

**AMENDMENT NUMBER 03
LOCAL AGENCY AGREEMENT
MULTIMODAL TRANSPORTATION ENHANCE PROGRAM (MTEP)
(Match only)
Project Name: US395: Sidewalk Improvements (John Day)
City of John Day**

This is Amendment No. 03 to the Agreement between the **State of Oregon**, acting by and through its Department of Transportation, hereinafter referred to as “State” or “ODOT,” and City of John Day, acting by and through its elected officials, hereinafter referred to as “Agency,” entered into on August 16, 2016 and Amendment 01 on December 11, 2020, and Amendment 02 on August 30, 2021.

It has now been determined by State and Agency that the Agreement referenced above shall be amended to add obligations to both Parties.

1. **Effective Date.** This Amendment shall become effective on the date it is fully executed and approved as required by applicable law.
2. **Amendment to Agreement.**

Insert Exhibit B- Clean Fill Determination (CFD) document

Insert new Recitals, Paragraph 10, Page 2, to read as follows:

6. As part of the construction work on the US 395: Sidewalk Improvements (John Day) Project, the State will be excavating and will generate some excess material that is classified by the DEQ to be “not clean fill”, requiring special handling and disposal. The City of John Day would like to use this excess material to re-develop some City owned property. The State would like to work together with the Agency to provide them the excess material; and establish the guidelines that must be followed in order for this to be accomplished, in a manner that meets DEQ Guidelines for re-use of materials that are “Not Clean Fill.”

Insert new Paragraphs 33 and 34, Terms of Agreement, Pages 5 and 6, to read:

33. State will generate excess material from the Project. The upper 12 inches of the excavated excess material does not meet the DEQ definition of “Clean Fill,” as defined in OAR 340-093-0030(18), due to the lead concentration in the soil. The contaminated soil is a regulated waste, subject to OAR 340-093-0005 through OAR 340-093-0290. The estimated quantity of excess material from the Project is 2,000 cubic yards. Approximately 870 cubic yards is considered “not clean fill”. The remainder is considered to be clean fill as long as it is not mixed with materials that are “not clean fill”. Agency has requested this excess material and State is willing to give this excess material to the Agency for their re-development needs. State has ensured that the Agency is aware that the soil has been determined to be “not clean fill,” and has

provided the Agency with soil laboratory reports, DEQ guidelines, and has provided the Agency with a copy of the "Clean Fill Determination Report" - prepared by Oregon Department of Transportation's Region 5 Hazmat Coordinator, Michelle Peterson (attached).

34. Agency agrees to accept the excess material from the State; and agrees to follow the necessary DEQ guidelines for allowed re-uses of contaminated material as described in the Beneficial Use Determination BUD2018-1204, Highway shoulder soil throughout Oregon, and OAR 340-093-0005 through OAR 340-093-0290. Agency understands and agrees that once they have signed this Agreement and accepted the excess material, that State will not be held responsible for how the Agency uses the material. The following lists contain examples of guidelines for re-use of material that is "Not Clean Fill":

- Material must not be used on lots zoned residential.
- Agricultural uses are limited to non-human food crops and in accordance with Oregon Department of Agriculture requirements.
- Material must be managed in accordance with an Erosion and Sediment Control Plan and best management practices at all times.
- Material must be managed to prevent windblown dust, runoff and erosion at all times.
- The material may not be placed where it will be in contact with or adversely impact groundwater or surface water.
- Material use must comply with all applicable federal, state, or local regulations.

A complete report and list of guidelines is included in Exhibit B, .pdf attached hereto and by this reference made a part hereof. A printed document can be requested from the Department of Transportation, Region 5 by contacting (541) 963-3177.

Insert new Paragraph 8, of Special Provisions, Attachment 1, to read:

8. Notwithstanding Paragraphs 43-45 of Attachment 2, Agency shall hold harmless and indemnify the state of Oregon, ODOT and its officers, employees and agents from and against all claims, suits, actions, losses, or liability arising out of any state or federal environmental law, including, but not limited to, 42 USC §9601 et seq. (Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)), 33 USC §1251 et seq. (Clean Water Act), 42 USC §321 et seq. (Federal Resource Conservation and Recovery Act (RCRA)), Oregon Revised Statutes Chapter 465 (State Hazardous Waste Statutes), Oregon Revised Statutes Chapter 468b (State Clean Water Statutes), Oregon Revised Statutes 30.260 to 30.300 (Oregon Tort Claims Act), regarding the testing, removal, or remediation of any lead or lead contamination contained in the excess material provided by ODOT to Agency, caused by such excess material, or otherwise related to the Agency's use of such excess material.

3. **Counterparts**. This Amendment may be executed in two or more counterparts (by facsimile or otherwise) each of which is an original and all of which when taken together are deemed one agreement binding on all Parties, notwithstanding that all Parties are not signatories to the same counterpart.
4. **Original Agreement**. Except as expressly amended above, all other terms and conditions of the original Agreement are still in full force and effect. Agency certifies that the representations, warranties and certifications in the original Agreement are true and correct as of the effective date of this Amendment and with the same effect as though made at the time of this Amendment.

THE PARTIES, by execution of this Agreement, hereby acknowledge that their signing representatives have read this Agreement, understand it, and agree to be bound by its terms and conditions.

This Project is in the 2018-2021 Statewide Transportation Improvement Program (STIP), (Key #18918) that was adopted by the Oregon Transportation Commission on July 20, 2017 (or subsequently by amendment to the STIP).

SIGNATURE PAGE TO FOLLOW

City of John Day, by and through its
elected officials

By _____
Mayor (or other assigned designee)

Date _____

By _____
City Recorder (or other assigned
designee)

Date _____

**LEGAL REVIEW APPROVAL (If
required in Agency's process)**

By _____
Agency Counsel

Date _____

Agency Contact:

Nick Green, City Manager
450 East Main St.
John Day, Oregon 97846
Phone: (541) 575-0028
green@grantcounty-or.gov

State Contact:

Sean Maloney, Project Leader
1390 SE 1st Avenue
Ontario, Oregon 97914
Phone: (541) 823- 4025
Sean.maloney@odot.state.or.us

STATE OF OREGON, by and through
its Department of Transportation

By _____
Deputy Delivery and Operations Division
Administrator

Date _____

APPROVAL RECOMMENDED

By _____
Region 5 Manager

Date _____

By N/A _____
State Traffic / Roadway Engineer

Date _____

**APPROVED AS TO LEGAL
SUFFICIENCY**

By _____
Assistant Attorney General

Date: _____

EXHIBIT B

Clean Fill Determination

US395: Sidewalk Improvements (John
Day) Key #18918
John Day, Grant County

August 18, 2021

Prepared by:

Michelle L. Peterson, R.G.

Oregon Department of Transportation

Region 5 Technical Center
Geo-Environmental-Hydro Unit

3012 Island Avenue
La Grande, Oregon 97850

Executive Summary

The US395: Sidewalk Improvements (John Day) Project (Key #18918) is located on the John Day-Burns Highway (S. Canyon Boulevard) between 6th Avenue and Blue Gulch Road in John Day, Grant County, Oregon (Project Corridor). The purpose of the project is to improve sidewalks along the John Day-Burns Highway, also known as S. Canyon Boulevard, between SW 6th Avenue and Blue Gulch Road. In addition, a stormwater management system will be constructed to collect stormwater generated from private property, and along S. Canyon Boulevard, including a bioinfiltration swale to be constructed on bare land located west of S. Canyon Boulevard, and multiple rain garden structures at either end of the Project Corridor. Excavations for the various element that are included in this Project will vary from as shallow as 6 inches to as much as 7 feet below ground surface (bgs).

Two Hazardous Materials Corridor Study (HMCS) reports (ODOT, 2017; ODOT 2020) were prepared by ODOT to evaluate the potential for contaminated media to be encountered during construction. The 2020 HMCS was completed to evaluate a different design than was considered in the 2017 HMCS. The 2020 HMCS recommended shallow soil sampling (upper 1 foot) on the property where the swale is to be constructed to investigate around a burn barrel and paint wastes, and preparation of a clean fill determination to evaluate excess materials to be generated from construction of the sidewalks and other features along the highway, as well as from the land where the swale and cross pipe will be constructed.

ODOT conducted Level 2 Preliminary Site Investigation (PSI) soil sampling on the land where the swale will be constructed, and shoulder soil sampling at selected locations along S. Canyon Boulevard. The Level 2 PSI and shoulder soil sampling did not encounter field evidence of contamination during investigation (no staining and no odor), however, elevated concentrations of lead were found to be present in shallow soils along the highway and on the land where the swale will be constructed.

ODOT also conducted infiltration testing on the land where the swale is to be constructed to support the stormwater design for the Project, and collected a sample of the mine tailings present below 1 foot to conduct grain size testing. The mine tailings were found to be comprised primarily of gravels, with a small percentage of sand, and no silt or clay-sized particles.

This Clean Fill Determination evaluates which soils can be considered clean fill and which soils would require special handling and disposal. Soils that are not clean fill are solid waste and subject to DEQ's solid waste rules provided in Oregon Administrative Rule (OAR) 340-093-0005 through OAR 340-093-0290.

Two waste streams were identified for this Project. One of the two waste streams has re-use limitations. These waste streams and their respective handling and disposal requirements are summarized below:

1. Waste Stream 1 – Soils to be Excavated from Depths of 1 Foot or Less

The Level 2 PSI results and shoulder soil sampling results indicate that soils from the upper foot of excavation across the Project are not clean fill based on lead concentrations that are greater than the DEQ clean fill screening level (CFSL). No odor or staining were observed during sampling.

Approximately 870 cubic yards of excess material are anticipated to be generated from the upper foot along the length of the Project Corridor, with approximately 75% of this material being generated from shoulder soils located within 30 feet of the edge pavement. The remaining 25% will be generated during excavation of the bioinfiltration swale. The concentrations of lead in the swale area are similar to the concentrations of lead in the shoulder soils, and thus it is reasonable and appropriate to handle the materials from the swale in the same manner as the materials that are shoulder soils.

Shoulder soils that are not clean fill and require off-site disposal have re-use limitations as described in ODOT's Beneficial Use Determination for Highway shoulder soils throughout Oregon (BUD-21081204). The allowed re-use of this material is as non-residential construction fill, and includes use at commercial and industrial properties, on transportation projects, and on agricultural properties that are not used for human food crops. Shoulder soils may not be placed below the water table, or in/adjacent to surface water bodies. These soils may also be used as mine reclamation fill with approval from the Oregon Department of Geology and Mineral Industries (DOGAMI). These soils may also be disposed at a landfill approved to receive soils containing lead if the above re-use options are not available.

2. Waste Stream 2 – Soils to be Excavated from Depths Greater Than 1 Foot

Soils excavated from depths greater than 1 foot are comprised primarily of mine tailings. Grain size testing of the mine tailings indicates they do not contain fines (silt and clay) that would allow accumulation of lead. The mine tailings are comprised of subrounded and rounded gravels and cobbles of mafic rocks which are documented in a United States Geological Survey (USGS) publication to contain lead at average concentrations between 2 and 11 parts per million (ppm) (USGS, 1976), which is less than the DEQ CFSL of 21 mg/kg. Therefore, soils excavated from depths greater than 1 foot can be considered clean fill (as defined in ODOT Standard Specification 00290.20(c)(2)), and do not have special handling or disposal requirements. Excess materials that are clean fill can be made property of the contractor.

Special Provision 00294 is required for this Project to describe the handling, disposal, and worker training requirements for soils that are not clean fill.

If you have any questions regarding these findings please contact the Region 5 HazMat Coordinator. If the scope of work for construction changes, additional HazMat assessment and/or special provisions may be required.

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1. Introduction

The Oregon Department of Transportation (ODOT) Region 5 Hazardous Materials Unit (HazMat) has prepared this Clean Fill Determination (CFD) for the US395: Sidewalk Improvements (John Day), located on the John Day-Burns Highway between 6th Avenue and Blue Gulch Road, John Day, Grant County, Key #18918 (Project Corridor). A project location map is provided as Figure 1 in Appendix A.

1.1. CFD Purpose

ODOT prepares Clean Fill Determinations (CFDs) for projects where off-site disposal of soils generated during construction is required because the soil is not anticipated to be re-used within the operational right-of-way (ROW).

Surface soil within the project corridor may be impacted by road surface runoff and vehicle emissions from traffic. Surface soil adjacent to state highways has been found to contain contaminants (e.g., lead) at concentrations exceeding Oregon Department of Environmental Quality (DEQ) Clean Fill Screening Levels (CFSLs) in the top 1.5 feet. Agricultural soils are commonly encountered and may contain herbicide and pesticide residues at concentrations that do not meet DEQ CFSLs. In addition, project site-specific point sources may impact material that will be excavated for the project.

Clean fill determinations are prepared in general conformance with the DEQ issued Internal Management Directive (IMD) entitled *Clean Fill Determinations* dated February 21, 2019 (DEQ, 2019a). The directive lays out a process and provides CFSLs to be used in determining if materials removed from the project are considered clean fill as defined by OAR 340-093-0030. In order to be considered clean fill, the material type is limited as outlined in the directive and contaminants may not adversely impact waters of the state or public health. As the generator of the material, ODOT can complete a clean fill determination in general accordance with the directive.

ODOT's policy is to evaluate the excess material on a "waste stream" basis in accordance with DEQ consultation. The basic principal is that while the soil may be in-situ at the time of sampling, the sample program needs to consider how the material will be removed during construction using typical construction methods. This bulk characterization may result multiple waste streams for a project, dependent on how construction will occur.

Materials that meet the clean fill standards can be made property of the contractor per ODOT Standard Specification Section 00290.20(c)(2). Materials that do not meet clean fill standards are considered solid waste, unless they are characterized as hazardous waste by list or characteristic. Solid wastes must be managed appropriately, through re-use or recycling as allowed by the Standing Beneficial Use Determinations (BUDs) provided in OAR 340-093-0270, through re-use as described in Oregon Department of Environmental Quality (DEQ) approved BUD-20181204, BUD for Highway Shoulder Soil Throughout Oregon (DEQ, 2019b), or solid waste can be disposed at a solid waste landfill. Clean fill that is mixed with solid waste is considered solid waste and must be disposed at a solid waste landfill. Materials characterized as hazardous waste must be managed and disposed at a hazardous waste landfill.

1.2. Project Background

The purpose of the project is to improve sidewalks along the John Day-Burns Highway, also known as S. Canyon Boulevard, between SW 6th Avenue and Blue Gulch Road. Proposed construction activities include:

- Construction of sidewalks, including curb and gutter along S. Canyon Boulevard between SW 6th Avenue and Blue Gulch Road, including small embankments where needed to maintain acceptable slopes. Excavation depths are anticipated to be 1 foot or less.
- Construction of new curb ramps at SW 6th Avenue and Blue Gulch Road that are compliant with the Americans with Disability Act (ADA). Excavation depths are anticipated to be 1 foot or less.
- Construction of a storm drain system to collect stormwater generated from private property, and along S. Canyon Boulevard, including a bioinfiltration swale to be constructed on bare land located west of S. Canyon Boulevard. Excavation depths will vary between 3 and 7 feet.
- Construction of multiple rain garden structures at either end of the Project Corridor, including installation of storm drains and pipes at Blue Gulch Road to convey water to the rain garden structure. Excavation depth is anticipated to 5 feet or less.
- Reconstruction of driveway access for residential and commercial properties throughout the Project Corridor. Excavation depths of anticipated to be 1.5 feet or less.
- Extension of an existing culvert that provides for drainage of a spring under S. Canyon Boulevard, including improvements to the downstream ditch. Excavation is not expected below 1.5 feet bgs.
- Relocation or replacement of city water lines and water-related features (such as hydrants and water meters) where they conflict with the proposed construction. Excavation for these feature will extend up to 2 feet below ground surface (bgs).
- Installation of one flashing beacon and five new signs. Excavation depths are not expected to be greater than 3 to 5 feet.

The majority of the features of the project will be constructed along the west side of S. Canyon Boulevard between SW 6th Avenue and Blue Gulch Road. The proposed bioinfiltration swale is to be constructed on bare land west of S. Canyon Boulevard. The proposed location of the bioinfiltration swale, and the cross pipe connecting it to the stormwater facilities along S. Canyon Boulevard, are illustrated on Figure 2 provided in Appendix A.

1.3. Previous Hazardous Materials Investigations

Three studies were completed to evaluate the potential for ground disturbing activities to encounter contaminated media during construction. A summary of each study is provided in the following sections.

1.3.1. Hazardous Materials Corridor Study (2017)

The first study was a Hazardous Materials Corridor Study (HMCS) conducted in 2017 (ODOT, 2017) to evaluate the original Project Corridor which was slightly longer than the current Project Corridor, extending north from Blue Gulch Road to SW 4th Avenue, and included stormwater discharge to Canyon Creek along SW 4th Avenue through a wastewater treatment plant to be constructed as part of the project. The 2017 HMCA concluded there was potential to encounter contaminated soil and groundwater related to the Triangle Oil site, which experienced a significant

release of petroleum hydrocarbons in 2015, and from the former Rainbow Cleaners site, which had a documented release of dry cleaning solvent (perchloroethylene [PCE]) to soil and groundwater. Both of these listed sites were adjacent to, or within, the original Project Corridor.

1.3.2. Hazardous Materials Corridor Study (2020)

In 2019 and 2020, the project was refined to shorten the Project Corridor to the current footprint from SW 6th Avenue to Blue Gulch road, and to revise the stormwater design to be through infiltration instead of discharge to Canyon Creek. The second study was an HMCS (ODOT, 2020) prepared to evaluate acquisition of bare land located west of S. Canyon Boulevard at the north end of the Project Corridor for construction of a bioinfiltration swale. The 2020 HMCS identified three environmental conditions associated with property where the swale and cross pipe were to be constructed, and one environmental condition not previously identified along S. Canyon Boulevard:

- Presence of a burn barrel and other painting waste (rollers, paint pans) on the bare land where the swale will be constructed.
- The property where the cross pipe is to be constructed is identified as an Environmental Cleanup Site Information (ECSI) site (Grant Weed Control). However, no releases are known to have occurred, and no evidence of spills was observed in the area where the cross pipe is to be constructed during the site reconnaissance.
- The presence of a second ECSI site (Triangle Oil) east of the highway, adjoining the Project Corridor, that had a significant release in 2015 and for which cleanup operations are still ongoing. Remaining soil and groundwater contamination at this cleanup site occurs on the east side of the highway in proximity to the Project Corridor.
- Shoulder soil within the Project Corridor (i.e. unpaved areas within ODOT right-of-way) may be impacted by road surface runoff and vehicle emissions from traffic or spills from traffic accidents in areas that lack pavement. Shoulder soil adjacent to state highways has been found to contain contaminants (e.g., lead) at concentrations exceeding Oregon Department of Environmental Quality (DEQ) clean fill screening levels in the top 1.5 feet.

Based on these findings, ODOT HazMat recommended shallow soil sampling (upper 1 foot) at and near the burn barrel on the property where the swale is to be constructed to investigate for elevated concentrations of metals and volatile organic compounds (VOCs) associated with paint and painting products. ODOT also recommended that a clean fill determination be prepared to evaluate excess materials to be generated from construction of the sidewalks and other features along the highway, as well as from the land where the swale and cross pipe will be constructed.

Further investigation of the two ECSI sites was not recommended because there was no evidence that a release had occurred, or the extent of the release is outside of the current Project Corridor. The reduction in Project Corridor also eliminated the Rainbow Cleaners facility as a site of concern because it was downgradient and no longer adjacent to the current Project Corridor.

