94.1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND	q	1.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
2,3,4,7,8-PeCDF	8.81		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,6,7,8-HxCDD	5.15		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,7,8,9-HxCDD	5.79		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,4,7,8-HxCDF	9.18		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,6,7,8-HxCDF	9.77		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
2,3,4,6,7,8-HxCDF	10.5		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,4,6,7,8-HpCDD	102		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,4,6,7,8-HpCDF	52.5		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
OCDD	797		10.0		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
OCDF	40.2		10.0		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
Total TCDD	10.1	q	1.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
Total TCDF	67.7	q	1.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
Total PeCDD	18.5	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
Total PeCDF	72.9	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
Total HxCDD	50.1	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
Total HxCDF	84.3	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
Total HpCDD	183		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1
Total HpCDF	93.3		5.00		pg/g	☆	01/10/25 07:38	01/15/25 03:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	58		25 - 164	01/10/25 07:38	01/15/25 03:03	1
13C-2,3,7,8-TCDF	63		24 - 169	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,7,8-PeCDD	53		25 - 181	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,7,8-PeCDF	53		24 - 185	01/10/25 07:38	01/15/25 03:03	1
13C-2,3,4,7,8-PeCDF	50		21 - 178	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,4,7,8-HxCDD	50		32 - 141	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,6,7,8-HxCDD	69		28 - 130	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,6,7,8-HxCDF	60		26 - 123	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,7,8,9-HxCDF	54		29 - 147	01/10/25 07:38	01/15/25 03:03	1
13C-2,3,4,6,7,8-HxCDF	63		28 - 136	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,4,6,7,8-HpCDD	60		23 - 140	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	01/10/25 07:38	01/15/25 03:03	1
13C-1,2,3,4,7,8,9-HpCDF	51		26 - 138	01/10/25 07:38	01/15/25 03:03	1
13C-OCDD	60		17 - 157	01/10/25 07:38	01/15/25 03:03	1
13C-OCDF	70		17 - 157	01/10/25 07:38	01/15/25 03:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	92		35 - 197	01/10/25 07:38	01/15/25 03:03	1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	4.08		1.00		pg/g	☆	01/10/25 07:38	01/15/25 19:13	1

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Client Sample ID: DU1-ISM

Date Collected: 12/20/24 07:50

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118077-1

Matrix: Solid

Percent Solids: 94.1

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	67		24 - 169				01/10/25 07:38	01/15/25 19:13	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD	92		35 - 197				01/10/25 07:38	01/15/25 19:13	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	5.9		0.1		%			01/16/25 15:51	1
Percent Solids (ASTM D 2216)	94.1		0.1		%			01/16/25 15:51	1

Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Client Sample ID: DU1-ISM

Lab Sample ID: 320-118077-1

						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	ND	q	1.00		pg/g	1	0.105	1613B
1,2,3,7,8-PeCDD	ND		5.00		pg/g	1	0.153	1613B
1,2,3,7,8-PeCDF	ND		5.00		pg/g	0.03	0.00564	1613B
2,3,4,7,8-PeCDF	8.81		5.00		pg/g	0.3	2.64	1613B
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0361	1613B
1,2,3,6,7,8-HxCDD	5.15		5.00		pg/g	0.1	0.515	1613B
1,2,3,7,8,9-HxCDD	5.79		5.00		pg/g	0.1	0.579	1613B
1,2,3,4,7,8-HxCDF	9.18		5.00		pg/g	0.1	0.918	1613B
1,2,3,6,7,8-HxCDF	9.77		5.00		pg/g	0.1	0.977	1613B
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.0386	1613B
2,3,4,6,7,8-HxCDF	10.5		5.00		pg/g	0.1	1.05	1613B
1,2,3,4,6,7,8-HpCDD	102		5.00		pg/g	0.01	1.02	1613B
1,2,3,4,6,7,8-HpCDF	52.5		5.00		pg/g	0.01	0.525	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	0.01	0.00870	1613B
OCDD	797		10.0		pg/g	0.0003	0.239	1613B
OCDF	40.2		10.0		pg/g	0.0003	0.0121	1613B
2,3,7,8-TCDF - RA	4.08		1.00		pg/g	0.1	0.408	1613B
						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		9.23	TEQ
Total TEQ					pg/g		9.23	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

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Surrogate Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-118077-1	DU1-ISM	92
320-118077-1 - RA	DU1-ISM	92
MB 320-826876/1-A	Method Blank	95

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-826876/2-A	Lab Control Sample	95
LCSD 320-826876/3-A	Lab Control Sample Dup	96

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-118077-1	DU1-ISM	58	63	53	53	50	50	69	57
320-118077-1 - RA	DU1-ISM		67						
MB 320-826876/1-A	Method Blank	60	68	56	61	58	53	65	57

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)	OCDF (17-157)
320-118077-1	DU1-ISM	60	54	63	60	64	51	60	70
320-118077-1 - RA	DU1-ISM								
MB 320-826876/1-A	Method Blank	61	59	59	56	64	53	61	64

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-826876/2-A	Lab Control Sample	69	76	65	66	56	50	66	50
LCSD 320-826876/3-A	Lab Control Sample Dup	71	78	65	67	63	60	77	63

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)	OCDF (13-199)
LCS 320-826876/2-A	Lab Control Sample	55	71	69	68	62	70	78	79
LCSD 320-826876/3-A	Lab Control Sample Dup	67	72	72	68	76	71	75	81

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD

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Isotope Dilution Summary

Client: Pace Analytical National

Project/Site: Oregon samples

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

Job ID: 320-118077-1

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-826876/1-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 826876

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,7,8-TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDD	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDF	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,7,8-TCDF	68		24 - 169	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDD	56		25 - 181	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDF	61		24 - 185	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,7,8-PeCDF	58		21 - 178	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8,9-HxCDF	59		29 - 147	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138	01/10/25 07:38	01/14/25 16:53	1
13C-OCDD	61		17 - 157	01/10/25 07:38	01/14/25 16:53	1
13C-OCDF	64		17 - 157	01/10/25 07:38	01/14/25 16:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	95		35 - 197	01/10/25 07:38	01/14/25 16:53	1

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-826876/2-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	20.0	20.88		pg/g		104	67 - 158
2,3,7,8-TCDF	20.0	20.35		pg/g		102	75 - 158
1,2,3,7,8-PeCDD	100	105.1		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	107.9		pg/g		108	80 - 134
2,3,4,7,8-PeCDF	100	108.6		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	107.7		pg/g		108	70 - 164
1,2,3,6,7,8-HxCDD	100	106.5		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	135.5		pg/g		135	64 - 162
1,2,3,4,7,8-HxCDF	100	115.7		pg/g		116	72 - 134
1,2,3,6,7,8-HxCDF	100	112.9		pg/g		113	84 - 130
1,2,3,7,8,9-HxCDF	100	112.6		pg/g		113	78 - 130
2,3,4,6,7,8-HxCDF	100	111.7		pg/g		112	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111.2		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	105.9		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	116.4		pg/g		116	78 - 138
OCDD	200	206.8		pg/g		103	78 - 144
OCDF	200	218.2		pg/g		109	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	69		20 - 175
13C-2,3,7,8-TCDF	76		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	66		21 - 192
13C-2,3,4,7,8-PeCDF	56		13 - 328
13C-1,2,3,4,7,8-HxCDD	50		21 - 193
13C-1,2,3,6,7,8-HxCDD	66		25 - 163
13C-1,2,3,4,7,8-HxCDF	50		19 - 202
13C-1,2,3,6,7,8-HxCDF	55		21 - 159
13C-1,2,3,7,8,9-HxCDF	71		17 - 205
13C-2,3,4,6,7,8-HxCDF	69		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	62		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	70		20 - 186
13C-OCDD	78		13 - 199
13C-OCDF	79		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	95		31 - 191

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	21.85		pg/g		109	67 - 158	5	50
2,3,7,8-TCDF	20.0	21.35		pg/g		107	75 - 158	5	50
1,2,3,7,8-PeCDD	100	109.2		pg/g		109	70 - 142	4	50
1,2,3,7,8-PeCDF	100	114.1		pg/g		114	80 - 134	6	50

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,4,7,8-PeCDF	100	113.0		pg/g		113	68 - 160	4	50
1,2,3,4,7,8-HxCDD	100	111.7		pg/g		112	70 - 164	4	50
1,2,3,6,7,8-HxCDD	100	107.7		pg/g		108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	100	116.6		pg/g		117	64 - 162	15	50
1,2,3,4,7,8-HxCDF	100	119.5		pg/g		120	72 - 134	3	50
1,2,3,6,7,8-HxCDF	100	118.5		pg/g		118	84 - 130	5	50
1,2,3,7,8,9-HxCDF	100	112.0		pg/g		112	78 - 130	0	50
2,3,4,6,7,8-HxCDF	100	115.7		pg/g		116	70 - 156	4	50
1,2,3,4,6,7,8-HpCDD	100	116.1		pg/g		116	70 - 140	4	50
1,2,3,4,6,7,8-HpCDF	100	105.1		pg/g		105	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF	100	113.8		pg/g		114	78 - 138	2	50
OCDD	200	218.1		pg/g		109	78 - 144	5	50
OCDF	200	217.3		pg/g		109	63 - 170	0	50

LCSD LCSD			
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	71		20 - 175
13C-2,3,7,8-TCDF	78		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	67		21 - 192
13C-2,3,4,7,8-PeCDF	63		13 - 328
13C-1,2,3,4,7,8-HxCDD	60		21 - 193
13C-1,2,3,6,7,8-HxCDD	77		25 - 163
13C-1,2,3,4,7,8-HxCDF	63		19 - 202
13C-1,2,3,6,7,8-HxCDF	67		21 - 159
13C-1,2,3,7,8,9-HxCDF	72		17 - 205
13C-2,3,4,6,7,8-HxCDF	72		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	76		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	71		20 - 186
13C-OCDD	75		13 - 199
13C-OCDF	81		13 - 199

LCSD LCSD			
Surrogate	%Recovery	Qualifier	Limits
37Cl4-2,3,7,8-TCDD	96		31 - 191

Eurofins Sacramento

QC Association Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Specialty Organics

Prep Batch: 826876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118077-1	DU1-ISM	Total/NA	Solid	HRMS-Sox	
320-118077-1 - RA	DU1-ISM	Total/NA	Solid	HRMS-Sox	
MB 320-826876/1-A	Method Blank	Total/NA	Solid	HRMS-Sox	
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Sox	
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	HRMS-Sox	

Analysis Batch: 827323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118077-1	DU1-ISM	Total/NA	Solid	1613B	826876
MB 320-826876/1-A	Method Blank	Total/NA	Solid	1613B	826876
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	1613B	826876
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	1613B	826876

Analysis Batch: 827707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118077-1 - RA	DU1-ISM	Total/NA	Solid	1613B	826876

General Chemistry

Analysis Batch: 827913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118077-1	DU1-ISM	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Client Sample ID: DU1-ISM

Date Collected: 12/20/24 07:50

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118077-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: DU1-ISM

Date Collected: 12/20/24 07:50

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118077-1

Matrix: Solid

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.02 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827323	01/15/25 03:03	CB	EET SAC
Total/NA	Prep	HRMS-Sox	RA		10.02 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B	RA	1	1 uL	1 uL	827707	01/15/25 19:13	DB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200060	03-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
TEQ		Solid	Total Dioxin/Furan TEQ
TEQ		Solid	Total TEQ

Method Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	EET SAC
TEQ	Total TEQ Calculation	Lab SOP	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
HRMS-Sox	Soxhlet Extraction	EPA	EET SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118077-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118077-1	DU1-ISM	Solid	12/20/24 07:50	01/07/25 09:10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Sub-Contract Chain of Custody