1.3.3. Level 2 Preliminary Site Investigation (2021)

The third study was a Level 2 Preliminary Site Investigation (ODOT, 2021) of the bare land where the bioinfiltration swale will be constructed to evaluate the burn barrel and other painting waste, and to assess representative locations away from the burn barrel given historical land use as an unpermitted mobile home park. No sampling was conducted on the property where the cross pipe will be constructed because that property is covered with impervious pavement and no releases are known to have occurred.

Three hand auger borings (HA-01 to HA-03) were completed on the bare land. One composite soil sample was collected from each hand auger boring, which extended to depths of 4.5 to 10 inches below ground surface (bgs), to characterize the finer-grained materials (silt and sand) that are present on top of coarse-grained materials (rounded gravels and cobbles) that are interpreted to be mine tailings from historical placer mining operations within the Canyon Creek drainage where the Project Corridor is located. Soil samples were tested for volatile organic compounds (VOCs) and the 8 Resource Conservation and Recovery Act (RCRA) metals. Each metal, except lead, was detected at naturally occurring levels. Lead was detected at concentrations ranging from 7.22 milligrams per kilogram (mg/kg) to 70.4 mg/kg, with the average lead concentration being 38.3 mg/kg. Fuel-related VOCs were detected at the burn barrel location, with a smaller number of VOCs detected at much lower concentrations away from the burn barrel.

The Level 2 PSI report concluded no evidence of a release of paint or painting-related products at the burn barrel location, and no evidence of contamination away from the burn barrel location because no field evidence of contamination was observed during soil sampling, VOC concentrations were all less than DEQ CFSLs, and most metals concentrations were consistent with naturally occurring levels. No further evaluation was recommended.

The analytical results for HA-01 through HA-03 are included in Table 1 and Table 2 of this Clean Fill Determination. Sample locations are shown on Figure 3 provided in Appendix A, surface soil field records are provided in Appendix C1, and the laboratory analytical report is provided in Appendix E1.

2. Clean Fill Sampling

ODOT collected soil samples in October 2020 and April 2021 to support a clean fill determination. The purpose of the soil sampling in October 2020 was to collect a sample of mine tailings materials for grain size testing. The purpose of the soil sampling conducted in April 2021 was to evaluate shoulder soil material chemical concentrations in unpaved areas along the Project Corridor.

2.1. Field Work

Field work for the clean fill determination was completed during two field events: (1) October 2020, and (2) April 2021. Utility locating was accomplished using Oregon One Call. Exploration in October 2020 was conducted with a rubber-tire backhoe. Exploration in April 2021 was accomplished using a stainless steel hand auger. The test pit location is shown on the boring location map provided as Figure 3, in Appendix A. Hand auger boring locations are shown on the shoulder soil boring location map provided as Figure 4, in Appendix A.

2.2. October 2020 Sample Collection

One test pit was excavated on October 27, 2020. The test pit was advanced to approximately 6.5 feet deep, and approximately 13 feet wide by 13 feet long, for the purpose of conducting an

infiltration test in support of the stormwater design for the project. The City of John Day provided the backhoe and operator.

The top 8 to 12 inches is a consolidated layer of brown topsoil (silt and sand) with angular gravel. The remainder of the hole is comprised of gray, dry to damp, unconsolidated gravels with some cobbles and trace boulders and sand. Clasts are sub-rounded to rounded below the topsoil layer, are largest near the surface, and decrease in size to primarily gravel at the total depth explored. No odor or staining were observed during excavation. The test pit was backfilled with the excavated materials upon completion of infiltration testing.

The coarse-grained materials below the topsoil layer are interpreted to be mine tailings from old placer mining operations along Canyon Creek. Photographs of the infiltration test pit and subsurface materials are provided in Appendix B. Photographs from a nearby home foundation excavation illustrating similar subsurface conditions are also included in the photograph log in Appendix B.

The coarse-grained materials comprising the mine tailing have few or no fines as a result of the mining process, and the absence of fines means that potential contaminants have limited opportunities to accumulate. A sample of the coarse-grained material was collected for grain size testing to verify the lack of fines observed in the field. The grain size sample (18918-INF) was collected in 4 gallon-sized ziptop bags and submitted to the ODOT Materials Laboratory for testing.

2.3. April 2021 Sample Collection

A total of 5 hand auger borings (HA-04 through HA-08) were completed on April 30, 2021. Hand auger borings were advanced to depths between 6.5 inches and 21 inches bgs, to characterize unpaved shoulder soils along S. Canyon Boulevard that are comprised of finer-grained materials (silt and sand) on top of coarse-grained materials (gravels and cobbles) interpreted to be mine tailings from historical placer mining operations within the Canyon Creek drainage. Canyon Creek is located parallel to the Project Corridor, approximately 315 to 490 feet to the west. A photograph log of hand auger and sampling activities is provided in Appendix B. Surface soil field records for each hand auger boring are provided in Appendix C.

Each soil sample is a composite of the material removed with the hand auger from the total depth explored. VOC samples were collected using a 5035 kit. Approximately 8 ounces of soil were collected into clean, laboratory-supplied, sample jars. The jars were filled as full as possible to minimize the volume of remaining headspace. The containers were labelled, sealed with a threaded Teflon-lined cap, and placed in a cooler with ice. The samples were labeled with the letters “HA” for hand auger, the investigation location ID number (04 through 08), and sample depth (for example, 0-6.5”).

Hand auger borings were backfilled with soils removed during investigation. Soil samples were submitted to Pace Laboratories (Pace) in Mt. Juliet, TN under chain-of-custody protocol.

2.4. Subsurface Conditions

The topsoil layer at each exploration location (infiltration test pit and hand auger borings) consisted of brown to dark-brown, dry to damp, silty/sandy gravel or gravelly/sandy silt. The gravel shape ranged from subangular (commonly associated with highway construction or surface fill) to rounded (from naturally occurring river deposits).

Coarse materials (gravels, cobbles, boulders) below the topsoil layer were observed only at the infiltration test pit location to the total depth explored. Refusal was encountered at each hand auger boring between 6.5 and 12 inches, as expected, except at one location where the highway was elevated by several feet above the neighboring yard, resulting in an exploration depth of 21 inches before encountering refusal.

No visual or olfactory evidence of contamination was observed during either exploration. Groundwater was not encountered in the infiltration test pit nor in the hand auger borings.

2.5. Laboratory Analyses, Results, and Discussion

Soil samples collected in October 2020 were analyzed for grain size using the following test method:

- Sieve Analysis (no hydrometer) using American Society of Testing and Materials (ASTM) Method D422 / American Association of State Highway and Transportation Officials (AASHTO) T88

The sieve analysis laboratory report is provided in Appendix D.

Soil samples collected in April 2021 were analyzed for the following chemical constituents:

- Gasoline-range organics (GRO) using Northwest (NW) Method TPH-Gx.
- Diesel-range organics (DRO) and residual-range organics (RRO) using NW Method TPH-Dx.
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using United States Environmental Protection Agency (EPA) Method 8260.
- Polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270 SIM (selected ion mode).
- Lead using EPA Method 6020B.

Two soil samples collected in April 2021 were also analyzed for leachable lead based on the total lead results. These two samples were prepared using EPA Method 1311, Toxicity Characteristic Leaching Procedure (TCLP), and then analyzed for total lead using EPA Method 6010D.

Sample results are presented in Tables 1 through 5. The analytical laboratory flagged multiple chemical analytical results with a “J” indicating the reported concentration is an estimated value. The laboratory reports and chain of custody are provided in Appendix E2 and Appendix E3 (for TCLP testing).

The remainder of this section provides a summary of the sample results and includes a comparison of the results to relevant screening or regulatory criteria, which are:

- DEQ Clean Fill Screening Levels (CFSLs) (DEQ, 2019)
- DEQ Risk-Based Concentrations (RBCs) in soil for construction and excavation workers (direct contact) (DEQ, 2018)

2.5.1. Grain Size

The sieve analysis results are presented in Table 1 and indicate that 95% of the infiltration test pit sample consists of gravel, and 5% of the infiltration test pit sample consists of sand. No portion of the sample passed through the #200 sieve, indicating a lack of silt and clay sized particles.

2.5.2. *Metals*

Total lead was analyzed in each shoulder soil sample. Results are presented in Table 2A.

Lead was detected at concentrations greater than the DEQ CFSL of 21 milligrams per kilogram (mg/kg) in each sample, which is the naturally occurring background level in the Blue Mountains Physiographic Province. The average concentration of lead in samples HA-04 through HA-08 is 72 mg/kg and also greater than the DEQ CFSL.

Two samples (HA-05 and HA-06) contained lead at concentrations of 111 mg/kg and 136 mg/kg, respectively. According to the RCRA “Rule of 20”, if a total metals result is 20 times or more than the EPA Hazardous Waste Action Level (Action Level), the waste may be characteristic of a hazardous waste. For lead, the Action Level is 5 milligrams per liter (mg/L), and indicates the potential for leachable lead to be present at concentrations indicative of a hazardous waste.

The TCLP analytical preparation method is used to prepare a sample for testing to determine whether a waste exceeds the Action Level. If a material exceeds the Action Level, the material must be handled, transported and disposed as a hazardous waste. If a material does not exceed the Action Level, it can be handled, transported and disposed as a solid waste.

The TCLP results for samples collected at HA-05 and HA-06 indicate that leachable lead was not detected in either sample. Therefore, excess soils containing lead along S. Canyon Boulevard are not considered hazardous waste. Leachable lead results are presented in Table 2B.

2.5.3. *Selected Volatile Organic Compounds*

Each soil sample was analyzed for selected VOCs, specifically BTEX. Results are presented in Table 3.

Toluene and total xylenes were detected in each sample, but at concentrations less than their respective DEQ CFSLs. Benzene and ethylbenzene were not detected.

2.5.4. *Total Petroleum Hydrocarbons*

Each soil sample was analyzed for GRO, DRO, and RRO. Results are presented in Table 4.

DRO was detected in three of five samples (HA-04, HA-05, and HA-07) at concentrations of approximately 28.3 mg/kg or less. RRO was detected in each of the five samples at concentrations ranging from 68.8 to approximately 385 mg/kg. DRO and RRO concentrations are each less than the DEQ CFSL of 1,100 mg/kg. GRO was not detected.

2.5.5. *Polycyclic Aromatic Hydrocarbons*

Each soil sample was analyzed for PAHs. Results are presented in Table 5.

Multiple PAHs were detected in each soil sample. None of the detection were greater than their respective DEQ CFSLs.

2.6. *Discussion*

Grain size test results indicate the coarse-grained materials below the topsoil layer are comprised primarily of gravel with a small amount of sand. Finer-grained material (silt and clay) is absent. These data are consistent with a mine tailings deposit resulting from placer mining where the objective is to wash and collect the fines containing precious metals out of coarser materials.

Soil analytical results indicate the only analyte exceeding a DEQ CFSL is lead. No other analytes were detected at concentrations greater than their respective CFSL, and no field evidence of spills or releases (odor or staining) was observed during sample collection.

The shoulder soil sample results (HA-04 through HA-08) are similar to those for the Level 2 PSI samples (HA-01 through HA-03), in that both sample sets have low concentrations of apparent fuel-related compounds, with elevated lead concentrations. No odor or staining were observed during collection of either sample set.

The average concentration of lead was calculated for all samples (HA-01 through HA-08). The average concentration representing both sample sets is 59.4 mg/kg, which is greater than the DEQ CFSL of 21 mg/kg.

3. Beneficial Use Determination and Discussion

Based on the proposed construction activities, the Level 2 PSI results, and the shoulder soil sampling results, the excess soils that could be generated during construction can be placed into one of two waste streams: (1) soils to be excavated from depths of 1 foot or less that are not clean fill, and (2) soils to be excavated from depths greater than 1 foot that are clean fill. This section provides a discussion for each waste stream and what re-use and disposal options are available and appropriate.

3.1. Waste Stream 1 – Soils to be Excavated from Depths of 1 Foot or Less

Soils excavated from depths of 1 foot or less across the Project contain lead at concentrations that are greater than the DEQ CFSL of 21 mg/kg. In unpaved areas, these soils are comprised of silty/sandy gravel or gravelly/sandy silt and commonly contain rootlets or other organic matter that make them undesirable for re-use in embankment construction or as backfill on the Project. In paved areas, the upper foot may also contain gravelly materials used as subbase to prepare the ground for paving, though it is not known what the subgrade materials are comprised of. Paved areas are anticipated to contain elevated levels of lead in the upper foot from historical highway use and runoff prior to placing pavement adjacent to S. Canyon Boulevard for walking paths and parking areas.

Approximately 870 cubic yards of excess material are anticipated to be generated from the upper foot along the length of the Project Corridor, with approximately 75% of this material being generated from shoulder soils located within 30 feet of the edge pavement. The remaining 25% will be generated during excavation of the bioinfiltration swale. The concentrations of lead in the swale area are similar to the concentrations of lead in the shoulder soils, and thus it is reasonable and appropriate to handle the materials from the swale in the same manner as the materials that are shoulder soils.

The soils excavated from the upper foot across the Project are not clean fill. Shoulder soils that are not clean fill and require off-site disposal have re-use limitations as described in ODOT's Beneficial Use Determination for Highway shoulder soils throughout Oregon (BUD-21081204). The allowed re-use of this material is as non-residential construction fill, and includes use at commercial and industrial properties, on transportation projects, and on agricultural properties that are not used for human food crops. Shoulder soils may not be placed below the water table, or in/adjacent to surface water bodies. These soils may also be used as mine reclamation fill with approval from the Oregon Department of Geology and Mineral Industries (DOGAMI). These soils

may also be disposed at a landfill approved to receive soils containing lead if the above re-use options are not available.

3.2. Waste Stream 2 – Soils to be Excavated from Depths Greater Than 1 Foot

Soils excavated from depths greater than 1 foot are comprised primarily of mine tailings. Grain size testing of the mine tailings indicates they do not contain fines (silt and clay) that would allow accumulation of lead. The mine tailings are comprised of subrounded and rounded gravels and cobbles of mafic rocks which are documented in a United States Geological Survey (USGS) publication to contain lead at average concentrations between 2 and 11 parts per million (ppm) (USGS, 1976), which is less than the DEQ CFSL of 21 mg/kg. Therefore, soils excavated from depths greater than 1 foot can be considered clean fill (as defined in ODOT Standard Specification 00290.20(c)(2)), and do not have special handling or disposal requirements.

4. Conclusion and Summary

The US395: Sidewalk Improvements (John Day) Project (Key #18918) is located on the John Day-Burns Highway (S. Canyon Boulevard) between 6th Avenue and Blue Gulch Road in John Day, Grant County, Oregon (Project Corridor).

Two HMCS reports (ODOT, 2017; ODOT 2020) were prepared by ODOT to evaluate the potential for contaminated media to be encountered during construction. The 2020 HMCS was completed to evaluate a different design than was considered in the 2017 HMCS. The 2020 HMCS recommended shallow soil sampling (upper 1 foot) on the property where the swale is to be constructed to investigate around a burn barrel and paint wastes, and preparation of a clean fill determination to evaluate excess materials to be generated from construction of the sidewalks and other features along the highway, as well as from the land where the swale and cross pipe will be constructed.

ODOT conducted Level 2 PSI soil sampling on the land where the swale will be constructed, and shoulder soil sampling at selected locations along S. Canyon Boulevard. The Level 2 PSI and shoulder soil sampling did not encounter field evidence of contamination during investigation (no staining and no odor), however, elevated concentrations of lead were found to be present in shallow soils along the highway and on the land where the swale will be constructed.

ODOT also conducted infiltration testing on the land where the swale is to be constructed to support the stormwater design for the Project, and collected a sample of the mine tailings present below 1 foot to conduct grain size testing. The mine tailings were found to be comprised primarily of gravels, with a small percentage of sand, and no silt or clay-sized particles.

This Clean Fill Determination evaluates which soils can be considered clean fill and which soils would require special handling and disposal. Soils that are not clean fill are solid waste and subject to DEQ's solid waste rules provided in Oregon Administrative Rule (OAR) 340-093-0005 through OAR 340-093-0290.

Two waste streams were identified for this Project. One of the two waste streams has re-use limitations. These waste streams and their respective handling and disposal requirements are summarized below:

1. Waste Stream 1 – Soils to be Excavated from Depths of 1 Foot or Less

The Level 2 PSI results and shoulder soil sampling results indicate that soils from the upper foot of excavation across the Project are not clean fill based on lead concentrations that are greater than the DEQ CFSL. No odor or staining were observed during sampling.

Approximately 870 cubic yards of excess material are anticipated to be generated from the upper foot along the length of the Project Corridor, with approximately 75% of this material being generated from shoulder soils located within 30 feet of the edge pavement. The remaining 25% will be generated during excavation of the bioinfiltration swale. The concentrations of lead in the swale area are similar to the concentrations of lead in the shoulder soils, and thus it is reasonable and appropriate to handle the materials from the swale in the same manner as the materials that are shoulder soils.

Shoulder soils that are not clean fill and require off-site disposal have re-use limitations as described in ODOT's Beneficial Use Determination for Highway shoulder soils throughout Oregon (BUD-21081204). The allowed re-use of this material is as non-residential construction fill, and includes use at commercial and industrial properties, on transportation projects, and on agricultural properties that are not used for human food crops. Shoulder soils may not be placed below the water table, or in/adjacent to surface water bodies. These soils may also be used as mine reclamation fill with approval from the Oregon Department of Geology and Mineral Industries (DOGAMI). These soils may also be disposed at a landfill approved to receive soils containing lead if the above re-use options are not available.

2. Waste Stream 2 – Soils to be Excavated from Depths Greater Than 1 Foot

Soils excavated from depths greater than 1 foot are comprised primarily of mine tailings. Grain size testing of the mine tailings indicates they do not contain fines (silt and clay) that would allow accumulation of lead. The mine tailings are comprised of subrounded and rounded gravels and cobbles of mafic rocks which are documented in a United States Geological Survey (USGS) publication to contain lead at average concentrations between 2 and 11 parts per million (ppm) (USGS, 1976), which is less than the DEQ CFSL of 21 mg/kg. Therefore, soils excavated from depths greater than 1 foot can be considered clean fill (as defined in ODOT Standard Specification 00290.20(c)(2)), and do not have special handling or disposal requirements. Excess materials that are clean fill can be made property of the contractor.

Special Provision 00294 is required for this Project to describe the handling, disposal, and worker training requirements for soils that are not clean fill.

If you have any questions regarding these findings please contact the Region 5 HazMat Coordinator. If the scope of work for construction changes, additional HazMat assessment and/or special provisions may be required.

5. Signatures

Report preparation conducted by Michelle L. Peterson, R.G.

Digitally Signed Aug 18 2021 12:53 PM

Signature

Date

Technical review conducted by Shawn R. Rapp, R.G.

Shawn R. Rapp, RG
Digitally signed
by Shawn R.
Rapp, RG
Date: 2021.08.23
07:36:27 -07'00'

Signature

Date

Corporate review conducted by Russell G. Frost, C.E.G.

Russ Frost
Digitally signed
by Russ Frost
Date: 2021.08.18
14:44:39 -07'00'

Signature

Date

Registered Geologist Stamp:



EXPIRES: 11-30-2021

6. References

DEQ, 2018. Risk-Based Concentrations for Individual Chemicals. May, 2018.

DEQ, 2019a. Clean Fill Determinations, Internal Management Directive, Materials Management, February 19, 2019.

DEQ, 2019b. Beneficial Use Determination (BUD-20181204), Highway shoulder soil throughout Oregon. July 2, 2019.

ODOT, 2017. Hazardous Materials Corridor Study, U.S. 395: Sidewalk Improvements (John Day), John Day, Oregon, Grant County Key # 18918. May 2017

ODOT, 2020. Hazardous Materials Corridor Study, US395: Sidewalk Improvements (John Day), Key #18918, John Day, Grant County. December 9, 2020.

ODOT, 2021. Level 2 Preliminary Site Investigation, US395: Sidewalk Improvements (John Day), Key #18918, John Day, Grant County. June 1, 2021.

USGS, 1976. Lead in the Environment, USGS Professional Paper 957, A compilation of papers on the abundance and distribution of lead in rocks, soils, plants, and the atmosphere, and on methods of analysis for lead used by the U.S. Geological Survey.

Tables

TABLE 1
GRAIN SIZE TEST RESULTS FOR SAMPLE 18918-INF
US395 SIDEWALK IMPROVEMENTS (JOHN DAY)
CLEAN FILL DETERMINATION
K18918

SIEVE SIZE	UNITS	PASSING	RETAINED	GRAIN SIZE ^A	PERCENT PER GRAIN SIZE
3	inch	100%	0%	gravel	95%
2	inch	80%	20%		
1.5	inch	67%	13%		
1	inch	37%	30%		
3/4	inch	24%	13%		
1/2	inch	11%	13%		
3/8	inch	8%	3%		
1/4	inch	5%	3%		
#4 (4.75)	(millimeter)	5%	0%	sand	5%
#10 (2.00)	(millimeter)	4%	1%		
#40 (425)	(micron)	3%	1%		
#200 (75)	(micron)	0%	3%		

100%

Notes:

^A Grain size per American Society of Testing and Materials (ASTM) Method D422, Section 18.3.

TABLE 2A
SOIL ANALYTICAL RESULTS - METALS
 US395 SIDEWALK IMPROVEMENTS (JOHN DAY)
 CLEAN FILL DETERMINATION
 K18918

Sample ID	Method	6020B		6020B		6020B		6020B	
	Analyte	ARSENIC		BARIUM		CADMIUM		CHROMIUM	
	Units	mg/kg		mg/kg		mg/kg		mg/kg	
	Date Collected	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
LEVEL 2 PSI SOIL SAMPLES									
HA-01-5@0-4.5"	04/30/2021	3.17		200		0.677	J	85.1	
HA-02-5@0-10"	04/30/2021	3.43		243		0.434	J	92.2	
HA-03-5@0-8"	04/30/2021	4.28		165		0.642	J	116	
SHOULDER SOIL SAMPLES									
HA-04-5@0-8"	04/30/2021	NT		NT		NT		NT	
HA-05-5@0-12"	04/30/2021	NT		NT		NT		NT	
HA-06-5@0-9.5"	04/30/2021	NT		NT		NT		NT	
HA-07-5@0-6.5"	04/30/2021	NT		NT		NT		NT	
HA-08-5@0-21"	04/30/2021	NT		NT		NT		NT	
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) SCREENING LEVELS ^A									
Clean Fill Screening Level (CFSL)		14		950		0.69		190	
Direct contact RBC - CW & EW		NA		NA		NA		NA	

Method	Method	6020B		7471B		6020B		6020B	
	Analyte	LEAD		MERCURY		SELENIUM		SILVER	
	Units	mg/kg		mg/kg		mg/kg		mg/kg	
	Date Collected	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
LEVEL 2 PSI SOIL SAMPLES									
HA-01-5@0-4.5"	04/30/2021	70.4		0.0917		0.608	J	0.416	J
HA-02-5@0-10"	04/30/2021	7.22		0.0411	J	1.06	J	0.138	J
HA-03-5@0-8"	04/30/2021	37.4		0.0901		0.529	J	0.098	J
AVERAGE CONCENTRATION (HA-01 to HA-03)		38.3		NC		0.732		NC	
SHOULDER SOIL SAMPLES									
HA-04-5@0-8"	04/30/2021	40.5		NT		NT		NT	
HA-05-5@0-12"	04/30/2021	111		NT		NT		NT	
HA-06-5@0-9.5"	04/30/2021	136		NT		NT		NT	
HA-07-5@0-6.5"	04/30/2021	23.8		NT		NT		NT	
HA-08-5@0-21"	04/30/2021	48.5		NT		NT		NT	
AVERAGE CONCENTRATION (HA-04 to HA-08)		72.0		NC		NC		NC	
BOTH SAMPLE SETS (LEVEL 2 PSI SAMPLES + SHOULDER SOIL SAMPLES)									
AVERAGE CONCENTRATION		59.4		NC		NC		NC	
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) SCREENING LEVELS ^A									
Clean Fill Screening Level (CFSL)		21		1.4		0.93		2.6	
Direct contact RBC - CW & EW		800		NA		NA		NA	

Notes:

Bold text indicate the analyte was detected.

J - The identification of the analyte is acceptable; the reported value is an estimate.

Peach indicates the concentration is greater than the DEQ CFSL.

^A CFSLs taken from the DEQ Clean Fill Determinations Internal Management Directive (February 19, 2019) and table of RBCs for Individual Chemicals (May, 2018).

Abbreviations:

mg/kg = milligrams per kilogram

NA = not applicable because the metal was detected at a concentration less than the DEQ CFSL

NC = not calculated because the individual concentrations were less than the DEQ CFSL or the analyte was not tested

NT = not tested in shoulder soil samples

CW = Construction worker

EW = Excavation worker

TABLE 2B
SOIL ANALYTICAL RESULTS - LEAD LEACHABILITY TESTING
 US395 SIDEWALK IMPROVEMENTS (JOHN DAY)
 CLEAN FILL DETERMINATION
 K18918

Sample ID	Method	6020B		1311 & 6010D	
	Analyte	TOTAL LEAD		LEACHABLE LEAD	
	Units	mg/kg		mg/L	
	Date Collected	Result	Qualifier	Result	Qualifier
SHOULDER SOIL SAMPLES					
HA-05-5@0-12"	04/30/2021	111		< 0.100	
HA-06-5@0-9.5"	04/30/2021	136		< 0.100	
APPLICABLE SCREENING LEVELS/REGULATORY CRITERIA					
DEQ Clean Fill Screening Level (CFSL) ^A		21			
EPA Regulatory Level ^B				5	

Notes:

Bold text indicates the analyte was detected.

J - The identification of the analyte is acceptable; the reported value is an estimate.

U - The analyte was not detected at the reporting limit (or method detection limit where applicable).

Peach indicates the concentration is greater than the DEQ CFSL.

^B CFSLs taken from the DEQ Clean Fill Determinations Internal Management Directive (February 19, 2019).

^C 40CFR 61.24 Toxicity Characteristic, Table 1 - Maximum Concentration of Contaminants for the Toxicity Characteristic

Abbreviations:

mg/kg = milligrams per kilogram

mg/L - milligrams per liter

DEQ - Oregon Department of Environmental Quality

EPA - United States Environmental Protection Agency

TABLE 3
SOIL ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
 US395 SIDEWALK IMPROVEMENTS (JOHN DAY)
 CLEAN FILL DETERMINATION
 K18918

Sample ID	Method	8260D		8260D		8260D		8260D	
	Analyte	BENZENE		TOLUENE		ETHYLBENZENE		XYLENES, TOTAL	
	Units	mg/kg		mg/kg		mg/kg		mg/kg	
	Date Collected	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
LEVEL 2 PSI SOIL SAMPLES									
HA-01-5@0-4.5"	04/30/2021	0.00124		0.0545		0.00191	J	0.00739	
HA-02-5@0-10"	04/30/2021	<0.00117		0.0162		<0.00291		0.00124	J
HA-03-5@0-8"	04/30/2021	<0.00114		0.0161		<0.00284		0.00222	J
SHOULDER SOIL SAMPLES									
HA-04-5@0-8"	04/30/2021	<0.00111		0.0417		<0.00279		0.00552	J
HA-05-5@0-12"	04/30/2021	<0.00116		0.0801		<0.00291		0.00486	J
HA-06-5@0-9.5"	04/30/2021	<0.00126		0.0807		<0.00314		0.00748	J
HA-07-5@0-6.5"	04/30/2021	<0.00116		0.0905		<0.00291		0.00715	J
HA-08-5@0-21"	04/30/2021	<0.00120		0.0668		<0.00299		0.00585	J
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) SCREENING LEVELS ^A									
Clean Fill Screening Level (CFSL)		0.023		23		0.22		1.4	

Sample ID	Method	8260D		8260D		8260D	
	Analyte	1,2-DICHLORO-		P-ISOPROPYL-		1,2,4-TRIMETHYL-	
	Units	mg/kg		mg/kg		mg/kg	
	Date Collected	Result	Qualifier	Result	Qualifier	Result	Qualifier
LEVEL 2 PSI SOIL SAMPLES							
HA-01-5@0-4.5"	04/30/2021	0.00093	J	0.00361	J	0.0017	J
HA-02-5@0-10"	04/30/2021	<0.00291		0.00329	J	<0.00583	
HA-03-5@0-8"	04/30/2021	<0.00284		<0.00568		<0.00568	
SHOULDER SOIL SAMPLES							
HA-04-5@0-8"	04/30/2021	NT		NT		NT	
HA-05-5@0-12"	04/30/2021	NT		NT		NT	
HA-06-5@0-9.5"	04/30/2021	NT		NT		NT	
HA-07-5@0-6.5"	04/30/2021	NT		NT		NT	
HA-08-5@0-21"	04/30/2021	NT		NT		NT	
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) SCREENING LEVELS ^A							
Clean Fill Screening Level (CFSL)		0.0028		NP		10	

Notes:

This table shows detected analytes only.

A "<" indicates the analyte was not detected at the reporting limit (or method detection limit where applicable).

Bold text indicate the analyte was detected.

J - The identification of the analyte is acceptable; the reported value is an estimate.

^A CFSLs taken from the DEQ Clean Fill Determinations Internal Management Directive (February 19, 2019).

Abbreviations:

mg/kg = milligrams per kilogram

NP = not published

NT = not tested in shoulder soil samples

TABLE 4
SOIL ANALYTICAL RESULTS - TOTAL PETROLEUM HYDROCARBONS
 US395 SIDEWALK IMPROVEMENTS (JOHN DAY)
 CLEAN FILL DETERMINATION
 K18918

Sample ID	Analyte	GASOLINE RANGE ORGANICS		DIESEL-RANGE ORGANICS		RESIDUAL-RANGE ORGANICS	
	Units	mg/kg		mg/kg		mg/kg	
	Date Collected	Result	Qualifier	Result	Qualifier	Result	Qualifier
SHOULDER SOIL SAMPLES							
HA-04-5@0-8"	04/30/2021	<2.79		7.13 J		72.7	
HA-05-5@0-12"	04/30/2021	<2.91		28.3 J		250	
HA-06-5@0-9.5"	04/30/2021	<3.14		<180		385 J	
HA-07-5@0-6.5"	04/30/2021	<2.91		6.93 J		68.8	
HA-08-5@0-21"	04/30/2021	<2.99		<87.3		180 J	
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) SCREENING LEVELS ^A							
Clean Fill Screening Level (CFSL)		31		1,100		1,100	

Notes:

A "<" indicates the analyte was not detected at the reporting limit (or method detection limit where applicable).

Bold text indicate the analyte was detected.

J - The identification of the analyte is acceptable; the reported value is an estimate.

^A CFSLs taken from the DEQ Clean Fill Determinations Internal Management Directive (February 19, 2019). The TPH-Diesel RBC is used as a surrogate for TPH-Heavy Oil.

Abbreviations:

mg/kg = milligrams per kilogram

TABLE 5
SOIL ANALYTICAL RESULTS - POLYCYCLIC AROMATIC HYDROCARBONS
 US395 SIDEWALK IMPROVEMENTS (JOHN DAY)
 CLEAN FILL DETERMINATION
 K18918

Sample ID	Method	8270E-SIM		8270E-SIM		8270E-SIM		8270E-SIM		8270E-SIM		8270E-SIM		8270E-SIM	
		ANTHRACENE	ACENAPHTHYLENE	ACENAPHTHYLENE	BENZO(A)-ANTHRACENE	BENZO(A)PYRENE	BENZO(B)-FLUORANTHENE	BENZO(G,H,I)-PERYLENE	BENZO(K)-FLUORANTHENE	CHRYSENE	DIBENZ(A,H)-ANTHRACENE	Result	Qualifier	Result	Qualifier
	Date Collected	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SHOULDER SOIL SAMPLES															
HA-04-5@0-8"	04/30/2021	<0.00632	<0.00632	<0.00632	0.00619 J	0.00819	0.0173	0.0129	0.00535 J	0.0097	0.00186 J				
HA-05-5@0-12"	04/30/2021	0.00262 J	<0.00648	0.00362 J	0.02	0.0244	0.0542	0.0361	0.0175	0.0417	0.00562 J				
HA-06-5@0-9.5"	04/30/2021	<0.00675	<0.00675	0.00358 J	0.0186	0.0229	0.0466	0.0303	0.0128	0.0272	0.00478 J				
HA-07-5@0-6.5"	04/30/2021	<0.00648	<0.00648	<0.00648	0.00513 J	0.00646 J	0.00974	0.00906	0.00324 J	0.00596 J	<0.00648				
HA-08-5@0-21"	04/30/2021	<0.00654	<0.00654	<0.00654	0.00556 J	0.0066	0.013	0.0116	0.00351 J	0.00621 J	0.00201 J				
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) SCREENING LEVELS^A															
Clean Fill Screening Level (CFSL)		6.8	0.25	120	0.73	0.11	1.1	25	11	3.1	0.11				
SHOULDER SOIL SAMPLES															
HA-04-5@0-8"	04/30/2021	0.0189	<0.00632	0.0111	<0.0211	0.00626 J	0.0181	<0.0211	<0.0211	<0.0211	<0.0211				
HA-05-5@0-12"	04/30/2021	0.0799	<0.00648	0.0304	0.0061 J	0.026	0.0719	<0.0216	0.00546 J	<0.0216	<0.0216				
HA-06-5@0-9.5"	04/30/2021	0.0494	<0.00675	0.025	0.0106 J	0.0156	0.0444	<0.0225	0.00947 J	<0.0225	<0.0225				
HA-07-5@0-6.5"	04/30/2021	0.0117	<0.00648	0.00743	<0.0216	0.00326 J	0.0109	<0.0216	<0.0216	<0.0216	<0.0216				
HA-08-5@0-21"	04/30/2021	0.0131	<0.00654	0.00805	<0.0218	0.00411 J	0.012	<0.0218	<0.0218	<0.0218	<0.0218				
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) SCREENING LEVELS^A															
Clean Fill Screening Level (CFSL)		10	3.7	1.1	0.077	5.5	10	0.36	11	230	0.11				

Notes:

A "<" indicates the analyte was not detected at the reporting limit (or method detection limit where applicable).

Bold text indicate the analyte was detected.

J - The identification of the analyte is acceptable; the reported value is an estimate.

^A Screening levels taken from the DEQ Clean Fill Determinations Internal Management Directive (February 19, 2019).

Abbreviations:

mg/kg = milligrams per kilogram

Appendix A

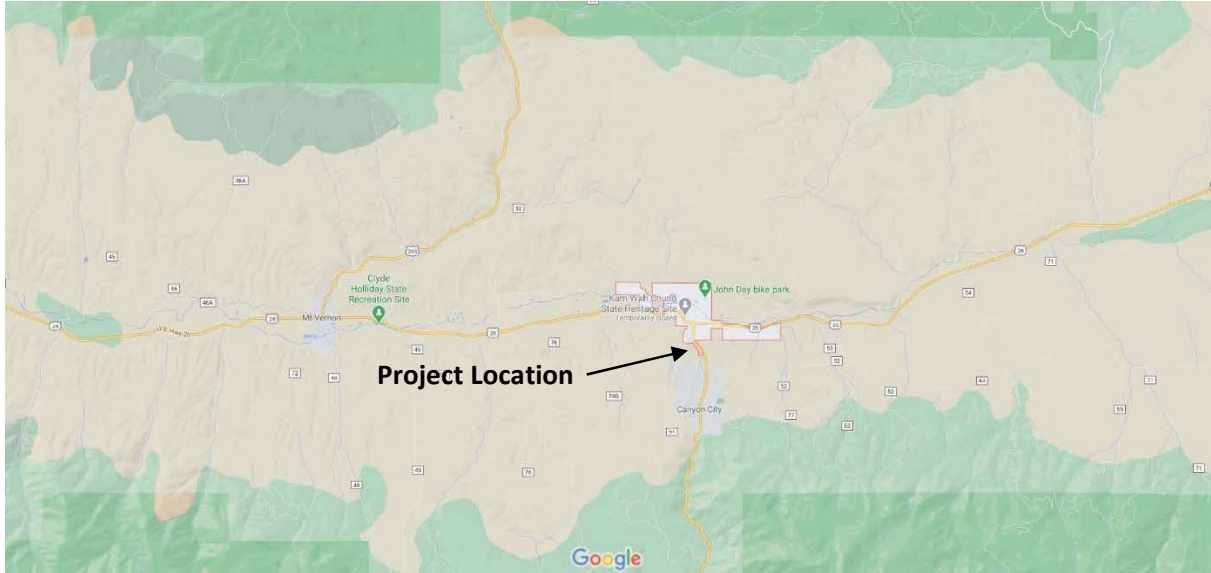
Figures

Figure 1 – Project Location Map

Figure 2 – Swale and Cross Pipe Location Map

Figure 3 – Boring Location Map

Figure 4 – Shoulder Soil Boring Location Map



NORTH

FIGURE 1
PROJECT LOCATION MAP
US395: Sidewalk Improvements (John Day)
K18918

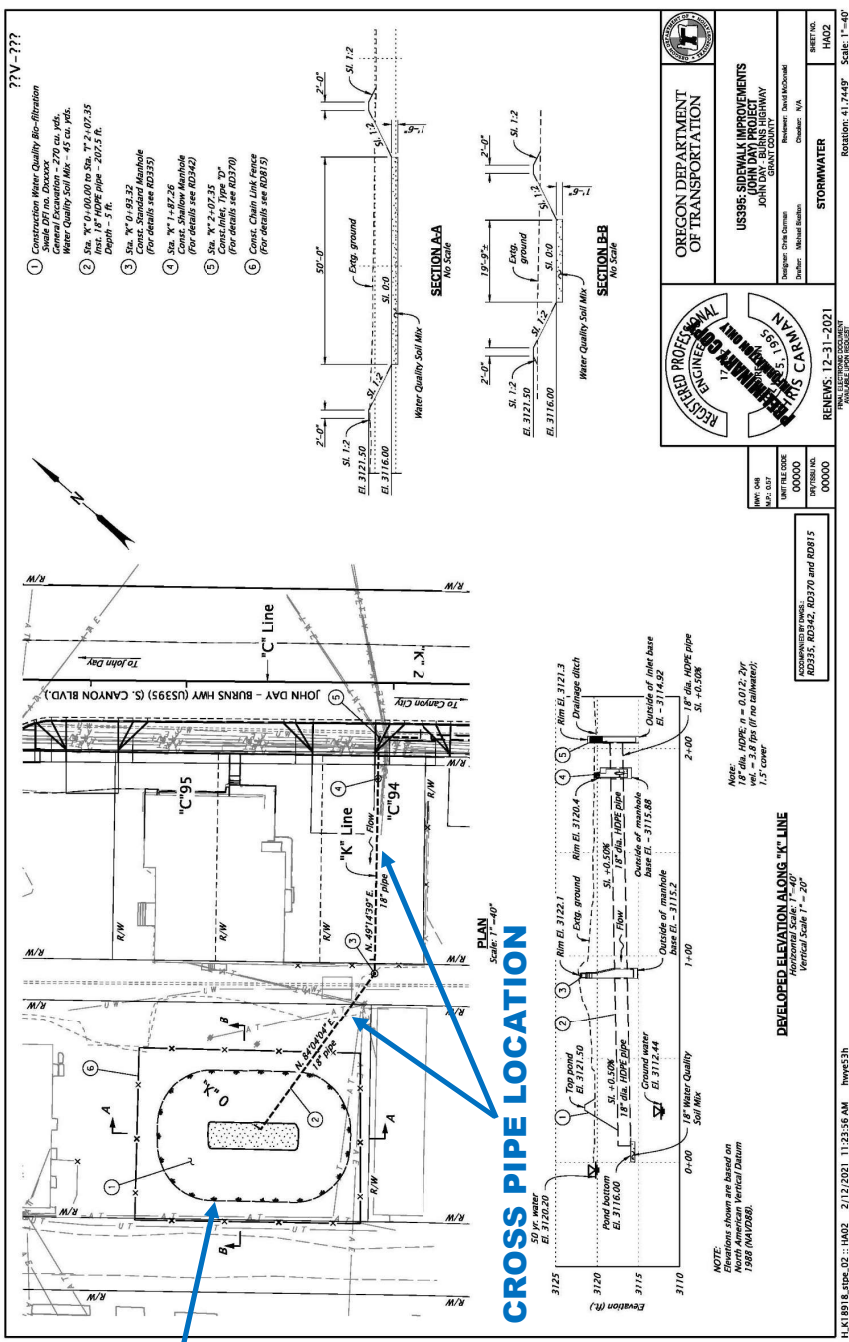
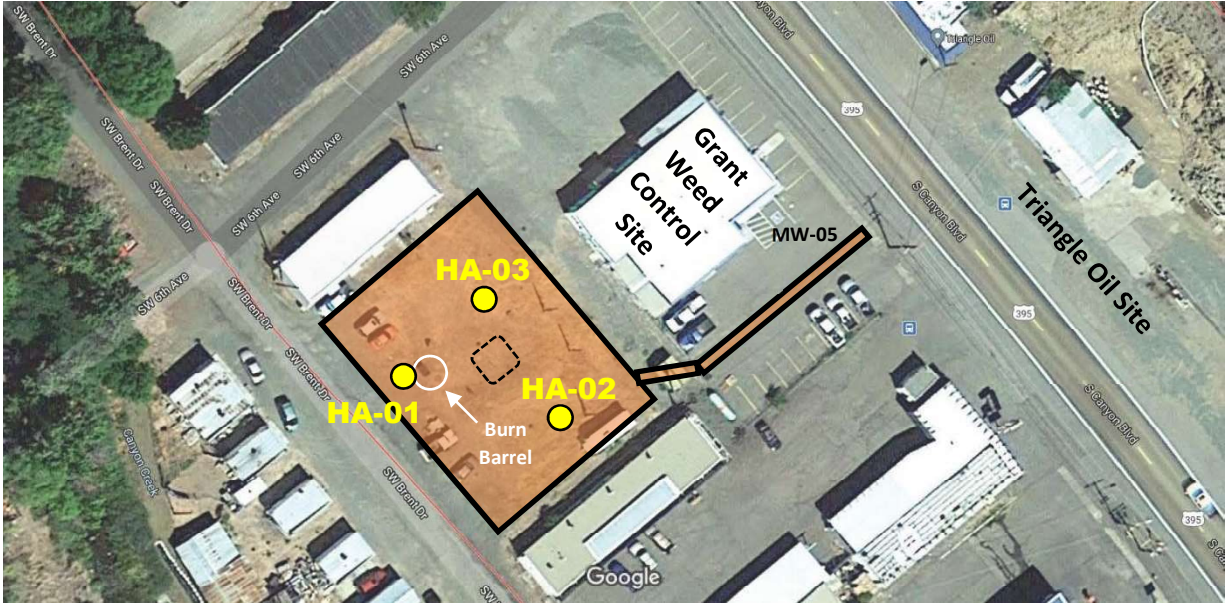


FIGURE 2
SWALE AND CROSS PIPE LOCATION MAP
US395: Sidewalk Improvements (John Day)
K18918



- Property to be acquired
- Approximate hand auger boring location
- Approximate location of infiltration test pit

FIGURE 3
BORING LOCATION MAP
 US395: Sidewalk Improvements (John Day)
 K18918



0 0.0276 0.056 0.11 mi

Created on May 28, 2021

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ODOT - Geographic Information Services

This product is for informational purposes and may not be suitable for legal, engineering, or surveying purposes. Users of this product should review and consult the primary data source to determine the usability

- Approximate hand auger boring location
- Grant County tax lot lines (approximate)

FIGURE 4
SHOULDER SOIL BORING LOCATION MAP
 US395: Sidewalk Improvements (John Day)
 K18918

Appendix B
Photograph Log



Photo 1. Infiltration test pit completed in October 2020 (looking east). Grant County Soil and Water Conservation District building is in the background. Note the thin layer of finer-grained material on top of coarse-grained material. The pile of cobbles in the lower right portion of the photograph is material removed from the test pit.



Photo 2. View of the completed test pit (looking north).



Photo 3. Profile view of the infiltration test pit showing the finer-grained materials at the surface.



Photo 4. Profile view of the infiltration test pit showing the finer-grained materials at the surface.



Photo 5. View of a house foundation excavation located approximately one-third mile north of the Project. The excavation shows a similar profile with finer-grained materials at the surface and coarser-grained materials underneath.



Photo 6. Close-up view of the home foundation excavation.

Appendix C1

Surface Soil Field Records for HA-01 through HA-03

Surface Soil Field Record

Project Name: US395 Sidewalk Improvements (John Da)		Project Number: K18918
Sample Crew	Michelle Peterson	Date: 4/30/2021
		Weather: Sunny, warm

Location ID: HA-01	Lat/Long	Source: iPhone
	45.24' 29" N	
	-122.57' 4" W	Other:
Adjacent Highway: NA	3120' FT elevation	
Distance from Pavement (ft): NA	Above / Below / Level to Roadway	
Surface: Gravel	Soil Type: silty gravel, gravelly silt, dry	
(Grass)	Soil Color: brown	
Other:	Odor / Staining / Other: no odor, no staining	
Water Encountered: NO		
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc. NA 55 21 FT E to power pole (up) 69 85 FT S to bldg (up)		
Comments: TD = 4.5' (refusal on gravel) Boring ~ 2 FT away from burn barrel area Burn barrel debris is surficial (a few inches), as is paint staining nearby.		
Sample ID: HA-01-5 @ 4.5"	Sample Depth: 0-4.5"	Sample Time: 10:00 AM
Sample ID:	Sample Depth:	Sample Time:
Sample ID:	Sample Depth:	Sample Time:
Sample Volume: 1 Terra core + 1 4oz		Sample Method: Hand Auger

Location ID: HA-02	Lat/Long	Source: iPhone
	45.24' 29" N	
	-122.57' 4" W	Other:
Adjacent Highway: NA	3120 FT elevation	
Distance from Pavement (ft): NA	Above / Below / Level to Roadway	
Surface: Gravel	Soil Type: Gravelly silt, gravel is ang to rounded, damp-dry	
Grass	Soil Color: Red-brown to brown	
Other:	Odor / Staining / Other: no odor, no staining	
Water Encountered: No		
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc. NA 16 FT E to power pole 31 FT S to bldg		
Comments: TD = 10" (refusal on gravel) Representative sample @ SE corner of pond area. No evidence of contamination No solid waste @ surface. Small piece plastic @ depth (~4")		
Sample ID: HA-02-5 @ 0-10"	Sample Depth: 0-10"	Sample Time: 10:45 AM
Sample ID:	Sample Depth:	Sample Time:
Sample ID:	Sample Depth:	Sample Time:
Sample Volume:		Sample Method:

y, soil is more fine sandy than silt

Surface Soil Field Record

Project Name: US395 Sidewalk Improvements (John Da)		Project Number: K18918
Sample Crew	Michelle Peterson	Date: 4/30/2021
		Weather: Sunny, warm

Location ID: 14A-03	Lat/Long	Source: iPhone
	45.29' 24" N	
	-122.57' 4" W	Other:
Adjacent Highway: NA		
Distance from Pavement (ft): NA		Above / Below / Level to Roadway
Surface: Gravel	Soil Type: silty gravel, gravelly silt, moist to dry	
(Grass)	Soil Color: brown	
Other:	Odor / Staining / Other: no odor, no staining	
Water Encountered: No		
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc. NA 34 FT E To Power poles 83 FT S To Bldg		
Comments: Representative sample @ NW corner of pond area No evidence surface contamination. Solid waste visible @ surface (glass, paper, dog poop)		Gravels are sub ang to sub rounded. TD: 8" (refused on rounded gravel)
Sample ID: NA-03-S @ 0-8"	Sample Depth: 0-8"	Sample Time: 6:25 AM
Sample ID:	Sample Depth:	Sample Time:
Sample ID:	Sample Depth:	Sample Time:
Sample Volume: 1 Terra core + 1 4oz		Sample Method: Hand Auger

Location ID:	Lat/Long	Source: iPhone
	45.	
	-122.	Other:
Adjacent Highway:		
Distance from Pavement (ft):		Above / Below / Level to Roadway
Surface: Gravel	Soil Type:	
Grass	Soil Color:	
Other:	Odor / Staining / Other:	
Water Encountered:		
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc.		
Comments:		
Sample ID:	Sample Depth:	Sample Time:
Sample ID:	Sample Depth:	Sample Time:
Sample ID:	Sample Depth:	Sample Time:
Sample Volume:		Sample Method:

Appendix C2

Surface Soil Field Records for HA-04 through HA-08

Surface Soil Field Record

Project Name: US395 Sidewalk Improvements (John Da)		Project Number: K18918
Sample Crew	Michelle Peterson	Date: 4/30/2021
		Weather: Sunny Warm

Location ID: HA-04	Lat/Long	Source: iPhone
815 S Canyon Blvd	45.24' 26" N	
N property side	-122.56' 58" W	Other:
Adjacent Highway: US395	Elev 3140 FT	
Distance from Pavement (ft): 13' 5"	Above / (Below) Level to Roadway	
Surface: <u>Gravel</u>	Soil Type: silty, sandy gravel (sub rounded to rounded), damp	
Grass	Soil Color: Brown	
Other:	Odor / Staining / Other: no odor no staining	
Water Encountered: no		
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc. Hand auger location is adjacent to a residential fence foundation that is the lowest point between the fence & the highway Boring is 12FT @ of power pole @ N edge property		
Comments: TD: 8" (refusal on gravel) No evidence of contamination Spiked methanol on soil during sampling. used different TerraCore for sampling & avoided the soil w/ methanol for the 4oz jars.		
Sample ID: HA-04-S @ 0-8"	Sample Depth: 0-8"	Sample Time: 11:50 AM
Sample ID:	Sample Depth:	Sample Time:
Sample ID:	Sample Depth:	Sample Time:
Sample Volume: 1 TerraCore + 2 4oz jars		Sample Method: Hand Auger

Location ID: HA-05	Lat/Long	Source: iPhone
815 S Canyon Blvd	45.24' 26" N	
S property side, N of driveway	-122.56' 58" W	Other:
Adjacent Highway:	Elev 3140 FT	
Distance from Pavement (ft): 13' 11"	Above / (Below) Level to Roadway	
Surface: <u>Gravel</u>	Soil Type: silty, sandy gravel (sub ang to sub rounded), damp	
Grass	Soil Color: Brown	
Other:	Odor / Staining / Other: no odor no staining	
Water Encountered: no		
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc. Same as HA-04. Boring is at angle in front yard fence.		
Comments: TD: 12" (refusal on gravel) No evidence contamination.		
Sample ID: HA-05-S @ 0-12"	Sample Depth: 0-12"	Sample Time: 12:25 PM
Sample ID:	Sample Depth:	Sample Time:
Sample ID:	Sample Depth:	Sample Time:
Sample Volume: 1 TerraCore + 2 4oz jars		Sample Method: Hand Auger

Surface Soil Field Record

Project Name: US395 Sidewalk Improvements (John Da)		Project Number: K18918
Sample Crew	Michelle Peterson	Date: 4/30/2021
		Weather: Sunny, Warm

Location ID: HA-06	Lat/Long	Source: iPhone
s side of property @ grass	45.24' 24" N	
	-122.56' 57" W	Other:
Adjacent Highway: US 395		
Distance from Pavement (ft): 13' 2"	Above / <u>Below</u> / Level to Roadway	
Surface: Gravel	Soil Type: silty, sandy gravel / gravelly sandy silt (subang - subrounded)	
<u>Grass</u>	Soil Color: DK brown - Brown	
Other:	Odor / Staining / Other: No odor, no staining	
Water Encountered: No		
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc. Hand auger location is in grassy area behind curb. The ground cut inlets to slope away from pavement toward parking lot. Boring located ~ 5 FT (S) of sanitary manhole in US395 on other side of curb		
Comments: TD: 9.5" (refusal on gravel) No evidence of contamination		
Sample ID: HA-06-SC0-9.5"	Sample Depth: 0-9.5"	Sample Time: 12:50 PM
Sample ID:	Sample Depth:	Sample Time:
Sample ID:	Sample Depth:	Sample Time:
Sample Volume: 1 TerraCore + 2 4oz jars		Sample Method: Hand Auger

Location ID: HA-07	Lat/Long	Source: iPhone
N side of 345 S Canyon Blvd	45.24' 21" N	
near culvert to be extended	-122.56' 54" W	Other:
Adjacent Highway: US 395 Elev 3140 FT		
Distance from Pavement (ft): 15 FT	Above / <u>Below</u> / Level to Roadway	
Surface: Gravel	Soil Type: silty, gravelly sand (ang - subrounded), damp	
<u>Grass</u>	Soil Color: Brown	
Other:	Odor / Staining / Other: no odor, no staining	
Water Encountered: no		
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc. Similar to HA-06 w/ gravel behind curb & then grass down slope. Boring between gravel drive and ditch carrying culvert discharge.		
Comments: TD = 6.5" (refusal on large cobble)		
Sample ID: HA-07-SC0-6.5"	Sample Depth: 0-6.5"	Sample Time: 2:40 PM
Sample ID:	Sample Depth:	Sample Time:
Sample ID:	Sample Depth:	Sample Time:
Sample Volume: 1 TerraCore + 2 4oz jars		Sample Method: Hand Auger

Surface Soil Field Record

Project Name: US395 Sidewalk Improvements (John Da)		Project Number: K18918
Sample Crew	Michelle Peterson	Date: 4/30/2021
		Weather: Sunny, warm

Location ID: HA-08		Lat/Long	Source: iPhone
Send of property @ 845 S Canyon Blvd		45.24' 20" N	
		-122.56' 53" W	Other:
Adjacent Highway: US 395		Elev 3190 Ft	
Distance from Pavement (ft): ^{curb} 4' ^{to slope} 6' ^{break to bearing} Above / Below / Level to Roadway			
Surface: Gravel	Soil Type: silt sand w/ some gravel (sub ang-sub rounded), clamp		
Grass	Soil Color: DK brown		
Other:	Odor / Staining / Other: no odor, no staining		
Water Encountered: No			
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc. Ditch leading down to front yard @ 845 S Canyon Blvd. Grassy slope leads up to gravel shoulder behind curb			
Comments: Deepest hole (to 21") b/c on slope & refusal on gravel. Grain size coarsens slightly w/ depth.			
Sample ID: HA-08-5 @ 0-21"	Sample Depth: 0-21"	Sample Time: 2:10 P.M	
Sample ID:	Sample Depth:	Sample Time:	
Sample ID:	Sample Depth:	Sample Time:	
Sample Volume: 1 Terra core + 2 4oz jars		Sample Method: Hand Auger	

Location ID:		Lat/Long	Source: iPhone
		45.	
		-122.	Other:
Adjacent Highway:			
Distance from Pavement (ft):		Above / Below / Level to Roadway	
Surface: Gravel	Soil Type:		
Grass	Soil Color:		
Other:	Odor / Staining / Other:		
Water Encountered:			
Shoulder Description: ditch/near railroad or other structures/recent shoulder work/etc.			
Comments:			
Sample ID:	Sample Depth:	Sample Time:	
Sample ID:	Sample Depth:	Sample Time:	
Sample ID:	Sample Depth:	Sample Time:	
Sample Volume:		Sample Method:	

Appendix D

Laboratory Report for Sample 18918-INF

Contract No.: EA No.: PE002732 000 Lab No.: 21-000273
Project: US 395/SIDEWALK IMPROVEMENTS JOHN DAY
Highway: County: GRANT Data Sheet No.: G 5630 187
Contractor: FA No.:
Project Manager: KELLI MARTIN Org Unit: 5650 Bid Item:
Submitted By: M. PETERSON Org Unit: 5630 Sample No.: 18918-INF
Material Source: SWALE TEST PIT Qty Represented: SOIL @ DEPTH
Sampled At: 18918-INF @ 7.5' Sampled By:
DATE-Sampled: 20/10/27 Received: 21/ 2/ 5 Tested: 21/ 2/17 Date Reported: 21/ 2/17

Test Results For: DISTURBED SOIL

T 89 Liquid Lim:
T 90 Plastic Ind:
T288 Resistivity: Ω
T289 pH:
T100 Spec Grav:
TM117
Torvane Shear/ Pocket Pen.

T265 N. Moisture: 0.94 %
Dry Density rec'd:
Wet Density rec'd:
D4644 Slake Durab:
Water Cont:

D2974 Pct Organic:

Dry Density	Moisture
Max Density: Optimum Moisture:	

Sieve	Passing
3 "	100 %
2 "	80 %
1.5 "	67 %
1 "	37 %
3/4 "	24 %
1/2 "	11 %
3/8 "	8 %
1/4 "	5 %
# 4 "	5 %
10 "	4 %
40 "	3 %
200 "	0.0 %

Quantity	Method	Cost
1	D1140	\$ 96.00
1	R58	75.00
1	T154X	75.00

Hydrometer Analysis	Subsample	Total Sample
Coarse Sand= 4.75 to 2.0 mm:		
Medium Sand= 2.0 to .42 mm:		
Fine Sand= .42 to .074 mm:		
Silt= .074 to .02 mm:		
Silt= .02 to .005 mm:		
Clay= .005 to .002 mm:		
Clay= Less Than .002 mm:		

REMARKS: INFORMATION ONLY *	TOTAL CHARGES: \$ 0.00
--	-------------------------------

KEVIN BROPHY - LABORATORY SERVICES MANAGER

REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THIS LABORATORY.
'TM' TEST METHODS CAN BE CROSS-REFERENCED WITH AASHTO AND/OR ASTM, CONTACT THIS LAB FOR ASSISTANCE.