Batch Date/Time: 01/06/25 09:14

Sub-Contract Lab: TAWSCA

Address: 880 Riverside Parkway

City/State: West Sacramento, CA
95605

Contact:

Nathaniel Horner@et eurofinsus.com

Owner Lab: PACEMTJL

Address: 12065 Lebanon Rd

City/State: Mt Juliet, TN 37122

Phone: (615) 773-9756

Fax: (615) 758-5859

WO: WG2429093

Email: MTJLSuboutTeam@pacelabs.com

Results Due Date: 01/28/25

ESC Purchase Order #: L1813317

Send Reports to: James C Huckaba



12065 Lebanon Rd
Mt Juliet, TN 37122
Phone (615) 773-9756
Fax (615) 758-5859

Sample ID Container ID	Matrix	State	Collect Date	Description	Method	Sample Number Lab Use Only	Sample Comments Lab Use Only
DUI-ISM 4ozClr-NoPres - 50414568	SS	OR	12/20/24 07:50	Dioxins and Furans 1613	1613	2. L1813317-01	1613 dioxins/furans including TEQ, Equis EDD and Promium EDD

*= Container used for multiple Samples and/or Analyses

Relinquished by: [Signature] Date 1-6-25

Received by: [Signature] Date 11/7/24 0910

Relinquished by: _____ Date _____

Received by: _____ Date _____

0.6°C



320-118077 Chain of Custody



Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Loc 320

118077

Tracking # 4301 1543 7269

Job _____

SO ☒ PO ☐ FO ☐ SAT ☐ 2-Day ☐ Ground ☐ UPS ☐ CDO ☐ Courier
GSL ☐ OnTrac ☐ Goldstreak ☐ USPS ☐ Other _____Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COCTherm ID 209 Corr Factor (+/-) N/A °CIce ☒ Wet ☒ Gel _____ Other _____Cooler Custody Seal Seal

Cooler ID _____

Temp Observed 0.6 °C Corrected: 0.6 °CFrom Temp Blank ☒ Sandwich ☐ Sidewall ☐**Opening/Processing The Shipment** Yes No NACooler compromised/tampered with? ☐ ☒ ☐Cooler Temperature is acceptable? ☒ ☐ ☐Frozen samples show signs of thaw? ☐ ☐ ☒Initials SD Date 11/2/24**Unpacking/Labeling The Samples** Yes No NAContainers are not broken or leaking? ☒ ☐ ☐Samples compromised/tampered with? ☐ ☒ ☐COC is complete w/o discrepancies ☒ ☐ ☐Sample custody seal? ☐ ☐ ☒Sample containers have legible labels? ☒ ☐ ☐Sample date/times are provided? ☒ ☐ ☐Appropriate containers are used? ☒ ☐ ☐Sample bottles are completely filled? ☒ ☐ ☐Sample preservatives verified? ☐ ☐ ☒Is the Field Sampler's name on COC? ☐ ☐ ☒Samples w/o discrepancies? ☒ ☐ ☐Zero headspace?* ☐ ☐ ☒Alkalinity has no headspace? ☐ ☐ ☒Perchlorate has headspace? ☐ ☐ ☒

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

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

Initials DM Date 01/07/25

Notes _____

Trizma Lot #(s): _____

Ammonium

Acetate Lot #(s): _____

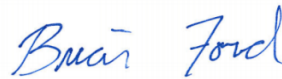
Login Completion Yes No NAReceipt Temperature on COC? ☒ ☐ ☐NCM Filed? ☐ ☐ ☒Samples received within hold time? ☒ ☐ ☐Log Release checked in TALS? ☒ ☐ ☐Initials DM Date 01/07/25

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1813318
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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Cp: Cover Page	1	¹ Cp
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Cn: Case Narrative	4	
Gl: Glossary of Terms	5	³ Ss
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Sc: Sample Chain of Custody	7	⁵ Gl
		⁶ Al
		⁷ Sc

SAMPLE SUMMARY

DU2-ISM L1813318-01 Solid

Collected by
Connor Anderson

Collected date/time
12/17/24 14:00

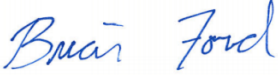
Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2429129	1	01/22/25 00:00	01/22/25 00:00	-	Subcontract

¹Cp ${}^2\text{Tc}$ ${}^3S_S$ ${}^4\text{Cn}$ ${}^5\text{Gl}$ ${}^6\text{Al}$ ${}^7\text{Sc}$

CASE NARRATIVE

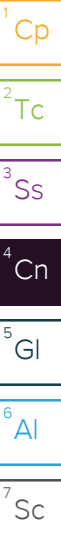
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples 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.



Brian Ford
Project Manager

Project Narrative

L1813318 -01 contains subout data that is included after the chain of custody.



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

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

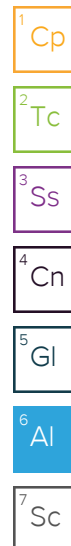
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



C169

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.



ANALYTICAL REPORT

PREPARED FOR

Attn: Jimmy Huckaba
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

Generated 1/22/2025 5:16:54 PM

JOB DESCRIPTION

Oregon samples

JOB NUMBER

320-118078-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



Generated
1/22/2025 5:16:54 PM

Authorized for release by
Nathaniel Horner, Project Manager I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

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Definitions/Glossary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

Glossary

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

Case Narrative

Client: Pace Analytical National
Project: Oregon samples

Job ID: 320-118078-1

Job ID: 320-118078-1

Eurofins Sacramento

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 1/7/2025 9:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

Dioxin

Method 1613B: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): DU2-ISM (320-118078-1). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

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

General Chemistry

Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The following sample in analytical batch 320-827913 was prepared and analyzed outside this time period: DU2-ISM (320-118078-1).

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

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Detection Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Client Sample ID: DU2-ISM

Lab Sample ID: 320-118078-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.95	q	1.00		pg/g	1	✳	1613B	Total/NA
1,2,3,7,8-PeCDD	7.64		5.00		pg/g	1	✳	1613B	Total/NA
1,2,3,7,8-PeCDF	17.9		5.00		pg/g	1	✳	1613B	Total/NA
2,3,4,7,8-PeCDF	39.7		5.00		pg/g	1	✳	1613B	Total/NA
1,2,3,4,7,8-HxCDD	6.78	q	5.00		pg/g	1	✳	1613B	Total/NA
1,2,3,6,7,8-HxCDD	15.0		5.00		pg/g	1	✳	1613B	Total/NA
1,2,3,7,8,9-HxCDD	14.7		5.00		pg/g	1	✳	1613B	Total/NA
1,2,3,4,7,8-HxCDF	45.8		5.00		pg/g	1	✳	1613B	Total/NA
1,2,3,6,7,8-HxCDF	38.6		5.00		pg/g	1	✳	1613B	Total/NA
2,3,4,6,7,8-HxCDF	51.8		5.00		pg/g	1	✳	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	149		5.00		pg/g	1	✳	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	226		5.00		pg/g	1	✳	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	8.57		5.00		pg/g	1	✳	1613B	Total/NA
OCDD	702		10.0		pg/g	1	✳	1613B	Total/NA
OCDF	65.8		10.0		pg/g	1	✳	1613B	Total/NA
Total TCDD	138	q	1.00		pg/g	1	✳	1613B	Total/NA
Total TCDF	375	G	1.36		pg/g	1	✳	1613B	Total/NA
Total PeCDD	146	q	5.00		pg/g	1	✳	1613B	Total/NA
Total PeCDF	351	q	5.00		pg/g	1	✳	1613B	Total/NA
Total HxCDD	244	q	5.00		pg/g	1	✳	1613B	Total/NA
Total HxCDF	376	q	5.00		pg/g	1	✳	1613B	Total/NA
Total HpCDD	299		5.00		pg/g	1	✳	1613B	Total/NA
Total HpCDF	308		5.00		pg/g	1	✳	1613B	Total/NA
2,3,7,8-TCDF - RA	20.0		1.00		pg/g	1	✳	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Client Sample ID: DU2-ISM

Lab Sample ID: 320-118078-1

Date Collected: 12/17/24 14:00

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 91.6

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1.95	q	1.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,7,8-PeCDD	7.64		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,7,8-PeCDF	17.9		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
2,3,4,7,8-PeCDF	39.7		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,4,7,8-HxCDD	6.78	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,6,7,8-HxCDD	15.0		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,7,8,9-HxCDD	14.7		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,4,7,8-HxCDF	45.8		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,6,7,8-HxCDF	38.6		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
2,3,4,6,7,8-HxCDF	51.8		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,4,6,7,8-HpCDD	149		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,4,6,7,8-HpCDF	226		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
1,2,3,4,7,8,9-HpCDF	8.57		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
OCDD	702		10.0		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
OCDF	65.8		10.0		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
Total TCDD	138	q	1.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
Total TCDF	375	G	1.36		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
Total PeCDD	146	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
Total PeCDF	351	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
Total HxCDD	244	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
Total HxCDF	376	q	5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
Total HpCDD	299		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1
Total HpCDF	308		5.00		pg/g	☆	01/10/25 07:38	01/15/25 07:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	54		25 - 164	01/10/25 07:38	01/15/25 07:15	1
13C-2,3,7,8-TCDF	61		24 - 169	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,7,8-PeCDD	53		25 - 181	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,7,8-PeCDF	54		24 - 185	01/10/25 07:38	01/15/25 07:15	1
13C-2,3,4,7,8-PeCDF	54		21 - 178	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,6,7,8-HxCDD	64		28 - 130	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,4,7,8-HxCDF	58		26 - 152	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,6,7,8-HxCDF	62		26 - 123	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,7,8,9-HxCDF	55		29 - 147	01/10/25 07:38	01/15/25 07:15	1
13C-2,3,4,6,7,8-HxCDF	62		28 - 136	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,4,6,7,8-HpCDF	62		28 - 143	01/10/25 07:38	01/15/25 07:15	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138	01/10/25 07:38	01/15/25 07:15	1
13C-OCDD	60		17 - 157	01/10/25 07:38	01/15/25 07:15	1
13C-OCDF	63		17 - 157	01/10/25 07:38	01/15/25 07:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	92		35 - 197	01/10/25 07:38	01/15/25 07:15	1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	20.0		1.00		pg/g	☆	01/10/25 07:38	01/15/25 19:56	1

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Client Sample ID: DU2-ISM

Date Collected: 12/17/24 14:00

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118078-1

Matrix: Solid

Percent Solids: 91.6

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	63		24 - 169					01/10/25 07:38	01/15/25 19:56	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD	90		35 - 197					01/10/25 07:38	01/15/25 19:56	1
General Chemistry										
Analyte	Result	Qualifier	RL	MDL	Unit	D		Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	8.4	H	0.1		%				01/16/25 15:51	1
Percent Solids (ASTM D 2216)	91.6	H	0.1		%				01/16/25 15:51	1

Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Client Sample ID: DU2-ISM

Lab Sample ID: 320-118078-1

						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	1.95	q	1.00		pg/g	1	1.95	1613B
1,2,3,7,8-PeCDD	7.64		5.00		pg/g	1	7.64	1613B
1,2,3,7,8-PeCDF	17.9		5.00		pg/g	0.03	0.537	1613B
2,3,4,7,8-PeCDF	39.7		5.00		pg/g	0.3	11.9	1613B
1,2,3,4,7,8-HxCDD	6.78	q	5.00		pg/g	0.1	0.678	1613B
1,2,3,6,7,8-HxCDD	15.0		5.00		pg/g	0.1	1.50	1613B
1,2,3,7,8,9-HxCDD	14.7		5.00		pg/g	0.1	1.47	1613B
1,2,3,4,7,8-HxCDF	45.8		5.00		pg/g	0.1	4.58	1613B
1,2,3,6,7,8-HxCDF	38.6		5.00		pg/g	0.1	3.86	1613B
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.157	1613B
2,3,4,6,7,8-HxCDF	51.8		5.00		pg/g	0.1	5.18	1613B
1,2,3,4,6,7,8-HpCDD	149		5.00		pg/g	0.01	1.49	1613B
1,2,3,4,6,7,8-HpCDF	226		5.00		pg/g	0.01	2.26	1613B
1,2,3,4,7,8,9-HpCDF	8.57		5.00		pg/g	0.01	0.0857	1613B
OCDD	702		10.0		pg/g	0.0003	0.211	1613B
OCDF	65.8		10.0		pg/g	0.0003	0.0197	1613B
2,3,7,8-TCDF - RA	20.0		1.00		pg/g	0.1	2.00	1613B
						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2000	TEQ
Total TEQ					pg/g		2000	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

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Surrogate Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-118078-1	DU2-ISM	92
320-118078-1 - RA	DU2-ISM	90
MB 320-826876/1-A	Method Blank	95

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-826876/2-A	Lab Control Sample	95
LCSD 320-826876/3-A	Lab Control Sample Dup	96

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-118078-1	DU2-ISM	54	61	53	54	54	53	64	58
320-118078-1 - RA	DU2-ISM		63						
MB 320-826876/1-A	Method Blank	60	68	56	61	58	53	65	57

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)	OCDF (17-157)
320-118078-1	DU2-ISM	62	55	62	56	62	53	60	63
320-118078-1 - RA	DU2-ISM								
MB 320-826876/1-A	Method Blank	61	59	59	56	64	53	61	64

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD
 OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-826876/2-A	Lab Control Sample	69	76	65	66	56	50	66	50
LCSD 320-826876/3-A	Lab Control Sample Dup	71	78	65	67	63	60	77	63

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)	OCDF (13-199)
LCS 320-826876/2-A	Lab Control Sample	55	71	69	68	62	70	78	79
LCSD 320-826876/3-A	Lab Control Sample Dup	67	72	72	68	76	71	75	81

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD

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Isotope Dilution Summary

Client: Pace Analytical National

Project/Site: Oregon samples

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

Job ID: 320-118078-1

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-826876/1-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 826876

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,7,8-TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDD	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDF	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,7,8-TCDF	68		24 - 169	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDD	56		25 - 181	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDF	61		24 - 185	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,7,8-PeCDF	58		21 - 178	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8,9-HxCDF	59		29 - 147	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138	01/10/25 07:38	01/14/25 16:53	1
13C-OCDD	61		17 - 157	01/10/25 07:38	01/14/25 16:53	1
13C-OCDF	64		17 - 157	01/10/25 07:38	01/14/25 16:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	95		35 - 197	01/10/25 07:38	01/14/25 16:53	1

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-826876/2-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	20.0	20.88		pg/g		104	67 - 158
2,3,7,8-TCDF	20.0	20.35		pg/g		102	75 - 158
1,2,3,7,8-PeCDD	100	105.1		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	107.9		pg/g		108	80 - 134
2,3,4,7,8-PeCDF	100	108.6		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	107.7		pg/g		108	70 - 164
1,2,3,6,7,8-HxCDD	100	106.5		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	135.5		pg/g		135	64 - 162
1,2,3,4,7,8-HxCDF	100	115.7		pg/g		116	72 - 134
1,2,3,6,7,8-HxCDF	100	112.9		pg/g		113	84 - 130
1,2,3,7,8,9-HxCDF	100	112.6		pg/g		113	78 - 130
2,3,4,6,7,8-HxCDF	100	111.7		pg/g		112	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111.2		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	105.9		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	116.4		pg/g		116	78 - 138
OCDD	200	206.8		pg/g		103	78 - 144
OCDF	200	218.2		pg/g		109	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	69		20 - 175
13C-2,3,7,8-TCDF	76		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	66		21 - 192
13C-2,3,4,7,8-PeCDF	56		13 - 328
13C-1,2,3,4,7,8-HxCDD	50		21 - 193
13C-1,2,3,6,7,8-HxCDD	66		25 - 163
13C-1,2,3,4,7,8-HxCDF	50		19 - 202
13C-1,2,3,6,7,8-HxCDF	55		21 - 159
13C-1,2,3,7,8,9-HxCDF	71		17 - 205
13C-2,3,4,6,7,8-HxCDF	69		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	62		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	70		20 - 186
13C-OCDD	78		13 - 199
13C-OCDF	79		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	95		31 - 191

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	21.85		pg/g		109	67 - 158	5	50
2,3,7,8-TCDF	20.0	21.35		pg/g		107	75 - 158	5	50
1,2,3,7,8-PeCDD	100	109.2		pg/g		109	70 - 142	4	50
1,2,3,7,8-PeCDF	100	114.1		pg/g		114	80 - 134	6	50

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,4,7,8-PeCDF	100	113.0		pg/g		113	68 - 160	4	50
1,2,3,4,7,8-HxCDD	100	111.7		pg/g		112	70 - 164	4	50
1,2,3,6,7,8-HxCDD	100	107.7		pg/g		108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	100	116.6		pg/g		117	64 - 162	15	50
1,2,3,4,7,8-HxCDF	100	119.5		pg/g		120	72 - 134	3	50
1,2,3,6,7,8-HxCDF	100	118.5		pg/g		118	84 - 130	5	50
1,2,3,7,8,9-HxCDF	100	112.0		pg/g		112	78 - 130	0	50
2,3,4,6,7,8-HxCDF	100	115.7		pg/g		116	70 - 156	4	50
1,2,3,4,6,7,8-HpCDD	100	116.1		pg/g		116	70 - 140	4	50
1,2,3,4,6,7,8-HpCDF	100	105.1		pg/g		105	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF	100	113.8		pg/g		114	78 - 138	2	50
OCDD	200	218.1		pg/g		109	78 - 144	5	50
OCDF	200	217.3		pg/g		109	63 - 170	0	50

LCSD LCSD			
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	71		20 - 175
13C-2,3,7,8-TCDF	78		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	67		21 - 192
13C-2,3,4,7,8-PeCDF	63		13 - 328
13C-1,2,3,4,7,8-HxCDD	60		21 - 193
13C-1,2,3,6,7,8-HxCDD	77		25 - 163
13C-1,2,3,4,7,8-HxCDF	63		19 - 202
13C-1,2,3,6,7,8-HxCDF	67		21 - 159
13C-1,2,3,7,8,9-HxCDF	72		17 - 205
13C-2,3,4,6,7,8-HxCDF	72		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	76		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	71		20 - 186
13C-OCDD	75		13 - 199
13C-OCDF	81		13 - 199

LCSD LCSD			
Surrogate	%Recovery	Qualifier	Limits
37Cl4-2,3,7,8-TCDD	96		31 - 191

Eurofins Sacramento

QC Association Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Specialty Organics

Prep Batch: 826876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118078-1	DU2-ISM	Total/NA	Solid	HRMS-Sox	
320-118078-1 - RA	DU2-ISM	Total/NA	Solid	HRMS-Sox	
MB 320-826876/1-A	Method Blank	Total/NA	Solid	HRMS-Sox	
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Sox	
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	HRMS-Sox	

Analysis Batch: 827323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-826876/1-A	Method Blank	Total/NA	Solid	1613B	826876
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	1613B	826876
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	1613B	826876

Analysis Batch: 827524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118078-1	DU2-ISM	Total/NA	Solid	1613B	826876

Analysis Batch: 827707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118078-1 - RA	DU2-ISM	Total/NA	Solid	1613B	826876

General Chemistry

Analysis Batch: 827913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118078-1	DU2-ISM	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Client Sample ID: DU2-ISM

Date Collected: 12/17/24 14:00

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118078-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: DU2-ISM

Date Collected: 12/17/24 14:00

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118078-1

Matrix: Solid

Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.48 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827524	01/15/25 07:15	CB	EET SAC
Total/NA	Prep	HRMS-Sox	RA		10.48 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B	RA	1	1 uL	1 uL	827707	01/15/25 19:56	DB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200060	03-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
TEQ		Solid	Total Dioxin/Furan TEQ
TEQ		Solid	Total TEQ

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Method Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	EET SAC
TEQ	Total TEQ Calculation	Lab SOP	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
HRMS-Sox	Soxhlet Extraction	EPA	EET SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118078-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118078-1	DU2-ISM	Solid	12/17/24 14:00	01/07/25 09:10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Sub-Contract Chain of Custody

Batch Date/Time: 01/06/25 09 40

Sub-Contract Lab: TAWSCA

Address: 880 Riverside Parkway

City/State: West Sacramento, CA

95605

Contact:

Nathaniel Horner@et eurofinsus com

Owner Lab: PACEMTJL

Address: 12065 Lebanon Rd

City/State: Mt Juliet, TN 37122

Phone: (615) 773-9756

Fax: (615) 758-5859

WO: WG2429129

Email: MTJLSuboutTeam@pacelabs com

Results Due Date: 01/28/25

ESC Purchase Order #: L1813318

Send Reports to: James C Huckaba



12065 Lebanon Rd

Mt Juliet, TN 37122

Phone (615) 773-9756

Fax (615) 758-5859

Sample ID Container ID	Matrix	State	Collect Date	Description	Method	Sample Number Lab Use Only	Sample Comments Lab Use Only
DU2-ISM 4ozClr-NoPres - 50414628	SS	OR	12/17/24 14:00	Dioxins and Furans 1613	1613	2. L1813318-01	1613 dioxins/furans including TEQ, Equis EDD and Promium EDD

*= Container used for multiple Samples and/or Analyses

Relinquished by: [Signature] Date 1-6-25

Received by: [Signature] EE7560 Date 1/7/25 0910

Relinquished by: _____ Date _____

Received by: _____ Date _____

06°C



320-118078 Chain of Custody



Environment Testing

Loc 320

118078

Sacramento Sample Receiving Notes (SSRN)

Tracking # 4301 1543 7469

Job _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC

Therm ID W4 Corr Factor (+/- W/A) °C

Ice ☒ Wet ☒ Gel _____ Other _____

Cooler Custody Seal Seal

Cooler ID _____

Temp Observed 0.6 °C Corrected 0.6 °C
From Temp Blank ☒ Sandwich ☐ Sidewall ☐

Opening/Processing The Shipment **Yes No NA**

Cooler compromised/tampered with? ☐ ☒ ☐

Cooler Temperature is acceptable? ☒ ☐ ☐

Frozen samples show signs of thaw? ☐ ☐ ☒

Initials SD Date 11/2/24

Unpacking/Labeling The Samples **Yes No NA**

Containers are not broken or leaking? ☒ ☐ ☐

Samples compromised/tampered with? ☐ ☒ ☐

COC is complete w/o discrepancies ☒ ☐ ☐

Sample custody seal? ☐ ☐ ☒

Sample containers have legible labels? ☒ ☐ ☐

Sample date/times are provided? ☒ ☐ ☐

Appropriate containers are used? ☒ ☐ ☐

Sample bottles are completely filled? ☒ ☐ ☐

Sample preservatives verified? ☐ ☐ ☒

Is the Field Sampler's name on COC? ☐ ☐ ☒

Samples w/o discrepancies? ☒ ☐ ☐

Zero headspace?* ☐ ☐ ☒

Alkalinity has no headspace? ☐ ☐ ☒

Perchlorate has headspace?
(Methods 314, 331, 6850) ☐ ☐ ☒

Multiphasic samples are not present? ☒ ☐ ☐

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

Initials DM Date 01/07/25

Notes: _____

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____

Login Completion **Yes No NA**

Receipt Temperature on COC? ☒ ☐ ☐

NCM Filed? ☐ ☐ ☒

Samples received within hold time? ☒ ☐ ☐

Log Release checked in TALS? ☒ ☐ ☐

Initials DM Date 01/07/25

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1813319
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

Cp: Cover Page	1	¹ Cp
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Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	³ Ss
Gl: Glossary of Terms	5	⁴ Cn
Al: Accreditations & Locations	6	⁵ Gl
Sc: Sample Chain of Custody	7	⁶ Al
		⁷ Sc

SAMPLE SUMMARY

DU4-ISM L1813319-01 Solid

Collected by
Connor Anderson

Collected date/time
12/18/24 11:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2429131	1	01/22/25 00:00	01/22/25 00:00	-	Subcontract

¹Cp ${}^2\text{Tc}$ ${}^3S_s$ ${}^4\text{Cn}$ ${}^5\text{G}_1$ ${}^6\text{Al}$ ${}^7\text{Sc}$

CASE NARRATIVE

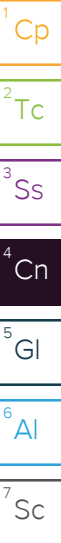
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples 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.