Appendix E1

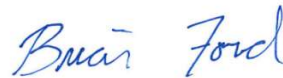
Laboratory Report for Samples HA-01 through HA-03

Oregon Dept of Transportation - ODOT

Sample Delivery Group: L1347464
Samples Received: 05/04/2021
Project Number: K18918
Description: John Day Sidewalks - Level 2 PSI

Report To: Michelle Peterson
3012 Island Ave.
La Grande, OR 97850

Entire Report Reviewed By:



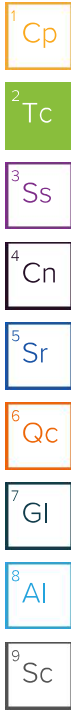
Brian Ford
Project Manager

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 www.pacenational.com

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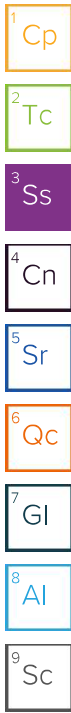


SAMPLE SUMMARY

HA-01-5@0-4.5" L1347464-01 Solid

Collected by: Michelle Peterson
 Collected date/time: 04/30/21 10:00
 Received date/time: 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1664620	1	05/05/21 09:46	05/05/21 09:58	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1664539	1	05/05/21 07:31	05/05/21 12:31	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1664520	5	05/05/21 10:53	05/05/21 16:34	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664671	1	04/30/21 10:00	05/05/21 22:51	TPR	Mt. Juliet, TN



HA-02-5@0-10" L1347464-02 Solid

Collected by: Michelle Peterson
 Collected date/time: 04/30/21 10:45
 Received date/time: 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1664620	1	05/05/21 09:46	05/05/21 09:58	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1664539	1	05/05/21 07:31	05/05/21 12:34	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1664520	5	05/05/21 10:53	05/05/21 16:37	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664671	1	04/30/21 10:45	05/05/21 23:10	TPR	Mt. Juliet, TN

HA-03-5@0-8" L1347464-03 Solid

Collected by: Michelle Peterson
 Collected date/time: 04/30/21 10:25
 Received date/time: 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1664620	1	05/05/21 09:46	05/05/21 09:58	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1664539	1	05/05/21 07:31	05/05/21 12:41	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1664520	5	05/05/21 10:53	05/05/21 16:40	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664671	1	04/30/21 10:25	05/05/21 23:29	TPR	Mt. Juliet, TN

TRIP BLANK L1347464-04 GW

Collected by: Michelle Peterson
 Collected date/time: 04/30/21 00:00
 Received date/time: 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664828	1	05/05/21 12:58	05/05/21 12:58	BMB	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	97.1		1	05/05/2021 09:58	WG1664620

Mercury by Method 7471B

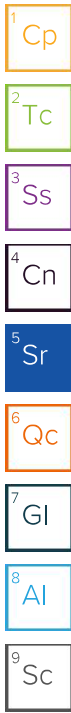
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0917		0.0185	0.0412	1	05/05/2021 12:31	WG1664539

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	3.17		0.103	1.03	5	05/05/2021 16:34	WG1664520
Barium	200		0.157	2.58	5	05/05/2021 16:34	WG1664520
Cadmium	0.677	J	0.0881	1.03	5	05/05/2021 16:34	WG1664520
Chromium	85.1		0.305	5.15	5	05/05/2021 16:34	WG1664520
Lead	70.4		0.102	2.06	5	05/05/2021 16:34	WG1664520
Selenium	0.608	J	0.185	2.58	5	05/05/2021 16:34	WG1664520
Silver	0.416	J	0.0891	0.515	5	05/05/2021 16:34	WG1664520

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		0.0387	0.0530	1	05/05/2021 22:51	WG1664671
Acrylonitrile	U		0.00383	0.0133	1	05/05/2021 22:51	WG1664671
Benzene	0.00124		0.000495	0.00106	1	05/05/2021 22:51	WG1664671
Bromobenzene	U		0.000954	0.0133	1	05/05/2021 22:51	WG1664671
Bromodichloromethane	U		0.000769	0.00265	1	05/05/2021 22:51	WG1664671
Bromoform	U		0.00124	0.0265	1	05/05/2021 22:51	WG1664671
Bromomethane	U		0.00209	0.0133	1	05/05/2021 22:51	WG1664671
n-Butylbenzene	U		0.00557	0.0133	1	05/05/2021 22:51	WG1664671
sec-Butylbenzene	U		0.00305	0.0133	1	05/05/2021 22:51	WG1664671
tert-Butylbenzene	U		0.00207	0.00530	1	05/05/2021 22:51	WG1664671
Carbon tetrachloride	U		0.000952	0.00530	1	05/05/2021 22:51	WG1664671
Chlorobenzene	U		0.000223	0.00265	1	05/05/2021 22:51	WG1664671
Chlorodibromomethane	U		0.000649	0.00265	1	05/05/2021 22:51	WG1664671
Chloroethane	U		0.00180	0.00530	1	05/05/2021 22:51	WG1664671
Chloroform	U		0.00109	0.00265	1	05/05/2021 22:51	WG1664671
Chloromethane	U		0.00461	0.0133	1	05/05/2021 22:51	WG1664671
2-Chlorotoluene	U		0.000917	0.00265	1	05/05/2021 22:51	WG1664671
4-Chlorotoluene	U		0.000477	0.00530	1	05/05/2021 22:51	WG1664671
1,2-Dibromo-3-Chloropropane	U		0.00414	0.0265	1	05/05/2021 22:51	WG1664671
1,2-Dibromoethane	U		0.000687	0.00265	1	05/05/2021 22:51	WG1664671
Dibromomethane	U		0.000795	0.00530	1	05/05/2021 22:51	WG1664671
1,2-Dichlorobenzene	U		0.000451	0.00530	1	05/05/2021 22:51	WG1664671
1,3-Dichlorobenzene	U		0.000636	0.00530	1	05/05/2021 22:51	WG1664671
1,4-Dichlorobenzene	U		0.000742	0.00530	1	05/05/2021 22:51	WG1664671
Dichlorodifluoromethane	U		0.00171	0.00265	1	05/05/2021 22:51	WG1664671
1,1-Dichloroethane	U		0.000521	0.00265	1	05/05/2021 22:51	WG1664671
1,2-Dichloroethane	0.000928	J	0.000688	0.00265	1	05/05/2021 22:51	WG1664671
1,1-Dichloroethene	U		0.000643	0.00265	1	05/05/2021 22:51	WG1664671
cis-1,2-Dichloroethene	U		0.000778	0.00265	1	05/05/2021 22:51	WG1664671
trans-1,2-Dichloroethene	U		0.00110	0.00530	1	05/05/2021 22:51	WG1664671
1,2-Dichloropropane	U		0.00151	0.00530	1	05/05/2021 22:51	WG1664671
1,1-Dichloropropene	U		0.000858	0.00265	1	05/05/2021 22:51	WG1664671
1,3-Dichloropropane	U		0.000531	0.00530	1	05/05/2021 22:51	WG1664671



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
cis-1,3-Dichloropropene	U		0.000803	0.00265	1	05/05/2021 22:51	WG1664671
trans-1,3-Dichloropropene	U		0.00121	0.00530	1	05/05/2021 22:51	WG1664671
2,2-Dichloropropane	U		0.00146	0.00265	1	05/05/2021 22:51	WG1664671
Di-isopropyl ether	U		0.000435	0.00106	1	05/05/2021 22:51	WG1664671
Ethylbenzene	0.00191	J	0.000781	0.00265	1	05/05/2021 22:51	WG1664671
Hexachloro-1,3-butadiene	U		0.00636	0.0265	1	05/05/2021 22:51	WG1664671
Isopropylbenzene	U		0.000451	0.00265	1	05/05/2021 22:51	WG1664671
p-Isopropyltoluene	0.00361	J	0.00270	0.00530	1	05/05/2021 22:51	WG1664671
2-Butanone (MEK)	U		0.0673	0.106	1	05/05/2021 22:51	WG1664671
Methylene Chloride	U		0.00704	0.0265	1	05/05/2021 22:51	WG1664671
4-Methyl-2-pentanone (MIBK)	U		0.00242	0.0265	1	05/05/2021 22:51	WG1664671
Methyl tert-butyl ether	U		0.000371	0.00106	1	05/05/2021 22:51	WG1664671
Naphthalene	U		0.00517	0.0133	1	05/05/2021 22:51	WG1664671
n-Propylbenzene	U		0.00101	0.00530	1	05/05/2021 22:51	WG1664671
Styrene	U		0.000243	0.0133	1	05/05/2021 22:51	WG1664671
1,1,1,2-Tetrachloroethane	U		0.00101	0.00265	1	05/05/2021 22:51	WG1664671
1,1,2,2-Tetrachloroethane	U		0.000737	0.00265	1	05/05/2021 22:51	WG1664671
1,1,2-Trichlorotrifluoroethane	U		0.000799	0.00265	1	05/05/2021 22:51	WG1664671
Tetrachloroethene	U		0.000950	0.00265	1	05/05/2021 22:51	WG1664671
Toluene	0.0545		0.00138	0.00530	1	05/05/2021 22:51	WG1664671
1,2,3-Trichlorobenzene	U		0.00777	0.0133	1	05/05/2021 22:51	WG1664671
1,2,4-Trichlorobenzene	U		0.00467	0.0133	1	05/05/2021 22:51	WG1664671
1,1,1-Trichloroethane	U		0.000979	0.00265	1	05/05/2021 22:51	WG1664671
1,1,2-Trichloroethane	U		0.000633	0.00265	1	05/05/2021 22:51	WG1664671
Trichloroethene	U		0.000619	0.00106	1	05/05/2021 22:51	WG1664671
Trichlorofluoromethane	U		0.000877	0.00265	1	05/05/2021 22:51	WG1664671
1,2,3-Trichloropropane	U		0.00172	0.0133	1	05/05/2021 22:51	WG1664671
1,2,4-Trimethylbenzene	0.00170	J	0.00168	0.00530	1	05/05/2021 22:51	WG1664671
1,2,3-Trimethylbenzene	U		0.00168	0.00530	1	05/05/2021 22:51	WG1664671
Vinyl chloride	U		0.00123	0.00265	1	05/05/2021 22:51	WG1664671
1,3,5-Trimethylbenzene	U		0.00212	0.00530	1	05/05/2021 22:51	WG1664671
Xylenes, Total	0.00739		0.000933	0.00689	1	05/05/2021 22:51	WG1664671
(S) Toluene-d8	101			75.0-131		05/05/2021 22:51	WG1664671
(S) 4-Bromofluorobenzene	103			67.0-138		05/05/2021 22:51	WG1664671
(S) 1,2-Dichloroethane-d4	99.2			70.0-130		05/05/2021 22:51	WG1664671

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	92.4		1	05/05/2021 09:58	WG1664620

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0411	J	0.0195	0.0433	1	05/05/2021 12:34	WG1664539

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	3.43		0.108	1.08	5	05/05/2021 16:37	WG1664520
Barium	243		0.165	2.71	5	05/05/2021 16:37	WG1664520
Cadmium	0.434	J	0.0925	1.08	5	05/05/2021 16:37	WG1664520
Chromium	92.2		0.320	5.41	5	05/05/2021 16:37	WG1664520
Lead	7.22		0.107	2.16	5	05/05/2021 16:37	WG1664520
Selenium	1.06	J	0.195	2.71	5	05/05/2021 16:37	WG1664520
Silver	0.138	J	0.0936	0.541	5	05/05/2021 16:37	WG1664520

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		0.0426	0.0583	1	05/05/2021 23:10	WG1664671
Acrylonitrile	U		0.00421	0.0146	1	05/05/2021 23:10	WG1664671
Benzene	U		0.000544	0.00117	1	05/05/2021 23:10	WG1664671
Bromobenzene	U		0.00105	0.0146	1	05/05/2021 23:10	WG1664671
Bromodichloromethane	U		0.000845	0.00291	1	05/05/2021 23:10	WG1664671
Bromoform	U		0.00136	0.0291	1	05/05/2021 23:10	WG1664671
Bromomethane	U		0.00230	0.0146	1	05/05/2021 23:10	WG1664671
n-Butylbenzene	U		0.00612	0.0146	1	05/05/2021 23:10	WG1664671
sec-Butylbenzene	U		0.00336	0.0146	1	05/05/2021 23:10	WG1664671
tert-Butylbenzene	U		0.00227	0.00583	1	05/05/2021 23:10	WG1664671
Carbon tetrachloride	U		0.00105	0.00583	1	05/05/2021 23:10	WG1664671
Chlorobenzene	U		0.000245	0.00291	1	05/05/2021 23:10	WG1664671
Chlorodibromomethane	U		0.000714	0.00291	1	05/05/2021 23:10	WG1664671
Chloroethane	U		0.00198	0.00583	1	05/05/2021 23:10	WG1664671
Chloroform	U		0.00120	0.00291	1	05/05/2021 23:10	WG1664671
Chloromethane	U		0.00507	0.0146	1	05/05/2021 23:10	WG1664671
2-Chlorotoluene	U		0.00101	0.00291	1	05/05/2021 23:10	WG1664671
4-Chlorotoluene	U		0.000525	0.00583	1	05/05/2021 23:10	WG1664671
1,2-Dibromo-3-Chloropropane	U		0.00455	0.0291	1	05/05/2021 23:10	WG1664671
1,2-Dibromoethane	U		0.000755	0.00291	1	05/05/2021 23:10	WG1664671
Dibromomethane	U		0.000874	0.00583	1	05/05/2021 23:10	WG1664671
1,2-Dichlorobenzene	U		0.000495	0.00583	1	05/05/2021 23:10	WG1664671
1,3-Dichlorobenzene	U		0.000700	0.00583	1	05/05/2021 23:10	WG1664671
1,4-Dichlorobenzene	U		0.000816	0.00583	1	05/05/2021 23:10	WG1664671
Dichlorodifluoromethane	U		0.00188	0.00291	1	05/05/2021 23:10	WG1664671
1,1-Dichloroethane	U		0.000572	0.00291	1	05/05/2021 23:10	WG1664671
1,2-Dichloroethane	U		0.000757	0.00291	1	05/05/2021 23:10	WG1664671
1,1-Dichloroethene	U		0.000707	0.00291	1	05/05/2021 23:10	WG1664671
cis-1,2-Dichloroethene	U		0.000856	0.00291	1	05/05/2021 23:10	WG1664671
trans-1,2-Dichloroethene	U		0.00121	0.00583	1	05/05/2021 23:10	WG1664671
1,2-Dichloropropane	U		0.00166	0.00583	1	05/05/2021 23:10	WG1664671
1,1-Dichloropropene	U		0.000943	0.00291	1	05/05/2021 23:10	WG1664671
1,3-Dichloropropane	U		0.000584	0.00583	1	05/05/2021 23:10	WG1664671



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
cis-1,3-Dichloropropene	U		0.000883	0.00291	1	05/05/2021 23:10	WG1664671
trans-1,3-Dichloropropene	U		0.00133	0.00583	1	05/05/2021 23:10	WG1664671
2,2-Dichloropropane	U		0.00161	0.00291	1	05/05/2021 23:10	WG1664671
Di-isopropyl ether	U		0.000478	0.00117	1	05/05/2021 23:10	WG1664671
Ethylbenzene	U		0.000859	0.00291	1	05/05/2021 23:10	WG1664671
Hexachloro-1,3-butadiene	U		0.00700	0.0291	1	05/05/2021 23:10	WG1664671
Isopropylbenzene	U		0.000495	0.00291	1	05/05/2021 23:10	WG1664671
p-Isopropyltoluene	0.00329	J	0.00297	0.00583	1	05/05/2021 23:10	WG1664671
2-Butanone (MEK)	U		0.0740	0.117	1	05/05/2021 23:10	WG1664671
Methylene Chloride	U		0.00774	0.0291	1	05/05/2021 23:10	WG1664671
4-Methyl-2-pentanone (MIBK)	U		0.00266	0.0291	1	05/05/2021 23:10	WG1664671
Methyl tert-butyl ether	U		0.000408	0.00117	1	05/05/2021 23:10	WG1664671
Naphthalene	U		0.00569	0.0146	1	05/05/2021 23:10	WG1664671
n-Propylbenzene	U		0.00111	0.00583	1	05/05/2021 23:10	WG1664671
Styrene	U		0.000267	0.0146	1	05/05/2021 23:10	WG1664671
1,1,1,2-Tetrachloroethane	U		0.00111	0.00291	1	05/05/2021 23:10	WG1664671
1,1,2,2-Tetrachloroethane	U		0.000810	0.00291	1	05/05/2021 23:10	WG1664671
1,1,2-Trichlorotrifluoroethane	U		0.000879	0.00291	1	05/05/2021 23:10	WG1664671
Tetrachloroethene	U		0.00104	0.00291	1	05/05/2021 23:10	WG1664671
Toluene	0.0162		0.00152	0.00583	1	05/05/2021 23:10	WG1664671
1,2,3-Trichlorobenzene	U		0.00855	0.0146	1	05/05/2021 23:10	WG1664671
1,2,4-Trichlorobenzene	U		0.00513	0.0146	1	05/05/2021 23:10	WG1664671
1,1,1-Trichloroethane	U		0.00108	0.00291	1	05/05/2021 23:10	WG1664671
1,1,2-Trichloroethane	U		0.000696	0.00291	1	05/05/2021 23:10	WG1664671
Trichloroethene	U		0.000681	0.00117	1	05/05/2021 23:10	WG1664671
Trichlorofluoromethane	U		0.000964	0.00291	1	05/05/2021 23:10	WG1664671
1,2,3-Trichloropropane	U		0.00189	0.0146	1	05/05/2021 23:10	WG1664671
1,2,4-Trimethylbenzene	U		0.00184	0.00583	1	05/05/2021 23:10	WG1664671
1,2,3-Trimethylbenzene	U		0.00184	0.00583	1	05/05/2021 23:10	WG1664671
Vinyl chloride	U		0.00135	0.00291	1	05/05/2021 23:10	WG1664671
1,3,5-Trimethylbenzene	U		0.00233	0.00583	1	05/05/2021 23:10	WG1664671
Xylenes, Total	0.00124	J	0.00103	0.00758	1	05/05/2021 23:10	WG1664671
(S) Toluene-d8	100			75.0-131		05/05/2021 23:10	WG1664671
(S) 4-Bromofluorobenzene	100			67.0-138		05/05/2021 23:10	WG1664671
(S) 1,2-Dichloroethane-d4	98.1			70.0-130		05/05/2021 23:10	WG1664671

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	93.8		1	05/05/2021 09:58	WG1664620

Mercury by Method 7471B

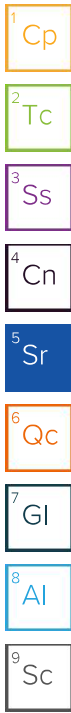
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0901		0.0192	0.0426	1	05/05/2021 12:41	WG1664539

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	4.28		0.107	1.07	5	05/05/2021 16:40	WG1664520
Barium	165		0.162	2.66	5	05/05/2021 16:40	WG1664520
Cadmium	0.642	J	0.0911	1.07	5	05/05/2021 16:40	WG1664520
Chromium	116		0.315	5.33	5	05/05/2021 16:40	WG1664520
Lead	37.4		0.106	2.13	5	05/05/2021 16:40	WG1664520
Selenium	0.529	J	0.192	2.66	5	05/05/2021 16:40	WG1664520
Silver	0.0980	J	0.0922	0.533	5	05/05/2021 16:40	WG1664520