Brian Ford
Project Manager

Project Narrative

L1813319 -01 contains subout data that is included after the chain of custody.



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

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

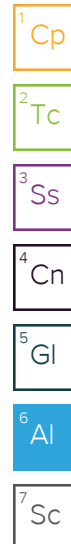
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



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ANALYTICAL REPORT

PREPARED FOR

Attn: Jimmy Huckaba
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

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JOB DESCRIPTION

Oregon samples

JOB NUMBER

320-118079-1

Eurofins Sacramento

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Authorized for release by
Nathaniel Horner, Project Manager I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

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Definitions/Glossary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

Glossary

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

Case Narrative

Client: Pace Analytical National
Project: Oregon samples

Job ID: 320-118079-1

Job ID: 320-118079-1

Eurofins Sacramento

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 1/7/2025 9:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

Dioxin

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

General Chemistry

Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The following samples in analytical batch 320-827913 were prepared and analyzed outside this time period: DU4-ISM (320-118079-1).

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

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Detection Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Client Sample ID: DU4-ISM

Lab Sample ID: 320-118079-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil	Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	24.2		5.00		pg/g	1		✱	1613B	Total/NA
OCDD	214		10.0		pg/g	1		✱	1613B	Total/NA
OCDF	15.1		10.0		pg/g	1		✱	1613B	Total/NA
Total TCDD	1.29		1.00		pg/g	1		✱	1613B	Total/NA
Total TCDF	7.33	q	1.00		pg/g	1		✱	1613B	Total/NA
Total HpCDD	40.9		5.00		pg/g	1		✱	1613B	Total/NA
Total HpCDF	8.07		5.00		pg/g	1		✱	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Client Sample ID: DU4-ISM

Lab Sample ID: 320-118079-1

Date Collected: 12/18/24 11:00

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 93.4

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,4,6,7,8-HpCDD	24.2		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
OCDD	214		10.0		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
OCDF	15.1		10.0		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
Total TCDD	1.29		1.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
Total TCDF	7.33 q		1.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
Total PeCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
Total PeCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
Total HxCDD	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
Total HxCDF	ND		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
Total HpCDD	40.9		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1
Total HpCDF	8.07		5.00		pg/g	☆	01/10/25 07:38	01/15/25 08:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	58		25 - 164	01/10/25 07:38	01/15/25 08:02	1
13C-2,3,7,8-TCDF	64		24 - 169	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,7,8-PeCDD	55		25 - 181	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,7,8-PeCDF	58		24 - 185	01/10/25 07:38	01/15/25 08:02	1
13C-2,3,4,7,8-PeCDF	57		21 - 178	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,4,7,8-HxCDD	52		32 - 141	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,4,7,8-HxCDF	55		26 - 152	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,6,7,8-HxCDF	59		26 - 123	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,7,8,9-HxCDF	57		29 - 147	01/10/25 07:38	01/15/25 08:02	1
13C-2,3,4,6,7,8-HxCDF	61		28 - 136	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,4,6,7,8-HpCDD	48		23 - 140	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,4,6,7,8-HpCDF	58		28 - 143	01/10/25 07:38	01/15/25 08:02	1
13C-1,2,3,4,7,8,9-HpCDF	55		26 - 138	01/10/25 07:38	01/15/25 08:02	1
13C-OCDD	48		17 - 157	01/10/25 07:38	01/15/25 08:02	1
13C-OCDF	62		17 - 157	01/10/25 07:38	01/15/25 08:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	96		35 - 197	01/10/25 07:38	01/15/25 08:02	1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		1.00		pg/g	☆	01/10/25 07:38	01/15/25 20:39	1

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Client Sample ID: DU4-ISM

Date Collected: 12/18/24 11:00

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118079-1

Matrix: Solid

Percent Solids: 93.4

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	67		24 - 169					01/10/25 07:38	01/15/25 20:39	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD	91		35 - 197					01/10/25 07:38	01/15/25 20:39	1
General Chemistry										
Analyte	Result	Qualifier	RL	MDL	Unit	D		Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	6.6	H	0.1		%				01/16/25 15:51	1
Percent Solids (ASTM D 2216)	93.4	H	0.1		%				01/16/25 15:51	1

Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Client Sample ID: DU4-ISM

Lab Sample ID: 320-118079-1

						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	ND		1.00		pg/g	1	0.0575	1613B
1,2,3,7,8-PeCDD	ND		5.00		pg/g	1	0.0449	1613B
1,2,3,7,8-PeCDF	ND		5.00		pg/g	0.03	0.00210	1613B
2,3,4,7,8-PeCDF	ND		5.00		pg/g	0.3	0.0198	1613B
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0201	1613B
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0180	1613B
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g	0.1	0.0178	1613B
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g	0.1	0.00975	1613B
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g	0.1	0.0106	1613B
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.00890	1613B
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g	0.1	0.00860	1613B
1,2,3,4,6,7,8-HpCDD	24.2		5.00		pg/g	0.01	0.242	1613B
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g	0.01	0.00103	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	0.01	0.00122	1613B
OCDD	214		10.0		pg/g	0.0003	0.0642	1613B
OCDF	15.1		10.0		pg/g	0.0003	0.00453	1613B
2,3,7,8-TCDF - RA	ND		1.00		pg/g	0.1	0.00560	1613B
						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		5.60	TEQ
Total TEQ					pg/g		5.60	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

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Surrogate Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-118079-1	DU4-ISM	96
320-118079-1 - RA	DU4-ISM	91
MB 320-826876/1-A	Method Blank	95

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-826876/2-A	Lab Control Sample	95
LCSD 320-826876/3-A	Lab Control Sample Dup	96

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-118079-1	DU4-ISM	58	64	55	58	57	52	65	55
320-118079-1 - RA	DU4-ISM		67						
MB 320-826876/1-A	Method Blank	60	68	56	61	58	53	65	57
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxCDF (26-123)	HxCF (29-147)	13CHxCDF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)	OCDF (17-157)
320-118079-1	DU4-ISM	59	57	61	48	58	55	48	62
320-118079-1 - RA	DU4-ISM								
MB 320-826876/1-A	Method Blank	61	59	59	56	64	53	61	64

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxCDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCDF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-826876/2-A	Lab Control Sample	69	76	65	66	56	50	66	50
LCSD 320-826876/3-A	Lab Control Sample Dup	71	78	65	67	63	60	77	63
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxCDF (21-159)	HxCF (17-205)	13CHxCDF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)	OCDF (13-199)
LCS 320-826876/2-A	Lab Control Sample	55	71	69	68	62	70	78	79
LCSD 320-826876/3-A	Lab Control Sample Dup	67	72	72	68	76	71	75	81

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD

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Isotope Dilution Summary

Client: Pace Analytical National

Project/Site: Oregon samples

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

Job ID: 320-118079-1

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-826876/1-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 826876

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,7,8-TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDD	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDF	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,7,8-TCDF	68		24 - 169	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDD	56		25 - 181	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDF	61		24 - 185	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,7,8-PeCDF	58		21 - 178	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8,9-HxCDF	59		29 - 147	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138	01/10/25 07:38	01/14/25 16:53	1
13C-OCDD	61		17 - 157	01/10/25 07:38	01/14/25 16:53	1
13C-OCDF	64		17 - 157	01/10/25 07:38	01/14/25 16:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	95		35 - 197	01/10/25 07:38	01/14/25 16:53	1

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-826876/2-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	20.0	20.88		pg/g		104	67 - 158
2,3,7,8-TCDF	20.0	20.35		pg/g		102	75 - 158
1,2,3,7,8-PeCDD	100	105.1		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	107.9		pg/g		108	80 - 134
2,3,4,7,8-PeCDF	100	108.6		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	107.7		pg/g		108	70 - 164
1,2,3,6,7,8-HxCDD	100	106.5		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	135.5		pg/g		135	64 - 162
1,2,3,4,7,8-HxCDF	100	115.7		pg/g		116	72 - 134
1,2,3,6,7,8-HxCDF	100	112.9		pg/g		113	84 - 130
1,2,3,7,8,9-HxCDF	100	112.6		pg/g		113	78 - 130
2,3,4,6,7,8-HxCDF	100	111.7		pg/g		112	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111.2		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	105.9		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	116.4		pg/g		116	78 - 138
OCDD	200	206.8		pg/g		103	78 - 144
OCDF	200	218.2		pg/g		109	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	69		20 - 175
13C-2,3,7,8-TCDF	76		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	66		21 - 192
13C-2,3,4,7,8-PeCDF	56		13 - 328
13C-1,2,3,4,7,8-HxCDD	50		21 - 193
13C-1,2,3,6,7,8-HxCDD	66		25 - 163
13C-1,2,3,4,7,8-HxCDF	50		19 - 202
13C-1,2,3,6,7,8-HxCDF	55		21 - 159
13C-1,2,3,7,8,9-HxCDF	71		17 - 205
13C-2,3,4,6,7,8-HxCDF	69		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	62		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	70		20 - 186
13C-OCDD	78		13 - 199
13C-OCDF	79		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	95		31 - 191

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	21.85		pg/g		109	67 - 158	5	50
2,3,7,8-TCDF	20.0	21.35		pg/g		107	75 - 158	5	50
1,2,3,7,8-PeCDD	100	109.2		pg/g		109	70 - 142	4	50
1,2,3,7,8-PeCDF	100	114.1		pg/g		114	80 - 134	6	50

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,4,7,8-PeCDF	100	113.0		pg/g		113	68 - 160	4	50
1,2,3,4,7,8-HxCDD	100	111.7		pg/g		112	70 - 164	4	50
1,2,3,6,7,8-HxCDD	100	107.7		pg/g		108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	100	116.6		pg/g		117	64 - 162	15	50
1,2,3,4,7,8-HxCDF	100	119.5		pg/g		120	72 - 134	3	50
1,2,3,6,7,8-HxCDF	100	118.5		pg/g		118	84 - 130	5	50
1,2,3,7,8,9-HxCDF	100	112.0		pg/g		112	78 - 130	0	50
2,3,4,6,7,8-HxCDF	100	115.7		pg/g		116	70 - 156	4	50
1,2,3,4,6,7,8-HpCDD	100	116.1		pg/g		116	70 - 140	4	50
1,2,3,4,6,7,8-HpCDF	100	105.1		pg/g		105	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF	100	113.8		pg/g		114	78 - 138	2	50
OCDD	200	218.1		pg/g		109	78 - 144	5	50
OCDF	200	217.3		pg/g		109	63 - 170	0	50