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		0.0415	0.0568	1	05/05/2021 23:29	WG1664671
Acrylonitrile	U		0.00410	0.0142	1	05/05/2021 23:29	WG1664671
Benzene	U		0.000531	0.00114	1	05/05/2021 23:29	WG1664671
Bromobenzene	U		0.00102	0.0142	1	05/05/2021 23:29	WG1664671
Bromodichloromethane	U		0.000824	0.00284	1	05/05/2021 23:29	WG1664671
Bromoform	U		0.00133	0.0284	1	05/05/2021 23:29	WG1664671
Bromomethane	U		0.00224	0.0142	1	05/05/2021 23:29	WG1664671
n-Butylbenzene	U		0.00597	0.0142	1	05/05/2021 23:29	WG1664671
sec-Butylbenzene	U		0.00327	0.0142	1	05/05/2021 23:29	WG1664671
tert-Butylbenzene	U		0.00222	0.00568	1	05/05/2021 23:29	WG1664671
Carbon tetrachloride	U		0.00102	0.00568	1	05/05/2021 23:29	WG1664671
Chlorobenzene	U		0.000239	0.00284	1	05/05/2021 23:29	WG1664671
Chlorodibromomethane	U		0.000695	0.00284	1	05/05/2021 23:29	WG1664671
Chloroethane	U		0.00193	0.00568	1	05/05/2021 23:29	WG1664671
Chloroform	U		0.00117	0.00284	1	05/05/2021 23:29	WG1664671
Chloromethane	U		0.00494	0.0142	1	05/05/2021 23:29	WG1664671
2-Chlorotoluene	U		0.000983	0.00284	1	05/05/2021 23:29	WG1664671
4-Chlorotoluene	U		0.000511	0.00568	1	05/05/2021 23:29	WG1664671
1,2-Dibromo-3-Chloropropane	U		0.00443	0.0284	1	05/05/2021 23:29	WG1664671
1,2-Dibromoethane	U		0.000736	0.00284	1	05/05/2021 23:29	WG1664671
Dibromomethane	U		0.000852	0.00568	1	05/05/2021 23:29	WG1664671
1,2-Dichlorobenzene	U		0.000483	0.00568	1	05/05/2021 23:29	WG1664671
1,3-Dichlorobenzene	U		0.000682	0.00568	1	05/05/2021 23:29	WG1664671
1,4-Dichlorobenzene	U		0.000795	0.00568	1	05/05/2021 23:29	WG1664671
Dichlorodifluoromethane	U		0.00183	0.00284	1	05/05/2021 23:29	WG1664671
1,1-Dichloroethane	U		0.000558	0.00284	1	05/05/2021 23:29	WG1664671
1,2-Dichloroethane	U		0.000737	0.00284	1	05/05/2021 23:29	WG1664671
1,1-Dichloroethene	U		0.000689	0.00284	1	05/05/2021 23:29	WG1664671
cis-1,2-Dichloroethene	U		0.000834	0.00284	1	05/05/2021 23:29	WG1664671
trans-1,2-Dichloroethene	U		0.00118	0.00568	1	05/05/2021 23:29	WG1664671
1,2-Dichloropropane	U		0.00161	0.00568	1	05/05/2021 23:29	WG1664671
1,1-Dichloropropene	U		0.000919	0.00284	1	05/05/2021 23:29	WG1664671
1,3-Dichloropropane	U		0.000569	0.00568	1	05/05/2021 23:29	WG1664671



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
cis-1,3-Dichloropropene	U		0.000860	0.00284	1	05/05/2021 23:29	WG1664671
trans-1,3-Dichloropropene	U		0.00130	0.00568	1	05/05/2021 23:29	WG1664671
2,2-Dichloropropane	U		0.00157	0.00284	1	05/05/2021 23:29	WG1664671
Di-isopropyl ether	U		0.000466	0.00114	1	05/05/2021 23:29	WG1664671
Ethylbenzene	U		0.000837	0.00284	1	05/05/2021 23:29	WG1664671
Hexachloro-1,3-butadiene	U		0.00682	0.0284	1	05/05/2021 23:29	WG1664671
Isopropylbenzene	U		0.000483	0.00284	1	05/05/2021 23:29	WG1664671
p-Isopropyltoluene	U		0.00290	0.00568	1	05/05/2021 23:29	WG1664671
2-Butanone (MEK)	U		0.0722	0.114	1	05/05/2021 23:29	WG1664671
Methylene Chloride	U		0.00754	0.0284	1	05/05/2021 23:29	WG1664671
4-Methyl-2-pentanone (MIBK)	U		0.00259	0.0284	1	05/05/2021 23:29	WG1664671
Methyl tert-butyl ether	U		0.000398	0.00114	1	05/05/2021 23:29	WG1664671
Naphthalene	U		0.00555	0.0142	1	05/05/2021 23:29	WG1664671
n-Propylbenzene	U		0.00108	0.00568	1	05/05/2021 23:29	WG1664671
Styrene	U		0.000260	0.0142	1	05/05/2021 23:29	WG1664671
1,1,1,2-Tetrachloroethane	U		0.00108	0.00284	1	05/05/2021 23:29	WG1664671
1,1,2,2-Tetrachloroethane	U		0.000790	0.00284	1	05/05/2021 23:29	WG1664671
1,1,2-Trichlorotrifluoroethane	U		0.000857	0.00284	1	05/05/2021 23:29	WG1664671
Tetrachloroethene	U		0.00102	0.00284	1	05/05/2021 23:29	WG1664671
Toluene	0.0161		0.00148	0.00568	1	05/05/2021 23:29	WG1664671
1,2,3-Trichlorobenzene	U		0.00833	0.0142	1	05/05/2021 23:29	WG1664671
1,2,4-Trichlorobenzene	U		0.00500	0.0142	1	05/05/2021 23:29	WG1664671
1,1,1-Trichloroethane	U		0.00105	0.00284	1	05/05/2021 23:29	WG1664671
1,1,2-Trichloroethane	U		0.000678	0.00284	1	05/05/2021 23:29	WG1664671
Trichloroethene	U		0.000664	0.00114	1	05/05/2021 23:29	WG1664671
Trichlorofluoromethane	U		0.000940	0.00284	1	05/05/2021 23:29	WG1664671
1,2,3-Trichloropropane	U		0.00184	0.0142	1	05/05/2021 23:29	WG1664671
1,2,4-Trimethylbenzene	U		0.00180	0.00568	1	05/05/2021 23:29	WG1664671
1,2,3-Trimethylbenzene	U		0.00180	0.00568	1	05/05/2021 23:29	WG1664671
Vinyl chloride	U		0.00132	0.00284	1	05/05/2021 23:29	WG1664671
1,3,5-Trimethylbenzene	U		0.00227	0.00568	1	05/05/2021 23:29	WG1664671
Xylenes, Total	0.00222	J	0.00100	0.00739	1	05/05/2021 23:29	WG1664671
(S) Toluene-d8	101			75.0-131		05/05/2021 23:29	WG1664671
(S) 4-Bromofluorobenzene	101			67.0-138		05/05/2021 23:29	WG1664671
(S) 1,2-Dichloroethane-d4	102			70.0-130		05/05/2021 23:29	WG1664671

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	
Acetone	U		11.3	50.0	1	05/05/2021 12:58	WG1664828
Acrolein	U		2.54	50.0	1	05/05/2021 12:58	WG1664828
Acrylonitrile	U		0.671	10.0	1	05/05/2021 12:58	WG1664828
Benzene	U		0.0941	1.00	1	05/05/2021 12:58	WG1664828
Bromobenzene	U		0.118	1.00	1	05/05/2021 12:58	WG1664828
Bromodichloromethane	U		0.136	1.00	1	05/05/2021 12:58	WG1664828
Bromoform	U		0.129	1.00	1	05/05/2021 12:58	WG1664828
Bromomethane	U		0.605	5.00	1	05/05/2021 12:58	WG1664828
n-Butylbenzene	U		0.157	1.00	1	05/05/2021 12:58	WG1664828
sec-Butylbenzene	U		0.125	1.00	1	05/05/2021 12:58	WG1664828
tert-Butylbenzene	U		0.127	1.00	1	05/05/2021 12:58	WG1664828
Carbon disulfide	U		0.0962	1.00	1	05/05/2021 12:58	WG1664828
Carbon tetrachloride	U		0.128	1.00	1	05/05/2021 12:58	WG1664828
Chlorobenzene	U		0.116	1.00	1	05/05/2021 12:58	WG1664828
Chlorodibromomethane	U		0.140	1.00	1	05/05/2021 12:58	WG1664828
Chloroethane	U	J3	0.192	5.00	1	05/05/2021 12:58	WG1664828
Chloroform	U		0.111	5.00	1	05/05/2021 12:58	WG1664828
Chloromethane	U		0.960	2.50	1	05/05/2021 12:58	WG1664828
2-Chlorotoluene	U		0.106	1.00	1	05/05/2021 12:58	WG1664828
4-Chlorotoluene	U		0.114	1.00	1	05/05/2021 12:58	WG1664828
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	05/05/2021 12:58	WG1664828
1,2-Dibromoethane	U		0.126	1.00	1	05/05/2021 12:58	WG1664828
Dibromomethane	U		0.122	1.00	1	05/05/2021 12:58	WG1664828
1,2-Dichlorobenzene	U		0.107	1.00	1	05/05/2021 12:58	WG1664828
1,3-Dichlorobenzene	U		0.110	1.00	1	05/05/2021 12:58	WG1664828
1,4-Dichlorobenzene	U		0.120	1.00	1	05/05/2021 12:58	WG1664828
Dichlorodifluoromethane	U		0.374	5.00	1	05/05/2021 12:58	WG1664828
1,1-Dichloroethane	U		0.100	1.00	1	05/05/2021 12:58	WG1664828
1,2-Dichloroethane	U		0.0819	1.00	1	05/05/2021 12:58	WG1664828
1,1-Dichloroethene	U		0.188	1.00	1	05/05/2021 12:58	WG1664828
cis-1,2-Dichloroethene	U		0.126	1.00	1	05/05/2021 12:58	WG1664828
trans-1,2-Dichloroethene	U		0.149	1.00	1	05/05/2021 12:58	WG1664828
1,2-Dichloropropane	U		0.149	1.00	1	05/05/2021 12:58	WG1664828
1,1-Dichloropropene	U		0.142	1.00	1	05/05/2021 12:58	WG1664828
1,3-Dichloropropane	U		0.110	1.00	1	05/05/2021 12:58	WG1664828
cis-1,3-Dichloropropene	U		0.111	1.00	1	05/05/2021 12:58	WG1664828
trans-1,3-Dichloropropene	U		0.118	1.00	1	05/05/2021 12:58	WG1664828
2,2-Dichloropropane	U		0.161	1.00	1	05/05/2021 12:58	WG1664828
Di-isopropyl ether	U		0.105	1.00	1	05/05/2021 12:58	WG1664828
Ethylbenzene	U		0.137	1.00	1	05/05/2021 12:58	WG1664828
Hexachloro-1,3-butadiene	U	J3	0.337	1.00	1	05/05/2021 12:58	WG1664828
Isopropylbenzene	U		0.105	1.00	1	05/05/2021 12:58	WG1664828
p-Isopropyltoluene	U		0.120	1.00	1	05/05/2021 12:58	WG1664828
2-Butanone (MEK)	U		1.19	10.0	1	05/05/2021 12:58	WG1664828
Methylene Chloride	U		0.430	5.00	1	05/05/2021 12:58	WG1664828
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	05/05/2021 12:58	WG1664828
Methyl tert-butyl ether	U		0.101	1.00	1	05/05/2021 12:58	WG1664828
Naphthalene	U		1.00	5.00	1	05/05/2021 12:58	WG1664828
n-Propylbenzene	U		0.0993	1.00	1	05/05/2021 12:58	WG1664828
Styrene	U		0.118	1.00	1	05/05/2021 12:58	WG1664828
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	05/05/2021 12:58	WG1664828
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	05/05/2021 12:58	WG1664828
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	05/05/2021 12:58	WG1664828
Tetrachloroethene	U	J3	0.300	1.00	1	05/05/2021 12:58	WG1664828
Toluene	U		0.278	1.00	1	05/05/2021 12:58	WG1664828
1,2,3-Trichlorobenzene	U		0.230	1.00	1	05/05/2021 12:58	WG1664828

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 ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.481	1.00	1	05/05/2021 12:58	WG1664828
1,1,1-Trichloroethane	U		0.149	1.00	1	05/05/2021 12:58	WG1664828
1,1,2-Trichloroethane	U		0.158	1.00	1	05/05/2021 12:58	WG1664828
Trichloroethene	U		0.190	1.00	1	05/05/2021 12:58	WG1664828
Trichlorofluoromethane	U		0.160	5.00	1	05/05/2021 12:58	WG1664828
1,2,3-Trichloropropane	U		0.237	2.50	1	05/05/2021 12:58	WG1664828
1,2,4-Trimethylbenzene	U		0.322	1.00	1	05/05/2021 12:58	WG1664828
1,2,3-Trimethylbenzene	U		0.104	1.00	1	05/05/2021 12:58	WG1664828
1,3,5-Trimethylbenzene	U		0.104	1.00	1	05/05/2021 12:58	WG1664828
Vinyl chloride	U		0.234	1.00	1	05/05/2021 12:58	WG1664828
Xylenes, Total	U		0.174	3.00	1	05/05/2021 12:58	WG1664828
(S) Toluene-d8	97.0			80.0-120		05/05/2021 12:58	WG1664828
(S) 4-Bromofluorobenzene	91.9			77.0-126		05/05/2021 12:58	WG1664828
(S) 1,2-Dichloroethane-d4	101			70.0-130		05/05/2021 12:58	WG1664828

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

WG1664620

Total Solids by Method 2540 G-2011

QUALITY CONTROL SUMMARY

[L1347464-01.02.03](#)

Method Blank (MB)

(MB) R3650940-1 05/05/21 09:58

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.000			

L1347459-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1347459-04 05/05/21 09:58 • (DUP) R3650940-3 05/05/21 09:58

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Total Solids	92.6	91.3	1	1.50		10

Laboratory Control Sample (LCS)

(LCS) R3650940-2 05/05/21 09:58

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Total Solids	50.0	50.0	100	85.0-115	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

Method Blank (MB)

(MB) R3650635-1 05/05/21 11:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U	0.0180	0.0400	

Laboratory Control Sample (LCS)

(LCS) R3650635-2 05/05/21 11:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.502	100	80.0-120	

L1345116-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1345116-01 05/05/21 11:43 • (MS) R3650635-3 05/05/21 11:45 • (MSD) R3650635-4 05/05/21 11:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	U	0.654	0.459	131	91.8	1	75.0-125	J5	J3	35.0	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

WG1664520

Metals (ICPMS) by Method 6020B

QUALITY CONTROL SUMMARY

[L1347464-01.02.03](#)

Method Blank (MB)

(MB) R3650818-1 05/05/21 15:00

Analyte	MB Result mg/kg	<u>MB Qualifier</u>	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Lead	0.231	<u>J</u>	0.0990	2.00
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500

Laboratory Control Sample (LCS)

(LCS) R3650818-2 05/05/21 15:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Arsenic	100	95.2	95.2	80.0-120	
Barium	100	95.8	95.8	80.0-120	
Cadmium	100	101	101	80.0-120	
Chromium	100	97.5	97.5	80.0-120	
Lead	100	101	101	80.0-120	
Selenium	100	99.5	99.5	80.0-120	
Silver	20.0	20.1	101	80.0-120	

L1347459-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1347459-01 05/05/21 15:06 • (MS) R3650818-5 05/05/21 15:16 • (MSD) R3650818-6 05/05/21 15:19

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MSD Rec. %	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits %
Arsenic	105	12.0	113	107	96.2	90.2	5	75.0-125			5.75	20
Barium	105	68.3	178	168	104	94.9	5	75.0-125			5.50	20
Cadmium	105	1.42	112	105	105	98.4	5	75.0-125			6.48	20
Chromium	105	298	379	270	77.2	0.000	5	75.0-125		<u>J3 J6</u>	33.5	20
Lead	105	40.5	159	149	113	103	5	75.0-125			6.87	20
Selenium	105	0.436	111	103	105	97.5	5	75.0-125			7.28	20
Silver	21.1	U	22.1	20.7	105	98.3	5	75.0-125			6.63	20

WG1664671

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

QUALITY CONTROL SUMMARY

[L1347464-01.02.03](#)

Method Blank (MB)

(MB) R3650868-3 05/05/21 13:34

Analyte	MB Result mg/kg	<u>MB Qualifier</u>	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	0.00250
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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

WG1664671

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

QUALITY CONTROL SUMMARY

[L1347464-01.02.03](#)

Method Blank (MB)

(MB) R3650868-3 05/05/21 13:34

Analyte	MB Result mg/kg	<u>MB Qualifier</u>	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	0.0948	↓	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
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
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
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-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	99.6			75.0-131
(S) 4-Bromofluorobenzene	101			67.0-138
(S) 1,2-Dichloroethane-d4	101			70.0-130

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

(LCS) R3650868-1 05/05/21 12:18 • (LCSD) R3650868-2 05/05/21 12:37

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 %
Acetone	0.625	0.649	0.664	104	106	10.0-160		2.28	2.28	31
Acrylonitrile	0.625	0.645	0.649	103	104	45.0-153		0.618	0.618	22
Benzene	0.125	0.133	0.133	106	106	70.0-123		0.000	0.000	20
Bromobenzene	0.125	0.127	0.131	102	105	73.0-121		3.10	3.10	20
Bromodichloromethane	0.125	0.122	0.123	97.6	98.4	73.0-121		0.816	0.816	20

WG1664671

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

QUALITY CONTROL SUMMARY

[L1347464-01.02.03](#)

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

(LCS) R3650868-1 05/05/21 12:18 • (LCSD) R3650868-2 05/05/21 12:37

Analyte	Spike Amount mg/kg	LCS Result		LCSD Result		LCS Rec.		LCSD Rec.		Rec. Limits %	LCS Qualifier		LCSD Qualifier		RPD Limits	
		mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%		%	%	%	%		
Bromoform	0.125	0.131	0.136	0.136	105	109	64.0-132	3.75	20							
Bromomethane	0.125	0.138	0.137	0.137	110	110	56.0-147	0.727	20							
n-Butylbenzene	0.125	0.126	0.125	0.125	101	100	68.0-135	0.797	20							
sec-Butylbenzene	0.125	0.129	0.127	0.127	103	102	74.0-130	1.56	20							
tert-Butylbenzene	0.125	0.128	0.125	0.125	102	100	75.0-127	2.37	20							
Carbon tetrachloride	0.125	0.134	0.136	0.136	107	109	66.0-128	1.48	20							
Chlorobenzene	0.125	0.121	0.124	0.124	96.8	99.2	76.0-128	2.45	20							
Chlorodibromomethane	0.125	0.131	0.134	0.134	105	107	74.0-127	2.26	20							
Chloroethane	0.125	0.123	0.121	0.121	98.4	96.8	61.0-134	1.64	20							
Chloroform	0.125	0.124	0.126	0.126	99.2	101	72.0-123	1.60	20							
Chloromethane	0.125	0.121	0.129	0.129	96.8	103	51.0-138	6.40	20							
2-Chlorotoluene	0.125	0.128	0.132	0.132	102	106	75.0-124	3.08	20							
4-Chlorotoluene	0.125	0.116	0.122	0.122	92.8	97.6	75.0-124	5.04	20							
1,2-Dibromo-3-Chloropropane	0.125	0.128	0.132	0.132	102	106	59.0-130	3.08	20							
1,2-Dibromoethane	0.125	0.129	0.134	0.134	103	107	74.0-128	3.80	20							
Dibromomethane	0.125	0.138	0.136	0.136	110	109	75.0-122	1.46	20							
1,2-Dichlorobenzene	0.125	0.125	0.134	0.134	100	107	76.0-124	6.95	20							
1,3-Dichlorobenzene	0.125	0.125	0.127	0.127	100	102	76.0-125	1.59	20							
1,4-Dichlorobenzene	0.125	0.121	0.123	0.123	96.8	98.4	77.0-121	1.64	20							
Dichlorodifluoromethane	0.125	0.137	0.143	0.143	110	114	43.0-156	4.29	20							
1,1-Dichloroethane	0.125	0.131	0.130	0.130	105	104	70.0-127	0.766	20							
1,2-Dichloroethane	0.125	0.122	0.126	0.126	97.6	101	65.0-131	3.23	20							
1,1-Dichloroethene	0.125	0.131	0.128	0.128	105	102	65.0-131	2.32	20							
cis-1,2-Dichloroethene	0.125	0.131	0.133	0.133	105	106	73.0-125	1.52	20							
trans-1,2-Dichloroethene	0.125	0.132	0.127	0.127	106	102	71.0-125	3.86	20							
1,2-Dichloropropane	0.125	0.130	0.129	0.129	104	103	74.0-125	0.772	20							
1,1-Dichloropropene	0.125	0.126	0.123	0.123	101	98.4	73.0-125	2.41	20							
1,3-Dichloropropane	0.125	0.131	0.133	0.133	105	106	80.0-125	1.52	20							
cis-1,3-Dichloropropene	0.125	0.129	0.131	0.131	103	105	76.0-127	1.54	20							
trans-1,3-Dichloropropene	0.125	0.130	0.133	0.133	104	106	73.0-127	2.28	20							
2,2-Dichloropropane	0.125	0.152	0.152	0.152	122	122	59.0-135	0.000	20							
Di-isopropyl ether	0.125	0.129	0.134	0.134	103	107	60.0-136	3.80	20							
Ethylbenzene	0.125	0.123	0.128	0.128	98.4	102	74.0-126	3.98	20							
Hexachloro-1,3-butadiene	0.125	0.140	0.145	0.145	112	116	57.0-150	3.51	20							
Isopropylbenzene	0.125	0.123	0.127	0.127	98.4	102	72.0-127	3.20	20							
p-Isopropyltoluene	0.125	0.126	0.128	0.128	101	102	72.0-133	1.57	20							
2-Butanone (MEK)	0.625	0.721	0.728	0.728	115	116	30.0-160	0.966	24							
Methylene Chloride	0.125	0.123	0.121	0.121	98.4	96.8	68.0-123	1.64	20							
4-Methyl-2-pentanone (MIBK)	0.625	0.658	0.685	0.685	105	110	56.0-143	4.02	20							
Methyl tert-butyl ether	0.125	0.130	0.149	0.149	104	119	66.0-132	13.6	20							

WG1664671

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

QUALITY CONTROL SUMMARY

[L1347464-01.02.03](#)

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

(LCS) R3650868-1 05/05/21 12:18 • (LCSD) R3650868-2 05/05/21 12:37

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 %	Control Chart	
											1 Cp	2 Tc
Naphthalene	0.125	0.126	0.133	101	106	59.0-130		5.41	5.41	20		
n-Propylbenzene	0.125	0.119	0.123	95.2	98.4	74.0-126		3.31	3.31	20		
Styrene	0.125	0.123	0.127	98.4	102	72.0-127		3.20	3.20	20		
1,1,1,2-Tetrachloroethane	0.125	0.130	0.136	104	109	74.0-129		4.51	4.51	20		
1,1,2,2-Tetrachloroethane	0.125	0.126	0.130	101	104	68.0-128		3.12	3.12	20		
Tetrachloroethane	0.125	0.126	0.129	101	103	70.0-136		2.35	2.35	20		
Toluene	0.125	0.126	0.129	101	103	75.0-121		2.35	2.35	20		
1,1,2-Trichlorotrifluoroethane	0.125	0.144	0.143	115	114	61.0-139		0.697	0.697	20		
1,2,3-Trichlorobenzene	0.125	0.123	0.128	98.4	102	59.0-139		3.98	3.98	20		
1,2,4-Trichlorobenzene	0.125	0.132	0.132	106	106	62.0-137		0.000	0.000	20		
1,1,1-Trichloroethane	0.125	0.125	0.129	100	103	69.0-126		3.15	3.15	20		
1,1,2-Trichloroethane	0.125	0.122	0.127	97.6	102	78.0-123		4.02	4.02	20		
Trichloroethene	0.125	0.124	0.124	99.2	99.2	76.0-126		0.000	0.000	20		
Trichlorofluoromethane	0.125	0.136	0.137	109	110	61.0-142		0.733	0.733	20		
1,2,3-Trichloropropane	0.125	0.129	0.130	103	104	67.0-129		0.772	0.772	20		
1,2,3-Trimethylbenzene	0.125	0.121	0.127	96.8	102	74.0-124		4.84	4.84	20		
1,2,4-Trimethylbenzene	0.125	0.123	0.126	98.4	101	70.0-126		2.41	2.41	20		
1,3,5-Trimethylbenzene	0.125	0.125	0.129	100	103	73.0-127		3.15	3.15	20		
Vinyl chloride	0.125	0.131	0.127	105	102	63.0-134		3.10	3.10	20		
Xylenes, Total	0.375	0.368	0.385	98.1	103	72.0-127		4.52	4.52	20		
(S) Toluene-d8				99.7	101	75.0-131						
(S) 4-Bromofluorobenzene				99.4	101	67.0-138						
(S) 1,2-Dichloroethane-d4				106	105	70.0-130						

WG1664828

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

QUALITY CONTROL SUMMARY

[L1347464-04](#)

Method Blank (MB)

(MB) R3650680-3 05/05/21 11:31

Analyte	MB Result ug/l	<u>MB Qualifier</u> ug/l	MB MDL ug/l	MB RDL ug/l
Acetone	U	11.3	50.0	50.0
Acrolein	U	2.54	50.0	50.0
Acrylonitrile	U	0.671	10.0	10.0
Benzene	U	0.0941	1.00	1.00
Bromobenzene	U	0.118	1.00	1.00
Bromodichloromethane	U	0.136	1.00	1.00
Bromoform	U	0.129	1.00	1.00
Bromomethane	U	0.605	5.00	5.00
n-Butylbenzene	U	0.157	1.00	1.00
sec-Butylbenzene	U	0.125	1.00	1.00
tert-Butylbenzene	U	0.127	1.00	1.00
Carbon disulfide	U	0.0962	1.00	1.00
Carbon tetrachloride	U	0.128	1.00	1.00
Chlorobenzene	U	0.116	1.00	1.00
Chlorodibromomethane	U	0.140	1.00	1.00
Chloroethane	U	0.192	5.00	5.00
Chloroform	U	0.111	5.00	5.00
Chloromethane	U	0.960	2.50	2.50
2-Chlorotoluene	U	0.106	1.00	1.00
4-Chlorotoluene	U	0.114	1.00	1.00
1,2-Dibromo-3-Chloropropane	U	0.276	5.00	5.00
1,2-Dibromoethane	U	0.126	1.00	1.00
Dibromomethane	U	0.122	1.00	1.00
1,2-Dichlorobenzene	U	0.107	1.00	1.00
1,3-Dichlorobenzene	U	0.110	1.00	1.00
1,4-Dichlorobenzene	U	0.120	1.00	1.00
Dichlorodifluoromethane	U	0.374	5.00	5.00
1,1-Dichloroethane	U	0.100	1.00	1.00
1,2-Dichloroethane	U	0.0819	1.00	1.00
1,1-Dichloroethene	U	0.188	1.00	1.00
cis-1,2-Dichloroethene	U	0.126	1.00	1.00
trans-1,2-Dichloroethene	U	0.149	1.00	1.00
1,2-Dichloropropane	U	0.149	1.00	1.00
1,1-Dichloropropene	U	0.142	1.00	1.00
1,3-Dichloropropane	U	0.110	1.00	1.00
cis-1,3-Dichloropropene	U	0.111	1.00	1.00
trans-1,3-Dichloropropene	U	0.118	1.00	1.00
2,2-Dichloropropane	U	0.161	1.00	1.00
Di-isopropyl ether	U	0.105	1.00	1.00
Ethylbenzene	U	0.137	1.00	1.00

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG1664828

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

QUALITY CONTROL SUMMARY

L1347464-04

Method Blank (MB)

(MB) R3650680-3 05/05/21 11:31

Analyte	MB Result ug/l	<u>MB Qualifier</u> ug/l	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U	0.337	1.00	1.00
Isopropylbenzene	U	0.105	1.00	1.00
p-Isopropyltoluene	U	0.120	1.00	1.00
2-Butanone (MEK)	U	1.19	10.0	10.0
Methylene Chloride	U	0.430	5.00	5.00
4-Methyl-2-pentanone (MIBK)	U	0.478	10.0	10.0
Methyl tert-butyl ether	U	0.101	1.00	1.00
Naphthalene	U	1.00	5.00	5.00
n-Propylbenzene	U	0.0993	1.00	1.00
Styrene	U	0.118	1.00	1.00
1,1,1,2-Tetrachloroethane	U	0.147	1.00	1.00
1,1,2,2-Tetrachloroethane	U	0.133	1.00	1.00
Tetrachloroethene	U	0.300	1.00	1.00
Toluene	U	0.278	1.00	1.00
1,1,2-Trichlorotrifluoroethane	U	0.180	1.00	1.00
1,2,3-Trichlorobenzene	U	0.230	1.00	1.00
1,2,4-Trichlorobenzene	U	0.481	1.00	1.00
1,1,1-Trichloroethane	U	0.149	1.00	1.00
1,1,2-Trichloroethane	U	0.158	1.00	1.00
Trichloroethene	U	0.190	1.00	1.00
Trichlorofluoromethane	U	0.160	5.00	5.00
1,2,3-Trichloropropane	U	0.237	2.50	2.50
1,2,3-Trimethylbenzene	U	0.104	1.00	1.00
1,2,4-Trimethylbenzene	U	0.322	1.00	1.00
1,3,5-Trimethylbenzene	U	0.104	1.00	1.00
Vinyl chloride	U	0.234	1.00	1.00
Xylenes, Total	U	0.174	3.00	3.00
(S) Toluene-d8	96.7		80.0-120	
(S) 4-Bromofluorobenzene	92.5		77.0-126	
(S) 1,2-Dichloroethane-d4	101		70.0-130	

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

(LCS) R3650680-1 05/05/21 10:31 • (LCSD) R3650680-2 05/05/21 10:51

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 %
Acetone	25.0	24.9	23.9	99.6	95.6	19.0-160	4.10	4.10	27	27
Acrolein	25.0	28.8	27.6	115	110	10.0-160	4.26	4.26	26	26
Acrylonitrile	25.0	25.4	24.5	102	98.0	55.0-149	3.61	3.61	20	20

WG1664828

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

QUALITY CONTROL SUMMARY

L1347464-04

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

(LCS) R3650680-1 05/05/21 10:31 • (LCSD) R3650680-2 05/05/21 10:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec.		LCSD Rec.		Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD	
				%	%	%	%				%	%
Benzene	5.00	4.75	5.28	95.0	106	70.0-123	10.6		10.6	20		
Bromobenzene	5.00	5.31	5.23	106	105	73.0-121	1.52		1.52	20		
Bromodichloromethane	5.00	5.08	5.22	102	104	75.0-120	2.72		2.72	20		
Bromoform	5.00	4.24	4.48	84.8	89.6	68.0-132	5.50		5.50	20		
Bromomethane	5.00	4.52	5.51	90.4	110	10.0-160	19.7		19.7	25		
n-Butylbenzene	5.00	5.22	5.40	104	108	73.0-125	3.39		3.39	20		
sec-Butylbenzene	5.00	4.85	5.28	97.0	106	75.0-125	8.49		8.49	20		
tert-Butylbenzene	5.00	4.51	5.32	90.2	106	76.0-124	16.5		16.5	20		
Carbon disulfide	5.00	5.04	5.80	101	116	61.0-128	14.0		14.0	20		
Carbon tetrachloride	5.00	4.84	5.75	96.8	115	68.0-126	17.2		17.2	20		
Chlorobenzene	5.00	4.65	5.17	93.0	103	80.0-121	10.6		10.6	20		
Chlorodibromomethane	5.00	4.80	4.68	96.0	93.6	77.0-125	2.53		2.53	20		
Chloroethane	5.00	4.16	5.83	83.2	117	47.0-150	33.4	J3	33.4	20		
Chloroform	5.00	4.67	4.89	93.4	97.8	73.0-120	4.60		4.60	20		
Chloromethane	5.00	4.58	4.92	91.6	98.4	41.0-142	7.16		7.16	20		
2-Chlorotoluene	5.00	4.65	5.19	93.0	104	76.0-123	11.0		11.0	20		
4-Chlorotoluene	5.00	4.78	5.19	95.6	104	75.0-122	8.22		8.22	20		
1,2-Dibromo-3-Chloropropane	5.00	5.07	4.72	101	94.4	58.0-134	7.15		7.15	20		
1,2-Dibromoethane	5.00	5.21	5.10	104	102	80.0-122	2.13		2.13	20		
Dibromomethane	5.00	4.66	5.09	93.2	102	80.0-120	8.82		8.82	20		
1,2-Dichlorobenzene	5.00	5.41	5.62	108	112	79.0-121	3.81		3.81	20		
1,3-Dichlorobenzene	5.00	4.77	5.19	95.4	104	79.0-120	8.43		8.43	20		
1,4-Dichlorobenzene	5.00	5.32	5.35	106	107	79.0-120	0.562		0.562	20		
Dichlorodifluoromethane	5.00	5.42	6.21	108	124	51.0-149	13.6		13.6	20		
1,1-Dichloroethane	5.00	5.28	5.65	106	113	70.0-126	6.77		6.77	20		
1,2-Dichloroethane	5.00	5.15	5.66	103	113	70.0-128	9.44		9.44	20		
1,1-Dichloroethene	5.00	4.92	5.63	98.4	113	71.0-124	13.5		13.5	20		
cis-1,2-Dichloroethene	5.00	5.36	5.61	107	112	73.0-120	4.56		4.56	20		
trans-1,2-Dichloroethene	5.00	5.14	5.67	103	113	73.0-120	9.81		9.81	20		
1,2-Dichloropropane	5.00	5.21	5.39	104	108	77.0-125	3.40		3.40	20		
1,1-Dichloropropane	5.00	5.10	5.50	102	110	74.0-126	7.55		7.55	20		
1,3-Dichloropropane	5.00	4.56	5.07	91.2	101	80.0-120	10.6		10.6	20		
cis-1,3-Dichloropropene	5.00	4.72	5.25	94.4	105	80.0-123	10.6		10.6	20		
trans-1,3-Dichloropropene	5.00	4.49	4.90	89.8	98.0	78.0-124	8.73		8.73	20		
2,2-Dichloropropane	5.00	4.94	5.22	98.8	104	58.0-130	5.51		5.51	20		
Di-isopropyl ether	5.00	5.12	5.21	102	104	58.0-138	1.74		1.74	20		
Ethylbenzene	5.00	4.76	5.50	95.2	110	79.0-123	14.4		14.4	20		
Hexachloro-1,3-butadiene	5.00	4.65	5.85	93.0	117	54.0-138	22.9		22.9	20		
Isopropylbenzene	5.00	4.65	5.34	93.0	107	76.0-127	13.8		13.8	20		
p-Isopropyltoluene	5.00	4.80	5.62	96.0	112	76.0-125	15.7		15.7	20		

WG1664828

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

QUALITY CONTROL SUMMARY

L1347464-04

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

(LCS) R3650680-1 05/05/21 10:31 • (LCSD) R3650680-2 05/05/21 10:51

Analyte	Spike Amount ug/l	LCS Result		LCSD Result		LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
		ug/l	%	ug/l	%							
2-Butanone (MEK)	25.0	26.5	106	25.6	102	106	102	44.0-160		3.45	3.45	20
Methylene Chloride	5.00	4.79	95.8	5.34	107	95.8	107	67.0-120		10.9	10.9	20
4-Methyl-2-pentanone (MIBK)	25.0	24.4	97.6	23.9	95.6	97.6	95.6	68.0-142		2.07	2.07	20
Methyl tert-butyl ether	5.00	5.04	101	5.15	103	101	103	68.0-125		2.16	2.16	20
Naphthalene	5.00	5.02	100	4.95	99.0	100	99.0	54.0-135		1.40	1.40	20
n-Propylbenzene	5.00	4.77	95.4	5.17	103	95.4	103	77.0-124		8.05	8.05	20
Styrene	5.00	4.55	91.0	4.92	98.4	91.0	98.4	73.0-130		7.81	7.81	20
1,1,1,2-Tetrachloroethane	5.00	4.59	91.8	4.87	97.4	91.8	97.4	75.0-125		5.92	5.92	20
1,1,2,2-Tetrachloroethane	5.00	5.52	110	5.11	102	110	102	65.0-130		7.71	7.71	20
Tetrachloroethane	5.00	4.35	87.0	5.34	107	87.0	107	72.0-132	J3	20.4	20.4	20
Toluene	5.00	4.63	92.6	5.35	107	92.6	107	79.0-120		14.4	14.4	20
1,1,2-Trichlorotrifluoroethane	5.00	4.59	91.8	5.11	102	91.8	102	69.0-132		10.7	10.7	20
1,2,3-Trichlorobenzene	5.00	4.94	98.8	5.37	107	98.8	107	50.0-138		8.34	8.34	20
1,2,4-Trichlorobenzene	5.00	5.34	107	5.76	115	107	115	57.0-137		7.57	7.57	20
1,1,1-Trichloroethane	5.00	4.75	95.0	5.48	110	95.0	110	73.0-124		14.3	14.3	20
1,1,2-Trichloroethane	5.00	5.06	101	4.83	96.6	101	96.6	80.0-120		4.65	4.65	20
Trichloroethene	5.00	4.95	99.0	5.54	111	99.0	111	78.0-124		11.2	11.2	20
Trichlorofluoromethane	5.00	4.53	90.6	5.05	101	90.6	101	59.0-147		10.9	10.9	20
1,2,3-Trichloropropane	5.00	5.48	110	5.58	112	110	112	73.0-130		1.81	1.81	20
1,2,3-Trimethylbenzene	5.00	4.98	99.6	5.06	101	99.6	101	77.0-120		1.59	1.59	20
1,2,4-Trimethylbenzene	5.00	4.94	98.8	5.24	105	98.8	105	76.0-121		5.89	5.89	20
1,3,5-Trimethylbenzene	5.00	5.11	102	5.50	110	102	110	76.0-122		7.35	7.35	20
Vinyl chloride	5.00	4.74	94.8	5.37	107	94.8	107	67.0-131		12.5	12.5	20
Xylenes, Total	15.0	13.7	91.3	15.4	103	91.3	103	79.0-123		11.7	11.7	20
(S) Toluene-d8			91.4		93.9	91.4	93.9	80.0-120				
(S) 4-Bromofluorobenzene			92.4		95.1	92.4	95.1	77.0-126				
(S) 1,2-Dichloroethane-d4			98.0		99.7	98.0	99.7	70.0-130				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

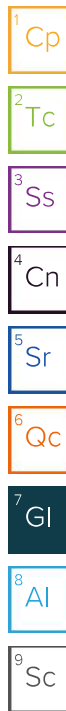
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.



ACCREDITATIONS & LOCATIONS

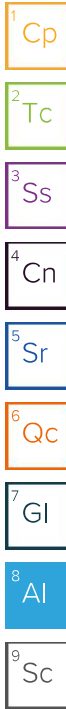
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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



State of Oregon Sample Chain of Custody

Agency, Authorized Purchaser or Agent: ODOT Send Lab Report To: Michelle Peterson Address: 3012 Island Avenue La Grande, OR 97850 Tel. #: (541) 963-1334 E-mail: michelle.l.peterson@odot.state.or.us	Contract Laboratory Name: Pace Analytical Lab Batch #: Invoice To: Same Address: Tel. #:	Lab Selection Criteria: <input type="checkbox"/> Proximity (if TAT < 48 hrs) <input type="checkbox"/> Prior work on same project <input checked="" type="checkbox"/> Cost (for anticipated analyses) <input type="checkbox"/> Other labs disqualified or unable to perform requested services <input type="checkbox"/> Emergency work	Turn Around Time: <input type="checkbox"/> 10 days (std.) <input type="checkbox"/> 5 days <input type="checkbox"/> 72 hours <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Other												
Project Name: John Day Sidewalks - level 2 PSI Project #: K18918 Sampler Name: Michelle Peterson		Sample Preservative Requested Analyses													
Sample ID#	Collection Date/Time	Matrix	Number of Containers	NWTPH-DX	NWTPH-GX	PAHs (8270 SIM)	RCRA 8 Metals	BTX (8260)	VOCs (8260)	Total lead	Comments				
HA-01-500-45"	4/30/21 10:00AM	SOIL	2				X		X		1347964-01				
HA-02-500-10"	4/30/21 10:45AM	SOIL	2				X		X		02				
HA-03-500-8"	4/30/21 10:25AM	SOIL	2				X		X		03				
Trip blank		H ₂ O	12						X		04				
Notes: Please discard methanol container w/ no sample. Please report trip blank for the level 2 PSI + Clean Full Detector minoration samples (CFD samples listed on separate chain of custody).															
Relinquished By: Michelle Peterson				Agency/Agent: ODOT				Received By:				Agency/Agent:			
Signature: Michelle Peterson				Time & Date: 11:00AM 5/3/21				Signature:				Time & Date:			
Relinquished By:				Agency/Agent:				Received By: PACE				Agency/Agent:			
Signature:				Time & Date:				Signature: <i>Bauer Polu</i>				Time & Date: 5/4/21 12:00			

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # [] THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIALLY APPLY TO THIS PURCHASE AND PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL BE THE PRICE AGREEMENT OR IMPLIED.