LCSD LCSD			
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	71		20 - 175
13C-2,3,7,8-TCDF	78		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	67		21 - 192
13C-2,3,4,7,8-PeCDF	63		13 - 328
13C-1,2,3,4,7,8-HxCDD	60		21 - 193
13C-1,2,3,6,7,8-HxCDD	77		25 - 163
13C-1,2,3,4,7,8-HxCDF	63		19 - 202
13C-1,2,3,6,7,8-HxCDF	67		21 - 159
13C-1,2,3,7,8,9-HxCDF	72		17 - 205
13C-2,3,4,6,7,8-HxCDF	72		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	76		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	71		20 - 186
13C-OCDD	75		13 - 199
13C-OCDF	81		13 - 199

LCSD LCSD			
Surrogate	%Recovery	Qualifier	Limits
37Cl4-2,3,7,8-TCDD	96		31 - 191

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-118079-1 DU

Matrix: Solid

Analysis Batch: 827913

Client Sample ID: DU4-ISM

Prep Type: Total/NA

Sample		DU		DU		RPD	
Analyte	Result	Qualifier	Result	Qualifier	Unit	RPD	Limit
Percent Moisture	6.6	H	6.6		%	0.5	20
Percent Solids	93.4	H	93.4		%	0	20

Eurofins Sacramento

QC Association Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Specialty Organics

Prep Batch: 826876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118079-1	DU4-ISM	Total/NA	Solid	HRMS-Sox	
320-118079-1 - RA	DU4-ISM	Total/NA	Solid	HRMS-Sox	
MB 320-826876/1-A	Method Blank	Total/NA	Solid	HRMS-Sox	
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Sox	
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	HRMS-Sox	

Analysis Batch: 827323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-826876/1-A	Method Blank	Total/NA	Solid	1613B	826876
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	1613B	826876
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	1613B	826876

Analysis Batch: 827524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118079-1	DU4-ISM	Total/NA	Solid	1613B	826876

Analysis Batch: 827707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118079-1 - RA	DU4-ISM	Total/NA	Solid	1613B	826876

General Chemistry

Analysis Batch: 827913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118079-1	DU4-ISM	Total/NA	Solid	D 2216	
320-118079-1 DU	DU4-ISM	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Client Sample ID: DU4-ISM

Date Collected: 12/18/24 11:00

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118079-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: DU4-ISM

Date Collected: 12/18/24 11:00

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118079-1

Matrix: Solid

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.05 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827524	01/15/25 08:02	CB	EET SAC
Total/NA	Prep	HRMS-Sox	RA		10.05 g	20.0 uL	826876	01/10/25 07:38	IS	EET SAC
Total/NA	Analysis	1613B	RA	1	1 uL	1 uL	827707	01/15/25 20:39	DB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200060	03-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
TEQ		Solid	Total Dioxin/Furan TEQ
TEQ		Solid	Total TEQ

Method Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	EET SAC
TEQ	Total TEQ Calculation	Lab SOP	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
HRMS-Sox	Soxhlet Extraction	EPA	EET SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118079-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118079-1	DU4-ISM	Solid	12/18/24 11:00	01/07/25 09:10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Sub-Contract Chain of Custody

Batch Date/Time: 01/06/25 09:42

Sub-Contract Lab: TAWSCA

Address: 880 Riverside Parkway

City/State: West Sacramento, CA
95605

Contact:

Nathaniel Horner@et eurofinsus.com

Owner Lab: PACEMTJL

Address: 12065 Lebanon Rd

City/State: Mt Juliet, TN 37122

Phone: (615) 773-9756

Fax: (615) 758-5859

WO: WG2429131

Email: MTJLSuboutTeam@pacelabs.com

Results Due Date: 01/28/25

ESC Purchase Order #: L1813319

Send Reports to: James C Huckaba



12065 Lebanon Rd
Mt Juliet, TN 37122
Phone (615) 773-9756
Fax (615) 758-5859

Sample ID Container ID	Matrix	State	Collect Date	Description	Method	Sample Number Lab Use Only	Sample Comments Lab Use Only
DU4-ISM 4ozClr-NoPres - 50415073	SS	OR	12/18/24 11:00	Dioxins and Furans 1613	1613	2. L1813319-01	1613 dioxins/furans including TEQ, Equis EDD and Premium EDD

*= Container used for multiple Samples and/or Analyses

Relinquished by: [Signature] Date 1-6-25

Received by: [Signature] Date 11/12/24 0910

Relinquished by: _____ Date _____

Received by: _____ Date _____

060



320-118079 Chain of Custody



Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Loc 320

118079

Tracking # 4301 1543 769

Job _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COCTherm ID 001 Corr Factor (+/-) N/A °CIce ☒ Wet ☒ Gel _____ Other _____Cooler Custody Seal: Seal

Cooler ID _____

Temp Observed 0.6 °C Corrected: 0.6 °CFrom Temp Blank ☒ Sandwich ☐ Sidewall ☐**Opening/Processing The Shipment** Yes No NACooler compromised/tampered with? ☐ ☒ ☐Cooler Temperature is acceptable? ☒ ☐ ☐Frozen samples show signs of thaw? ☐ ☐ ☒Initials SD Date 11/7/24**Unpacking/Labeling The Samples** Yes No NAContainers are not broken or leaking? ☒ ☐ ☐Samples compromised/tampered with? ☐ ☒ ☐COC is complete w/o discrepancies ☒ ☐ ☐Sample custody seal? ☐ ☐ ☒Sample containers have legible labels? ☒ ☐ ☐Sample date/times are provided? ☒ ☐ ☐Appropriate containers are used? ☒ ☐ ☐Sample bottles are completely filled? ☒ ☐ ☐Sample preservatives verified? ☐ ☐ ☒Is the Field Sampler's name on COC? ☐ ☐ ☒Samples w/o discrepancies? ☒ ☐ ☐Zero headspace?* ☐ ☐ ☒Alkalinity has no headspace? ☐ ☐ ☒Perchlorate has headspace? ☐ ☐ ☒

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

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

Initials DM Date 01/07/25

Notes. _____

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____

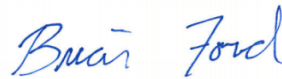
Login CompletionReceipt Temperature on COC? ☒ ☐ ☐NCM Filed? ☐ ☐ ☒Samples received within hold time? ☒ ☐ ☐Log Release checked in TALS? ☒ ☐ ☐Initials DM Date 01/07/25

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1813320
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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		⁷ Sc

SAMPLE SUMMARY

DU3-ISM L1813320-01 Solid

Collected by
Connor Anderson

Collected date/time
12/19/24 09:30

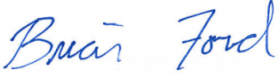
Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2429132	1	01/22/25 00:00	01/22/25 00:00	-	Subcontract

 ^1Cp ^{99m}Tc $^3S_1$ ${}^4\text{Cn}$ ⁵G| ${}^6\text{Al}$ ${}^7\text{Sc}$

CASE NARRATIVE

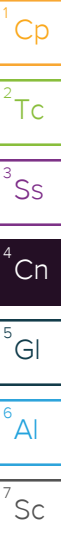
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples 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.



Brian Ford
Project Manager

Project Narrative

L1813320 -01 contains subout data that is included after the chain of custody.



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

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

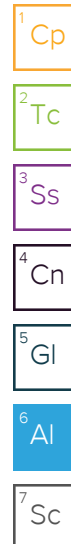
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



~~61812773~~

Signature: _____ Time & Date: _____ Signature: _____

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.



ANALYTICAL REPORT

PREPARED FOR

Attn: Jimmy Huckaba
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

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JOB DESCRIPTION

Oregon samples

JOB NUMBER

320-118081-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Authorized for release by
Nathaniel Horner, Project Manager I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

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Definitions/Glossary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

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

Case Narrative

Client: Pace Analytical National
Project: Oregon samples

Job ID: 320-118081-1

Job ID: 320-118081-1

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Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 1/7/2025 9:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

Dioxin

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

General Chemistry

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

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Detection Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Client Sample ID: DU3-ISM

Lab Sample ID: 320-118081-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDF	6.58		5.00		pg/g	1	✱	1613B	Total/NA
2,3,4,7,8-PeCDF	10.8		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,6,7,8-HxCDD	5.68		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,7,8,9-HxCDD	6.64		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,7,8-HxCDF	13.4		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,6,7,8-HxCDF	9.32	q	5.00		pg/g	1	✱	1613B	Total/NA
2,3,4,6,7,8-HxCDF	10.8		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	80.4		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	47.2		5.00		pg/g	1	✱	1613B	Total/NA
OCDD	668		10.0		pg/g	1	✱	1613B	Total/NA
OCDF	19.8		10.0		pg/g	1	✱	1613B	Total/NA
Total TCDD	29.0	q	1.00		pg/g	1	✱	1613B	Total/NA
Total TCDF	97.6		1.00		pg/g	1	✱	1613B	Total/NA
Total PeCDD	29.6		5.00		pg/g	1	✱	1613B	Total/NA
Total PeCDF	80.3		5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDD	72.4		5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDF	84.9	q	5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDD	158		5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDF	71.4	q	5.00		pg/g	1	✱	1613B	Total/NA
2,3,7,8-TCDF - RA	9.14		1.00		pg/g	1	✱	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Client Sample ID: DU3-ISM

Lab Sample ID: 320-118081-1

Date Collected: 12/19/24 09:30

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 95.0

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND	q	1.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,7,8-PeCDF	6.58		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
2,3,4,7,8-PeCDF	10.8		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,6,7,8-HxCDD	5.68		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,7,8,9-HxCDD	6.64		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,4,7,8-HxCDF	13.4		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,6,7,8-HxCDF	9.32	q	5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
2,3,4,6,7,8-HxCDF	10.8		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,4,6,7,8-HpCDD	80.4		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,4,6,7,8-HpCDF	47.2		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
OCDD	668		10.0		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
OCDF	19.8		10.0		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
Total TCDD	29.0	q	1.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
Total TCDF	97.6		1.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
Total PeCDD	29.6		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
Total PeCDF	80.3		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
Total HxCDD	72.4		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
Total HxCDF	84.9	q	5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
Total HpCDD	158		5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1
Total HpCDF	71.4	q	5.00		pg/g	✱	01/10/25 07:41	01/15/25 09:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	62		25 - 164	01/10/25 07:41	01/15/25 09:39	1
13C-2,3,7,8-TCDF	69		24 - 169	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,7,8-PeCDD	57		25 - 181	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,7,8-PeCDF	60		24 - 185	01/10/25 07:41	01/15/25 09:39	1
13C-2,3,4,7,8-PeCDF	58		21 - 178	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,6,7,8-HxCDD	68		28 - 130	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,4,7,8-HxCDF	59		26 - 152	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,6,7,8-HxCDF	60		26 - 123	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,7,8,9-HxCDF	60		29 - 147	01/10/25 07:41	01/15/25 09:39	1
13C-2,3,4,6,7,8-HxCDF	65		28 - 136	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,4,6,7,8-HpCDD	55		23 - 140	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,4,6,7,8-HpCDF	58		28 - 143	01/10/25 07:41	01/15/25 09:39	1
13C-1,2,3,4,7,8,9-HpCDF	52		26 - 138	01/10/25 07:41	01/15/25 09:39	1
13C-OCDD	47		17 - 157	01/10/25 07:41	01/15/25 09:39	1
13C-OCDF	59		17 - 157	01/10/25 07:41	01/15/25 09:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	93		35 - 197	01/10/25 07:41	01/15/25 09:39	1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	9.14		1.00		pg/g	✱	01/10/25 07:41	01/15/25 22:05	1

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Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Client Sample ID: DU3-ISM

Date Collected: 12/19/24 09:30

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118081-1

Matrix: Solid

Percent Solids: 95.0

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	72		24 - 169				01/10/25 07:41	01/15/25 22:05	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD	94		35 - 197				01/10/25 07:41	01/15/25 22:05	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	5.0		0.1		%			01/16/25 15:51	1
Percent Solids (ASTM D 2216)	95.0		0.1		%			01/16/25 15:51	1

Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Client Sample ID: DU3-ISM

Lab Sample ID: 320-118081-1

						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	ND	q	1.00		pg/g	1	0.105	1613B
1,2,3,7,8-PeCDD	ND		5.00		pg/g	1	0.117	1613B
1,2,3,7,8-PeCDF	6.58		5.00		pg/g	0.03	0.197	1613B
2,3,4,7,8-PeCDF	10.8		5.00		pg/g	0.3	3.24	1613B
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0256	1613B
1,2,3,6,7,8-HxCDD	5.68		5.00		pg/g	0.1	0.568	1613B
1,2,3,7,8,9-HxCDD	6.64		5.00		pg/g	0.1	0.664	1613B
1,2,3,4,7,8-HxCDF	13.4		5.00		pg/g	0.1	1.34	1613B
1,2,3,6,7,8-HxCDF	9.32	q	5.00		pg/g	0.1	0.932	1613B
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.0384	1613B
2,3,4,6,7,8-HxCDF	10.8		5.00		pg/g	0.1	1.08	1613B
1,2,3,4,6,7,8-HpCDD	80.4		5.00		pg/g	0.01	0.804	1613B
1,2,3,4,6,7,8-HpCDF	47.2		5.00		pg/g	0.01	0.472	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	0.01	0.00448	1613B
OCDD	668		10.0		pg/g	0.0003	0.200	1613B
OCDF	19.8		10.0		pg/g	0.0003	0.00594	1613B
2,3,7,8-TCDF - RA	9.14		1.00		pg/g	0.1	0.914	1613B
						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		914	TEQ
Total TEQ					pg/g		914	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

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Surrogate Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-118081-1	DU3-ISM	93
320-118081-1 - RA	DU3-ISM	94
MB 320-826876/1-A	Method Blank	95

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-826876/2-A	Lab Control Sample	95
LCSD 320-826876/3-A	Lab Control Sample Dup	96

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-118081-1	DU3-ISM	62	69	57	60	58	53	68	59
320-118081-1 - RA	DU3-ISM		72						
MB 320-826876/1-A	Method Blank	60	68	56	61	58	53	65	57

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)	OCDF (17-157)
320-118081-1	DU3-ISM	60	60	65	55	58	52	47	59
320-118081-1 - RA	DU3-ISM								
MB 320-826876/1-A	Method Blank	61	59	59	56	64	53	61	64

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-826876/2-A	Lab Control Sample	69	76	65	66	56	50	66	50
LCSD 320-826876/3-A	Lab Control Sample Dup	71	78	65	67	63	60	77	63

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)	OCDF (13-199)
LCS 320-826876/2-A	Lab Control Sample	55	71	69	68	62	70	78	79
LCSD 320-826876/3-A	Lab Control Sample Dup	67	72	72	68	76	71	75	81

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD

Eurofins Sacramento

Isotope Dilution Summary

Client: Pace Analytical National

Project/Site: Oregon samples

Job ID: 320-118081-1

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-826876/1-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 826876

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,7,8-TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDD	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDF	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,7,8-TCDF	68		24 - 169	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDD	56		25 - 181	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDF	61		24 - 185	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,7,8-PeCDF	58		21 - 178	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8,9-HxCDF	59		29 - 147	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138	01/10/25 07:38	01/14/25 16:53	1
13C-OCDD	61		17 - 157	01/10/25 07:38	01/14/25 16:53	1
13C-OCDF	64		17 - 157	01/10/25 07:38	01/14/25 16:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	95		35 - 197	01/10/25 07:38	01/14/25 16:53	1

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-826876/2-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	20.0	20.88		pg/g		104	67 - 158
2,3,7,8-TCDF	20.0	20.35		pg/g		102	75 - 158
1,2,3,7,8-PeCDD	100	105.1		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	107.9		pg/g		108	80 - 134
2,3,4,7,8-PeCDF	100	108.6		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	107.7		pg/g		108	70 - 164
1,2,3,6,7,8-HxCDD	100	106.5		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	135.5		pg/g		135	64 - 162
1,2,3,4,7,8-HxCDF	100	115.7		pg/g		116	72 - 134
1,2,3,6,7,8-HxCDF	100	112.9		pg/g		113	84 - 130
1,2,3,7,8,9-HxCDF	100	112.6		pg/g		113	78 - 130
2,3,4,6,7,8-HxCDF	100	111.7		pg/g		112	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111.2		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	105.9		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	116.4		pg/g		116	78 - 138
OCDD	200	206.8		pg/g		103	78 - 144
OCDF	200	218.2		pg/g		109	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	69		20 - 175
13C-2,3,7,8-TCDF	76		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	66		21 - 192
13C-2,3,4,7,8-PeCDF	56		13 - 328
13C-1,2,3,4,7,8-HxCDD	50		21 - 193
13C-1,2,3,6,7,8-HxCDD	66		25 - 163
13C-1,2,3,4,7,8-HxCDF	50		19 - 202
13C-1,2,3,6,7,8-HxCDF	55		21 - 159
13C-1,2,3,7,8,9-HxCDF	71		17 - 205
13C-2,3,4,6,7,8-HxCDF	69		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	62		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	70		20 - 186
13C-OCDD	78		13 - 199
13C-OCDF	79		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	95		31 - 191

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	21.85		pg/g		109	67 - 158	5	50
2,3,7,8-TCDF	20.0	21.35		pg/g		107	75 - 158	5	50
1,2,3,7,8-PeCDD	100	109.2		pg/g		109	70 - 142	4	50
1,2,3,7,8-PeCDF	100	114.1		pg/g		114	80 - 134	6	50

Eurofins Sacramento

QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,4,7,8-PeCDF	100	113.0		pg/g		113	68 - 160	4	50
1,2,3,4,7,8-HxCDD	100	111.7		pg/g		112	70 - 164	4	50
1,2,3,6,7,8-HxCDD	100	107.7		pg/g		108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	100	116.6		pg/g		117	64 - 162	15	50
1,2,3,4,7,8-HxCDF	100	119.5		pg/g		120	72 - 134	3	50
1,2,3,6,7,8-HxCDF	100	118.5		pg/g		118	84 - 130	5	50
1,2,3,7,8,9-HxCDF	100	112.0		pg/g		112	78 - 130	0	50
2,3,4,6,7,8-HxCDF	100	115.7		pg/g		116	70 - 156	4	50
1,2,3,4,6,7,8-HpCDD	100	116.1		pg/g		116	70 - 140	4	50
1,2,3,4,6,7,8-HpCDF	100	105.1		pg/g		105	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF	100	113.8		pg/g		114	78 - 138	2	50
OCDD	200	218.1		pg/g		109	78 - 144	5	50
OCDF	200	217.3		pg/g		109	63 - 170	0	50

LCSD LCSD			
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	71		20 - 175
13C-2,3,7,8-TCDF	78		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	67		21 - 192
13C-2,3,4,7,8-PeCDF	63		13 - 328
13C-1,2,3,4,7,8-HxCDD	60		21 - 193
13C-1,2,3,6,7,8-HxCDD	77		25 - 163
13C-1,2,3,4,7,8-HxCDF	63		19 - 202
13C-1,2,3,6,7,8-HxCDF	67		21 - 159
13C-1,2,3,7,8,9-HxCDF	72		17 - 205
13C-2,3,4,6,7,8-HxCDF	72		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	76		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	71		20 - 186
13C-OCDD	75		13 - 199
13C-OCDF	81		13 - 199

LCSD LCSD			
Surrogate	%Recovery	Qualifier	Limits
37Cl4-2,3,7,8-TCDD	96		31 - 191

Eurofins Sacramento

QC Association Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Specialty Organics

Prep Batch: 826876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118081-1	DU3-ISM	Total/NA	Solid	HRMS-Sox	
320-118081-1 - RA	DU3-ISM	Total/NA	Solid	HRMS-Sox	
MB 320-826876/1-A	Method Blank	Total/NA	Solid	HRMS-Sox	
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Sox	
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	HRMS-Sox	

Analysis Batch: 827323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-826876/1-A	Method Blank	Total/NA	Solid	1613B	826876
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	1613B	826876
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	1613B	826876

Analysis Batch: 827524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118081-1	DU3-ISM	Total/NA	Solid	1613B	826876

Analysis Batch: 827707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118081-1 - RA	DU3-ISM	Total/NA	Solid	1613B	826876

General Chemistry

Analysis Batch: 827913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118081-1	DU3-ISM	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Client Sample ID: DU3-ISM

Date Collected: 12/19/24 09:30

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118081-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: DU3-ISM

Date Collected: 12/19/24 09:30

Date Received: 01/07/25 09:10

Lab Sample ID: 320-118081-1

Matrix: Solid

Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.25 g	20.0 uL	826876	01/10/25 07:41	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827524	01/15/25 09:39	CB	EET SAC
Total/NA	Prep	HRMS-Sox	RA		10.25 g	20.0 uL	826876	01/10/25 07:41	IS	EET SAC
Total/NA	Analysis	1613B	RA	1	1 uL	1 uL	827707	01/15/25 22:05	DB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200060	03-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
TEQ		Solid	Total Dioxin/Furan TEQ
TEQ		Solid	Total TEQ

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
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- 11
- 12
- 13
- 14
- 15
- 16

Method Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	EET SAC
TEQ	Total TEQ Calculation	Lab SOP	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
HRMS-Sox	Soxhlet Extraction	EPA	EET SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118081-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118081-1	DU3-ISM	Solid	12/19/24 09:30	01/07/25 09:10

- 1
- 2
- 3
- 4
- 5
- 6
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- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Sub-Contract Chain of Custody

Batch Date/Time: 01/06/25 09 45

Sub-Contract Lab: TAWSCA

Address: 880 Riverside Parkway

City/State: West Sacramento, CA
95605

Contact:

Nathaniel Horner@et eurofinsus.com

Owner Lab: PACEMTJL

Address: 12065 Lebanon Rd

City/State: Mt Juliet, TN 37122

Phone: (615) 773-9756

Fax: (615) 758-5859

WO: WG2429132

Email: MTJLSuboutTeam@pacelabs.com

Results Due Date: 01/28/25

ESC Purchase Order #: L1813320

Send Reports to: James C Huckaba



12065 Lebanon Rd
Mt Juliet, TN 37122
Phone (615) 773-9756
Fax (615) 758-5859

Sample ID Container ID	Matrix	State	Collect Date	Description	Method	Sample Number Lab Use Only	Sample Comments Lab Use Only
DU3-ISM 4ozClr-NoPres - 50415105	SS	OR	12/19/24 09:30	Dioxins and Furans 1613	1613	1. L1813320-01	1613 dioxins/furans including TEQ, Equis EDD and Premium EDD

*= Container used for multiple Samples and/or Analyses

Relinquished by: _____ Date: 1-6-25

Received by: SEETBAC Date: 1/7/25 09:10

Relinquished by: _____ Date: _____

Received by: _____ Date: _____

060



320-118081 Chain of Custody



Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Loc 320

118081

Tracking # 4301 1543 769

Job _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COCTherm ID 001 Corr Factor (+/-) N/A °CIce ☒ Wet ☒ Gel _____ Other _____Cooler Custody Seal Seal

Cooler ID: _____

Temp Observed 0.6 °C Corrected 0.6 °CFrom Temp Blank ☒ Sandwich ☐ Sidewall ☐**Opening/Processing The Shipment** Yes No NACooler compromised/tampered with? ☐ ☒ ☐Cooler Temperature is acceptable? ☒ ☐ ☐Frozen samples show signs of thaw? ☐ ☐ ☒Initials SO Date 11/2/24**Unpacking/Labeling The Samples** Yes No NAContainers are not broken or leaking? ☒ ☐ ☐Samples compromised/tampered with? ☐ ☒ ☐COC is complete w/o discrepancies ☒ ☐ ☐Sample custody seal? ☐ ☐ ☒Sample containers have legible labels? ☒ ☐ ☐Sample date/times are provided? ☒ ☐ ☐Appropriate containers are used? ☒ ☐ ☐Sample bottles are completely filled? ☒ ☐ ☐Sample preservatives verified? ☐ ☐ ☒Is the Field Sampler's name on COC? ☐ ☐ ☒Samples w/o discrepancies? ☒ ☐ ☐Zero headspace?* ☐ ☐ ☒Alkalinity has no headspace? ☐ ☐ ☒Perchlorate has headspace? ☐ ☐ ☒

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

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

Initials DM Date 01/07/25

Notes. _____

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____

Login Completion

Receipt Temperature on COC? Yes No NA

NCM Filed? ☐ ☐ ☒Samples received within hold time? ☒ ☐ ☐Log Release checked in TALS? ☒ ☐ ☐Initials DM Date 01/07/25

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1813321
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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		⁷ Sc

SAMPLE SUMMARY

DU1-ISM-TRIP L1813321-01 Solid

Collected by
Connor Anderson

Collected date/time
12/20/24 07:50

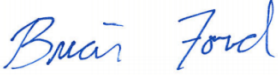
Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2429137	1	01/22/25 00:00	01/22/25 00:00	-	Subcontract

¹Cp ${}^2\text{Tc}$ ^3S_s ${}^4\text{Cn}$ ${}^5\text{G}_1$ ${}^6\text{Al}$ ${}^7\text{Sc}$

CASE NARRATIVE

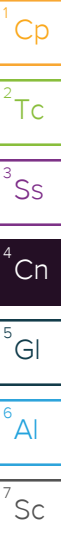
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples 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.



Brian Ford
Project Manager

Project Narrative

L1813321 -01 contains subout data that is included after the chain of custody.



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

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

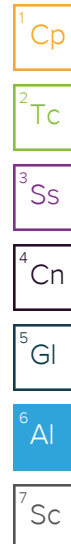
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: Oregon DEQ				Contract Laboratory Name: ESC				Lab Selection Criteria: ☐ Proximity (if TAT < 48 hrs) ☐ Prior work on same project ☒ Cost (for anticipated analyses) ☐ Other labs disqualified or unable to perform requested services ☐ Emergency work				Turn Around Time: ☒ 10 days (std.) ☐ 5 days ☐ 72 hours ☐ 48 hours ☐ 24 hours ☐ Other	
Send Lab Report To: Cathy Brown Address: 165 E. 7 th Avenue, Suite 100 Eugene, OR 97401 Tel. #: 503-753-6153 E-mail: cathy.brown@deq.oregon.gov				Lab Batch #: Invoice To: ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696									
Project Name: DEQ Forest Creek Sampler Name: Connor Anderson				Sample Preservative								L1812779 MS 12/30/24	
Sample ID#	Collection Date/Time	Matrix	Number of Containers	NWTPI-Gx	NWTPI-Dx	VOCs EPA 8260D	SVOCs EPA 8270E-SIM	Dioxins/Furans EPA 1613B	* Priority Pollutant Metals EPA 6010D/7471B	Herbicides EPA 8151A	Pesticides EPA 8081B	BTEX EPA 8260D	Comments
DU1-ISM-TRIP	12/20/24; 07:50	S	13	X	X	X	X	X	X	X	X		ISM processing 01 -01-02-03
4301/1538 3850 Sample Receipt Checklist COC Seal Present/Intact: ☒ Y ☐ N COC signed/Accurate: ☒ Y ☐ N Bottles arrive intact: ☒ Y ☐ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N RA Screen <0.5 mR/hr: ☒ Y ☐ N If Applicable VOA Zero Headspace: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N TLA 3.0-4.0=3.0													
TRIP BLANK												X	

*Priority Pollutant Metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.

Relinquished By: <i>Connor Anderson</i>	Agency/Agent: <i>UFA</i>	Received By:	Agency/Agent:
Signature: <i>[Signature]</i>	Time & Date: <i>12/23/24, 1100</i>	Signature: <i>[Signature]</i>	Time & Date: <i>12/24/24 900</i>
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.



ANALYTICAL REPORT

PREPARED FOR

Attn: Jimmy Huckaba
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

Generated 1/22/2025 5:27:48 PM

JOB DESCRIPTION

Oregon samples

JOB NUMBER

320-118082-1

Eurofins Sacramento

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



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Authorized for release by
Nathaniel Horner, Project Manager I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

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Definitions/Glossary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

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

Case Narrative

Client: Pace Analytical National
Project: Oregon samples

Job ID: 320-118082-1

Job ID: 320-118082-1

Eurofins Sacramento

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 1/7/2025 9:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

Dioxin

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

General Chemistry

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

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Detection Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Client Sample ID: DU1-ISM-TRIP

Lab Sample ID: 320-118082-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,4,7,8-PeCDF	7.77		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,7,8-HxCDF	11.9		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,6,7,8-HxCDF	10.1		5.00		pg/g	1	✱	1613B	Total/NA
2,3,4,6,7,8-HxCDF	11.0		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	90.7		5.00		pg/g	1	✱	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	61.9		5.00		pg/g	1	✱	1613B	Total/NA
OCDD	685		10.0		pg/g	1	✱	1613B	Total/NA
OCDF	41.5		10.0		pg/g	1	✱	1613B	Total/NA
Total TCDD	6.20	q	1.00		pg/g	1	✱	1613B	Total/NA
Total TCDF	59.7		1.00		pg/g	1	✱	1613B	Total/NA
Total PeCDF	38.8		5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDD	30.2		5.00		pg/g	1	✱	1613B	Total/NA
Total HxCDF	78.2	I	5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDD	165		5.00		pg/g	1	✱	1613B	Total/NA
Total HpCDF	97.8		5.00		pg/g	1	✱	1613B	Total/NA
2,3,7,8-TCDF - RA	5.12		1.00		pg/g	1	✱	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Client Sample ID: DU1-ISM-TRIP

Lab Sample ID: 320-118082-1

Date Collected: 12/20/24 07:50

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 94.1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
2,3,4,7,8-PeCDF	7.77		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,4,7,8-HxCDF	11.9		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,6,7,8-HxCDF	10.1		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
2,3,4,6,7,8-HxCDF	11.0		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,4,6,7,8-HpCDD	90.7		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,4,6,7,8-HpCDF	61.9		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
OCDD	685		10.0		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
OCDF	41.5		10.0		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
Total TCDD	6.20	q	1.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
Total TCDF	59.7		1.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
Total PeCDD	ND		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
Total PeCDF	38.8		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
Total HxCDD	30.2		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
Total HxCDF	78.2	l	5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
Total HpCDD	165		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1
Total HpCDF	97.8		5.00		pg/g	☆	01/10/25 07:41	01/15/25 10:25	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	64		25 - 164	01/10/25 07:41	01/15/25 10:25	1
13C-2,3,7,8-TCDF	69		24 - 169	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,7,8-PeCDD	58		25 - 181	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,7,8-PeCDF	60		24 - 185	01/10/25 07:41	01/15/25 10:25	1
13C-2,3,4,7,8-PeCDF	61		21 - 178	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,4,7,8-HxCDD	52		32 - 141	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,6,7,8-HxCDD	67		28 - 130	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,6,7,8-HxCDF	64		26 - 123	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,7,8,9-HxCDF	62		29 - 147	01/10/25 07:41	01/15/25 10:25	1
13C-2,3,4,6,7,8-HxCDF	64		28 - 136	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,4,6,7,8-HpCDD	58		23 - 140	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,4,6,7,8-HpCDF	60		28 - 143	01/10/25 07:41	01/15/25 10:25	1
13C-1,2,3,4,7,8,9-HpCDF	57		26 - 138	01/10/25 07:41	01/15/25 10:25	1
13C-OCDD	58		17 - 157	01/10/25 07:41	01/15/25 10:25	1
13C-OCDF	64		17 - 157	01/10/25 07:41	01/15/25 10:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	92		35 - 197	01/10/25 07:41	01/15/25 10:25	1

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	5.12		1.00		pg/g	☆	01/10/25 07:41	01/15/25 22:48	1

Eurofins Sacramento

Client Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Client Sample ID: DU1-ISM-TRIP

Lab Sample ID: 320-118082-1

Date Collected: 12/20/24 07:50

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 94.1

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	71		24 - 169				01/10/25 07:41	01/15/25 22:48	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD	88		35 - 197				01/10/25 07:41	01/15/25 22:48	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	5.9		0.1		%			01/16/25 15:51	1
Percent Solids (ASTM D 2216)	94.1		0.1		%			01/16/25 15:51	1

Toxicity Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Client Sample ID: DU1-ISM-TRIP

Lab Sample ID: 320-118082-1

						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	ND		1.00		pg/g	1	0.0615	1613B
1,2,3,7,8-PeCDD	ND		5.00		pg/g	1	0.0760	1613B
1,2,3,7,8-PeCDF	ND		5.00		pg/g	0.03	0.00891	1613B
2,3,4,7,8-PeCDF	7.77		5.00		pg/g	0.3	2.33	1613B
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0257	1613B
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g	0.1	0.0204	1613B
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g	0.1	0.0214	1613B
1,2,3,4,7,8-HxCDF	11.9		5.00		pg/g	0.1	1.19	1613B
1,2,3,6,7,8-HxCDF	10.1		5.00		pg/g	0.1	1.01	1613B
1,2,3,7,8,9-HxCDF	ND		5.00		pg/g	0.1	0.0350	1613B
2,3,4,6,7,8-HxCDF	11.0		5.00		pg/g	0.1	1.10	1613B
1,2,3,4,6,7,8-HpCDD	90.7		5.00		pg/g	0.01	0.907	1613B
1,2,3,4,6,7,8-HpCDF	61.9		5.00		pg/g	0.01	0.619	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g	0.01	0.00505	1613B
OCDD	685		10.0		pg/g	0.0003	0.206	1613B
OCDF	41.5		10.0		pg/g	0.0003	0.0125	1613B
2,3,7,8-TCDF - RA	5.12		1.00		pg/g	0.1	0.512	1613B

						WHO 2005		
						ND = ½ EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		8.14	TEQ
Total TEQ					pg/g		8.14	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

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Surrogate Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-118082-1	DU1-ISM-TRIP	92
320-118082-1 - RA	DU1-ISM-TRIP	88
MB 320-826876/1-A	Method Blank	95

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-826876/2-A	Lab Control Sample	95
LCSD 320-826876/3-A	Lab Control Sample Dup	96

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-118082-1	DU1-ISM-TRIP	64	69	58	60	61	52	67	57
320-118082-1 - RA	DU1-ISM-TRIP		71						
MB 320-826876/1-A	Method Blank	60	68	56	61	58	53	65	57

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxCDF (26-123)	HxCF (29-147)	13CHxCDF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)	OCDF (17-157)
320-118082-1	DU1-ISM-TRIP	64	62	64	58	60	57	58	64
320-118082-1 - RA	DU1-ISM-TRIP								
MB 320-826876/1-A	Method Blank	61	59	59	56	64	53	61	64

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HxCDF = 13C-1,2,3,6,7,8-HxCDF
 HxCF = 13C-1,2,3,7,8,9-HxCDF
 13CHxCDF = 13C-2,3,4,6,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
 OCDD = 13C-OCDD
 OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-826876/2-A	Lab Control Sample	69	76	65	66	56	50	66	50
LCSD 320-826876/3-A	Lab Control Sample Dup	71	78	65	67	63	60	77	63

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HxCDF (21-159)	HxCF (17-205)	13CHxCDF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)	OCDF (13-199)
LCS 320-826876/2-A	Lab Control Sample	55	71	69	68	62	70	78	79
LCSD 320-826876/3-A	Lab Control Sample Dup	67	72	72	68	76	71	75	81

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 PeCF = 13C-2,3,4,7,8-PeCDF
 HxCDD = 13C-1,2,3,4,7,8-HxCDD
 HxDD = 13C-1,2,3,6,7,8-HxCDD

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Isotope Dilution Summary

Client: Pace Analytical National

Project/Site: Oregon samples

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

Job ID: 320-118082-1

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-826876/1-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 826876

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,7,8-TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,7,8-PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,7,8,9-HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
2,3,4,6,7,8-HxCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,6,7,8-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
1,2,3,4,7,8,9-HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDD	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
OCDF	ND q		10.0		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDD	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total TCDF	ND		1.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total PeCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDD	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HxCDF	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDD	ND q		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1
Total HpCDF	ND		5.00		pg/g		01/10/25 07:38	01/14/25 16:53	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,7,8-TCDF	68		24 - 169	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDD	56		25 - 181	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8-PeCDF	61		24 - 185	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,7,8-PeCDF	58		21 - 178	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDD	65		28 - 130	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,7,8,9-HxCDF	59		29 - 147	01/10/25 07:38	01/14/25 16:53	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	01/10/25 07:38	01/14/25 16:53	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138	01/10/25 07:38	01/14/25 16:53	1
13C-OCDD	61		17 - 157	01/10/25 07:38	01/14/25 16:53	1
13C-OCDF	64		17 - 157	01/10/25 07:38	01/14/25 16:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	95		35 - 197	01/10/25 07:38	01/14/25 16:53	1

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-826876/2-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	20.0	20.88		pg/g		104	67 - 158
2,3,7,8-TCDF	20.0	20.35		pg/g		102	75 - 158
1,2,3,7,8-PeCDD	100	105.1		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	107.9		pg/g		108	80 - 134
2,3,4,7,8-PeCDF	100	108.6		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	107.7		pg/g		108	70 - 164
1,2,3,6,7,8-HxCDD	100	106.5		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	135.5		pg/g		135	64 - 162
1,2,3,4,7,8-HxCDF	100	115.7		pg/g		116	72 - 134
1,2,3,6,7,8-HxCDF	100	112.9		pg/g		113	84 - 130
1,2,3,7,8,9-HxCDF	100	112.6		pg/g		113	78 - 130
2,3,4,6,7,8-HxCDF	100	111.7		pg/g		112	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111.2		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	105.9		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	116.4		pg/g		116	78 - 138
OCDD	200	206.8		pg/g		103	78 - 144
OCDF	200	218.2		pg/g		109	63 - 170

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	69		20 - 175
13C-2,3,7,8-TCDF	76		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	66		21 - 192
13C-2,3,4,7,8-PeCDF	56		13 - 328
13C-1,2,3,4,7,8-HxCDD	50		21 - 193
13C-1,2,3,6,7,8-HxCDD	66		25 - 163
13C-1,2,3,4,7,8-HxCDF	50		19 - 202
13C-1,2,3,6,7,8-HxCDF	55		21 - 159
13C-1,2,3,7,8,9-HxCDF	71		17 - 205
13C-2,3,4,6,7,8-HxCDF	69		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	62		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	70		20 - 186
13C-OCDD	78		13 - 199
13C-OCDF	79		13 - 199

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	95		31 - 191

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	21.85		pg/g		109	67 - 158	5	50
2,3,7,8-TCDF	20.0	21.35		pg/g		107	75 - 158	5	50
1,2,3,7,8-PeCDD	100	109.2		pg/g		109	70 - 142	4	50
1,2,3,7,8-PeCDF	100	114.1		pg/g		114	80 - 134	6	50

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QC Sample Results

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-826876/3-A

Matrix: Solid

Analysis Batch: 827323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 826876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,4,7,8-PeCDF	100	113.0		pg/g		113	68 - 160	4	50
1,2,3,4,7,8-HxCDD	100	111.7		pg/g		112	70 - 164	4	50
1,2,3,6,7,8-HxCDD	100	107.7		pg/g		108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	100	116.6		pg/g		117	64 - 162	15	50
1,2,3,4,7,8-HxCDF	100	119.5		pg/g		120	72 - 134	3	50
1,2,3,6,7,8-HxCDF	100	118.5		pg/g		118	84 - 130	5	50
1,2,3,7,8,9-HxCDF	100	112.0		pg/g		112	78 - 130	0	50
2,3,4,6,7,8-HxCDF	100	115.7		pg/g		116	70 - 156	4	50
1,2,3,4,6,7,8-HpCDD	100	116.1		pg/g		116	70 - 140	4	50
1,2,3,4,6,7,8-HpCDF	100	105.1		pg/g		105	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF	100	113.8		pg/g		114	78 - 138	2	50
OCDD	200	218.1		pg/g		109	78 - 144	5	50
OCDF	200	217.3		pg/g		109	63 - 170	0	50

LCSD LCSD			
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	71		20 - 175
13C-2,3,7,8-TCDF	78		22 - 152
13C-1,2,3,7,8-PeCDD	65		21 - 227
13C-1,2,3,7,8-PeCDF	67		21 - 192
13C-2,3,4,7,8-PeCDF	63		13 - 328
13C-1,2,3,4,7,8-HxCDD	60		21 - 193
13C-1,2,3,6,7,8-HxCDD	77		25 - 163
13C-1,2,3,4,7,8-HxCDF	63		19 - 202
13C-1,2,3,6,7,8-HxCDF	67		21 - 159
13C-1,2,3,7,8,9-HxCDF	72		17 - 205
13C-2,3,4,6,7,8-HxCDF	72		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	68		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	76		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	71		20 - 186
13C-OCDD	75		13 - 199
13C-OCDF	81		13 - 199

LCSD LCSD			
Surrogate	%Recovery	Qualifier	Limits
37Cl4-2,3,7,8-TCDD	96		31 - 191

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QC Association Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Specialty Organics

Prep Batch: 826876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118082-1	DU1-ISM-TRIP	Total/NA	Solid	HRMS-Sox	
320-118082-1 - RA	DU1-ISM-TRIP	Total/NA	Solid	HRMS-Sox	
MB 320-826876/1-A	Method Blank	Total/NA	Solid	HRMS-Sox	
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Sox	
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	HRMS-Sox	

Analysis Batch: 827323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-826876/1-A	Method Blank	Total/NA	Solid	1613B	826876
LCS 320-826876/2-A	Lab Control Sample	Total/NA	Solid	1613B	826876
LCSD 320-826876/3-A	Lab Control Sample Dup	Total/NA	Solid	1613B	826876

Analysis Batch: 827524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118082-1	DU1-ISM-TRIP	Total/NA	Solid	1613B	826876

Analysis Batch: 827707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118082-1 - RA	DU1-ISM-TRIP	Total/NA	Solid	1613B	826876

General Chemistry

Analysis Batch: 827913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-118082-1	DU1-ISM-TRIP	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Client Sample ID: DU1-ISM-TRIP

Lab Sample ID: 320-118082-1

Date Collected: 12/20/24 07:50

Matrix: Solid

Date Received: 01/07/25 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			827913	01/16/25 15:51	CFR	EET SAC

Client Sample ID: DU1-ISM-TRIP

Lab Sample ID: 320-118082-1

Date Collected: 12/20/24 07:50

Matrix: Solid

Date Received: 01/07/25 09:10

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			10.39 g	20.0 uL	826876	01/10/25 07:41	IS	EET SAC
Total/NA	Analysis	1613B		1	1 Sample	1 Sample	827524	01/15/25 10:25	CB	EET SAC
Total/NA	Prep	HRMS-Sox	RA		10.39 g	20.0 uL	826876	01/10/25 07:41	IS	EET SAC
Total/NA	Analysis	1613B	RA	1	1 uL	1 uL	827707	01/15/25 22:48	DB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200060	03-31-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
TEQ		Solid	Total Dioxin/Furan TEQ
TEQ		Solid	Total TEQ

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Method Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	EET SAC
TEQ	Total TEQ Calculation	Lab SOP	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
HRMS-Sox	Soxhlet Extraction	EPA	EET SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Pace Analytical National
Project/Site: Oregon samples

Job ID: 320-118082-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-118082-1	DU1-ISM-TRIP	Solid	12/20/24 07:50	01/07/25 09:10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Sub-Contract Chain of Custody

Batch Date/Time: 01/06/25 09:53

Sub-Contract Lab: TAWSCA

Address: 880 Riverside Parkway

City/State: West Sacramento, CA
95605

Contact:

Nathaniel Horner@et eurofinsus.com

Owner Lab: PACEMTJL

Address: 12065 Lebanon Rd

City/State: Mt Juliet, TN 37122

Phone: (615) 773-9756

Fax: (615) 758-5859

WO: WG2429137

Email: MTJLSuboutTeam@pacelabs.com

Results Due Date: 01/28/25

ESC Purchase Order #: L1813321

Send Reports to: James C Huckaba



12065 Lebanon Rd
Mt Juliet, TN 37122
Phone (615) 773-9756
Fax (615) 758-5859

Sample ID Container ID	Matrix	State	Collect Date	Description	Method	Sample Number Lab Use Only	Sample Comments Lab Use Only
DUI-ISM-TRIP 4ozClr-NoPres - 50415135	SS	OR	12/20/24 07:50	Dioxins and Furans 1613	1613	2. L1813321-01	1613 dioxins/furans including TEQ, Equis EDD and Premium EDD

*= Container used for multiple Samples and/or Analyses

Relinquished by: [Signature] Date: 1-6-25

Received by: [Signature] Date: 11/7/24 0910

Relinquished by: _____ Date: _____

Received by: _____ Date: _____

0.66



320-118082 Chain of Custody



Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Lot: 320

118082

Tracking # 4301 1543 7469

Job _____

SO (PO) / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COCTherm ID 001 Corr Factor (+/-) W/A °CIce ☒ Wet ☒ Gel _____ Other _____Cooler Custody Seal Seal

Cooler ID _____

Temp Observed: 0.6 °C Corrected 0.6 °CFrom Temp Blank ☒ Sandwich ☐ Sidewall ☐**Opening/Processing The Shipment** Yes No NACooler compromised/tampered with? ☐ ☒ ☐Cooler Temperature is acceptable? ☒ ☐ ☐Frozen samples show signs of thaw? ☐ ☐ ☒Initials SD Date 11/2/24**Unpacking/Labeling The Samples** Yes No NAContainers are not broken or leaking? ☒ ☐ ☐Samples compromised/tampered with? ☐ ☒ ☐COC is complete w/o discrepancies ☒ ☐ ☐Sample custody seal? ☐ ☐ ☒Sample containers have legible labels? ☒ ☐ ☐Sample date/times are provided? ☒ ☐ ☐Appropriate containers are used? ☒ ☐ ☐Sample bottles are completely filled? ☒ ☐ ☐Sample preservatives verified? ☐ ☐ ☒Is the Field Sampler's name on COC? ☐ ☐ ☒Samples w/o discrepancies? ☒ ☐ ☐Zero headspace?* ☐ ☐ ☒Alkalinity has no headspace? ☐ ☐ ☒Perchlorate has headspace? ☐ ☐ ☒

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

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

Initials DM Date 01/07/25

Notes: _____

Trizma Lot #(s). _____

Ammonium

Acetate Lot #(s) _____

Login CompletionReceipt Temperature on COC? ☒ Yes ☐ No ☐ NANCM Filed? ☐ Yes ☐ No ☒ NASamples received within hold time? ☒ Yes ☐ No ☐ NALog Release checked in TALS? ☒ Yes ☐ No ☐ NAInitials DM Date 01/07/25