Sample Receipt Checklist

COC Seal Present/Intact:	<input checked="" type="checkbox"/> Y	If Applicable
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y	VOA Zero Headspace: <input checked="" type="checkbox"/> Y
Bottles arrive intact:	<input checked="" type="checkbox"/> Y	Pres. Correct/Check: <input checked="" type="checkbox"/> Y
Correct bottles used:	<input checked="" type="checkbox"/> Y	
Sufficient volume sent:	<input checked="" type="checkbox"/> Y	
Bar Screen < 0.5 mb/hr:	<input checked="" type="checkbox"/> Y	

9.2-1-15.1
A101

Version: 4/4/2008

Appendix E2

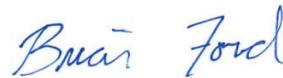
Laboratory Report for Samples HA-04 through HA-08

Oregon Dept of Transportation - ODOT

Sample Delivery Group: L1347459
Samples Received: 05/04/2021
Project Number: K18918
Description: John Day Sidewalks - Clean Fill Determination

Report To: Michelle Peterson
3012 Island Ave.
La Grande, OR 97850

Entire Report Reviewed By:



Brian Ford
Project Manager

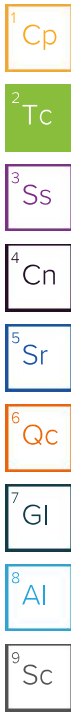
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory 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 www.pacenational.com

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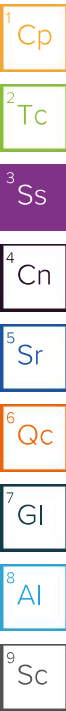


SAMPLE SUMMARY

HA-04-5@0-8" L1347459-01 Solid

Collected by Michelle Peterson Collected date/time 04/30/21 11:50 Received date/time 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1664620	1	05/05/21 09:46	05/05/21 09:58	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1664520	5	05/05/21 10:53	05/05/21 15:06	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1664566	25	04/30/21 11:50	05/05/21 10:22	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664423	1	04/30/21 11:50	05/05/21 05:28	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1664367	2	05/05/21 11:49	05/05/21 22:42	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1663472	1	05/05/21 07:17	05/05/21 20:43	LEA	Mt. Juliet, TN



HA-05-5@0-12" L1347459-02 Solid

Collected by Michelle Peterson Collected date/time 04/30/21 12:25 Received date/time 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1664620	1	05/05/21 09:46	05/05/21 09:58	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1664520	10	05/05/21 10:53	05/05/21 17:18	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1664566	25	04/30/21 12:25	05/05/21 10:44	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664423	1	04/30/21 12:25	05/05/21 05:47	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1664367	10	05/05/21 11:49	05/06/21 11:46	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1663472	1	05/05/21 07:17	05/05/21 21:36	LEA	Mt. Juliet, TN

HA-06-5@0-9.5" L1347459-03 Solid

Collected by Michelle Peterson Collected date/time 04/30/21 12:50 Received date/time 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1664620	1	05/05/21 09:46	05/05/21 09:58	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1664520	10	05/05/21 10:53	05/05/21 17:21	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1664566	25	04/30/21 12:50	05/05/21 11:06	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664423	1	04/30/21 12:50	05/05/21 06:06	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1664367	40	05/05/21 11:49	05/06/21 00:01	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1663472	1	05/05/21 07:17	05/05/21 21:54	LEA	Mt. Juliet, TN

HA-07-5@0-6.5" L1347459-04 Solid

Collected by Michelle Peterson Collected date/time 04/30/21 14:40 Received date/time 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1664620	1	05/05/21 09:46	05/05/21 09:58	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1664520	5	05/05/21 10:53	05/05/21 16:01	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1664566	25	04/30/21 14:40	05/05/21 11:28	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664423	1	04/30/21 14:40	05/05/21 06:25	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1664367	2	05/05/21 11:49	05/05/21 22:55	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1663472	1	05/05/21 07:17	05/05/21 21:01	LEA	Mt. Juliet, TN

HA-08-5@0-21" L1347459-05 Solid

Collected by Michelle Peterson Collected date/time 04/30/21 14:10 Received date/time 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1664620	1	05/05/21 09:46	05/05/21 09:58	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1664520	5	05/05/21 10:53	05/05/21 16:04	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1664566	25	04/30/21 14:10	05/05/21 11:50	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664423	1	04/30/21 14:10	05/05/21 06:44	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1664367	20	05/05/21 11:49	05/05/21 23:21	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1663472	1	05/05/21 07:17	05/05/21 21:19	LEA	Mt. Juliet, TN

SAMPLE SUMMARY

TRIP BLANK L1347459-06 GW

Collected by: Michelle Peterson
 Collected date/time: 04/30/21 00:00
 Received date/time: 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1664721	1	05/06/21 01:44	05/06/21 01:44	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1664828	1	05/05/21 12:18	05/05/21 12:18	JAH	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ 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.

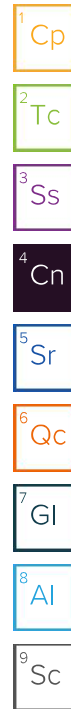


Brian Ford
Project Manager

Sample Delivery Group (SDG) Narrative

Analyzed from headspace vial.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1347459-06	TRIP BLANK	NWTPHGX



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	94.9		1	05/05/2021 09:58	WG1664620

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Lead	40.5		0.104	2.11	5	05/05/2021 15:06	WG1664520

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		0.945	2.79	25	05/05/2021 10:22	WG1664566
(S) a,a,a-Trifluorotoluene(FID)	117			77.0-120		05/05/2021 10:22	WG1664566

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000520	0.00111	1	05/05/2021 05:28	WG1664423
Toluene	0.0417		0.00145	0.00557	1	05/05/2021 05:28	WG1664423
Ethylbenzene	U		0.000821	0.00279	1	05/05/2021 05:28	WG1664423
Total Xylenes	0.00552	J	0.000980	0.00724	1	05/05/2021 05:28	WG1664423
(S) Toluene-d8	118			75.0-131		05/05/2021 05:28	WG1664423
(S) 4-Bromofluorobenzene	88.4			67.0-138		05/05/2021 05:28	WG1664423
(S) 1,2-Dichloroethane-d4	89.9			70.0-130		05/05/2021 05:28	WG1664423

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

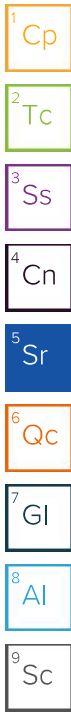
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	7.13	J	2.80	8.43	2	05/05/2021 22:42	WG1664367
Residual Range Organics (RRO)	72.7		7.02	21.1	2	05/05/2021 22:42	WG1664367
(S) o-Terphenyl	75.9			18.0-148		05/05/2021 22:42	WG1664367

Sample Narrative:

L1347459-01 WG1664367: Cannot run at lower dilution due to viscosity of extract

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Anthracene	U		0.00242	0.00632	1	05/05/2021 20:43	WG1663472
Acenaphthene	U		0.00220	0.00632	1	05/05/2021 20:43	WG1663472
Acenaphthylene	U		0.00228	0.00632	1	05/05/2021 20:43	WG1663472
Benzo(a)anthracene	0.00619	J	0.00182	0.00632	1	05/05/2021 20:43	WG1663472
Benzo(a)pyrene	0.00819		0.00189	0.00632	1	05/05/2021 20:43	WG1663472
Benzo(b)fluoranthene	0.0173		0.00161	0.00632	1	05/05/2021 20:43	WG1663472
Benzo(g,h,i)perylene	0.0129		0.00186	0.00632	1	05/05/2021 20:43	WG1663472
Benzo(k)fluoranthene	0.00535	J	0.00226	0.00632	1	05/05/2021 20:43	WG1663472
Chrysene	0.00970		0.00244	0.00632	1	05/05/2021 20:43	WG1663472
Dibenz(a,h)anthracene	0.00186	J	0.00181	0.00632	1	05/05/2021 20:43	WG1663472
Fluoranthene	0.0189		0.00239	0.00632	1	05/05/2021 20:43	WG1663472
Fluorene	U		0.00216	0.00632	1	05/05/2021 20:43	WG1663472
Indeno(1,2,3-cd)pyrene	0.0111		0.00191	0.00632	1	05/05/2021 20:43	WG1663472
Naphthalene	U		0.00430	0.0211	1	05/05/2021 20:43	WG1663472
Phenanthrene	0.00626	J	0.00243	0.00632	1	05/05/2021 20:43	WG1663472
Pyrene	0.0181		0.00211	0.00632	1	05/05/2021 20:43	WG1663472



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
1-Methylnaphthalene	U		0.00473	0.0211	1	05/05/2021 20:43	WG1663472
2-Methylnaphthalene	U		0.00450	0.0211	1	05/05/2021 20:43	WG1663472
2-Chloronaphthalene	U		0.00491	0.0211	1	05/05/2021 20:43	WG1663472
<i>(S)</i> Nitrobenzene-d5	102			14.0-149		05/05/2021 20:43	WG1663472
<i>(S)</i> 2-Fluorobiphenyl	94.6			34.0-125		05/05/2021 20:43	WG1663472
<i>(S)</i> p-Terphenyl-d14	116			23.0-120		05/05/2021 20:43	WG1663472

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 date / time	Batch
Total Solids	92.6		1	05/05/2021 09:58	WG1664620

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Lead	111		0.214	4.32	10	05/05/2021 17:18	WG1664520

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		0.986	2.91	25	05/05/2021 10:44	WG1664566
(S) a,a,a-Trifluorotoluene(FID)	117			77.0-120		05/05/2021 10:44	WG1664566

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000543	0.00116	1	05/05/2021 05:47	WG1664423
Toluene	0.0801		0.00151	0.00581	1	05/05/2021 05:47	WG1664423
Ethylbenzene	U		0.000857	0.00291	1	05/05/2021 05:47	WG1664423
Total Xylenes	0.00486	J	0.00102	0.00755	1	05/05/2021 05:47	WG1664423
(S) Toluene-d8	119			75.0-131		05/05/2021 05:47	WG1664423
(S) 4-Bromofluorobenzene	88.9			67.0-138		05/05/2021 05:47	WG1664423
(S) 1,2-Dichloroethane-d4	93.3			70.0-130		05/05/2021 05:47	WG1664423

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

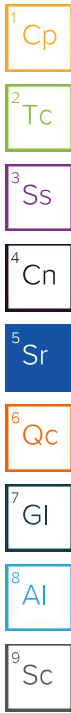
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	28.3	J	14.4	43.2	10	05/06/2021 11:46	WG1664367
Residual Range Organics (RRO)	250		35.9	108	10	05/06/2021 11:46	WG1664367
(S) o-Terphenyl	74.3			18.0-148		05/06/2021 11:46	WG1664367

Sample Narrative:

L1347459-02 WG1664367: Cannot run at lower dilution due to viscosity of extract

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Anthracene	0.00262	J	0.00248	0.00648	1	05/05/2021 21:36	WG1663472
Acenaphthene	U		0.00226	0.00648	1	05/05/2021 21:36	WG1663472
Acenaphthylene	0.00362	J	0.00233	0.00648	1	05/05/2021 21:36	WG1663472
Benzo(a)anthracene	0.0200		0.00187	0.00648	1	05/05/2021 21:36	WG1663472
Benzo(a)pyrene	0.0244		0.00193	0.00648	1	05/05/2021 21:36	WG1663472
Benzo(b)fluoranthene	0.0542		0.00165	0.00648	1	05/05/2021 21:36	WG1663472
Benzo(g,h,i)perylene	0.0361		0.00191	0.00648	1	05/05/2021 21:36	WG1663472
Benzo(k)fluoranthene	0.0175		0.00232	0.00648	1	05/05/2021 21:36	WG1663472
Chrysene	0.0417		0.00250	0.00648	1	05/05/2021 21:36	WG1663472
Dibenz(a,h)anthracene	0.00562	J	0.00186	0.00648	1	05/05/2021 21:36	WG1663472
Fluoranthene	0.0799		0.00245	0.00648	1	05/05/2021 21:36	WG1663472
Fluorene	U		0.00221	0.00648	1	05/05/2021 21:36	WG1663472
Indeno(1,2,3-cd)pyrene	0.0304		0.00195	0.00648	1	05/05/2021 21:36	WG1663472
Naphthalene	0.00610	J	0.00440	0.0216	1	05/05/2021 21:36	WG1663472
Phenanthrene	0.0260		0.00249	0.00648	1	05/05/2021 21:36	WG1663472
Pyrene	0.0719		0.00216	0.00648	1	05/05/2021 21:36	WG1663472



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
1-Methylnaphthalene	U		0.00485	0.0216	1	05/05/2021 21:36	WG1663472
2-Methylnaphthalene	0.00546	J	0.00461	0.0216	1	05/05/2021 21:36	WG1663472
2-Chloronaphthalene	U		0.00503	0.0216	1	05/05/2021 21:36	WG1663472
(S) Nitrobenzene-d5	89.2			14.0-149		05/05/2021 21:36	WG1663472
(S) 2-Fluorobiphenyl	78.8			34.0-125		05/05/2021 21:36	WG1663472
(S) p-Terphenyl-d14	102			23.0-120		05/05/2021 21:36	WG1663472

- 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
Total Solids	88.9		1	05/05/2021 09:58	WG1664620

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Lead	136		0.223	4.50	10	05/05/2021 17:21	WG1664520

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		1.07	3.14	25	05/05/2021 11:06	WG1664566
(S) a,a,a-Trifluorotoluene(FID)	117			77.0-120		05/05/2021 11:06	WG1664566

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000587	0.00126	1	05/05/2021 06:06	WG1664423
Toluene	0.0807		0.00163	0.00629	1	05/05/2021 06:06	WG1664423
Ethylbenzene	U		0.000926	0.00314	1	05/05/2021 06:06	WG1664423
Total Xylenes	0.00748	J	0.00111	0.00817	1	05/05/2021 06:06	WG1664423
(S) Toluene-d8	120			75.0-131		05/05/2021 06:06	WG1664423
(S) 4-Bromofluorobenzene	88.8			67.0-138		05/05/2021 06:06	WG1664423
(S) 1,2-Dichloroethane-d4	93.8			70.0-130		05/05/2021 06:06	WG1664423

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

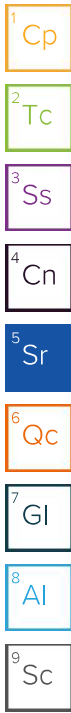
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	U		59.8	180	40	05/06/2021 00:01	WG1664367
Residual Range Organics (RRO)	385	J	150	450	40	05/06/2021 00:01	WG1664367
(S) o-Terphenyl	0.000	J7		18.0-148		05/06/2021 00:01	WG1664367

Sample Narrative:

L1347459-03 WG1664367: Cannot run at lower dilution due to viscosity of extract

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Anthracene	U		0.00259	0.00675	1	05/05/2021 21:54	WG1663472
Acenaphthene	U		0.00235	0.00675	1	05/05/2021 21:54	WG1663472
Acenaphthylene	0.00358	J	0.00243	0.00675	1	05/05/2021 21:54	WG1663472
Benzo(a)anthracene	0.0186		0.00195	0.00675	1	05/05/2021 21:54	WG1663472
Benzo(a)pyrene	0.0229		0.00201	0.00675	1	05/05/2021 21:54	WG1663472
Benzo(b)fluoranthene	0.0466		0.00172	0.00675	1	05/05/2021 21:54	WG1663472
Benzo(g,h,i)perylene	0.0303		0.00199	0.00675	1	05/05/2021 21:54	WG1663472
Benzo(k)fluoranthene	0.0128		0.00242	0.00675	1	05/05/2021 21:54	WG1663472
Chrysene	0.0272		0.00261	0.00675	1	05/05/2021 21:54	WG1663472
Dibenz(a,h)anthracene	0.00478	J	0.00193	0.00675	1	05/05/2021 21:54	WG1663472
Fluoranthene	0.0494		0.00255	0.00675	1	05/05/2021 21:54	WG1663472
Fluorene	U		0.00231	0.00675	1	05/05/2021 21:54	WG1663472
Indeno(1,2,3-cd)pyrene	0.0250		0.00204	0.00675	1	05/05/2021 21:54	WG1663472
Naphthalene	0.0106	J	0.00459	0.0225	1	05/05/2021 21:54	WG1663472
Phenanthrene	0.0156		0.00260	0.00675	1	05/05/2021 21:54	WG1663472
Pyrene	0.0444		0.00225	0.00675	1	05/05/2021 21:54	WG1663472



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
1-Methylnaphthalene	U		0.00505	0.0225	1	05/05/2021 21:54	WG1663472
2-Methylnaphthalene	0.00947	J	0.00480	0.0225	1	05/05/2021 21:54	WG1663472
2-Chloronaphthalene	U		0.00524	0.0225	1	05/05/2021 21:54	WG1663472
(S) Nitrobenzene-d5	95.9			14.0-149		05/05/2021 21:54	WG1663472
(S) 2-Fluorobiphenyl	86.1			34.0-125		05/05/2021 21:54	WG1663472
(S) p-Terphenyl-d14	106			23.0-120		05/05/2021 21:54	WG1663472

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 date / time	Batch
Total Solids	92.6		1	05/05/2021 09:58	WG1664620

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Lead	23.8		0.107	2.16	5	05/05/2021 16:01	WG1664520

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		0.988	2.91	25	05/05/2021 11:28	WG1664566
(S) a,a,a-Trifluorotoluene(FID)	117			77.0-120		05/05/2021 11:28	WG1664566

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000544	0.00116	1	05/05/2021 06:25	WG1664423
Toluene	0.0905		0.00151	0.00582	1	05/05/2021 06:25	WG1664423
Ethylbenzene	U		0.000858	0.00291	1	05/05/2021 06:25	WG1664423
Total Xylenes	0.00715	J	0.00102	0.00757	1	05/05/2021 06:25	WG1664423
(S) Toluene-d8	117			75.0-131		05/05/2021 06:25	WG1664423
(S) 4-Bromofluorobenzene	88.3			67.0-138		05/05/2021 06:25	WG1664423
(S) 1,2-Dichloroethane-d4	93.4			70.0-130		05/05/2021 06:25	WG1664423

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

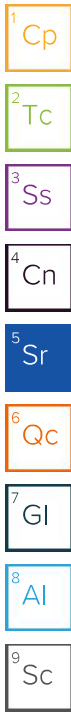
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6.93	J	2.87	8.64	2	05/05/2021 22:55	WG1664367
Residual Range Organics (RRO)	68.8		7.19	21.6	2	05/05/2021 22:55	WG1664367
(S) o-Terphenyl	74.3			18.0-148		05/05/2021 22:55	WG1664367

Sample Narrative:

L1347459-04 WG1664367: Cannot run at lower dilution due to viscosity of extract

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Anthracene	U		0.00248	0.00648	1	05/05/2021 21:01	WG1663472
Acenaphthene	U		0.00226	0.00648	1	05/05/2021 21:01	WG1663472
Acenaphthylene	U		0.00233	0.00648	1	05/05/2021 21:01	WG1663472
Benzo(a)anthracene	0.00513	J	0.00187	0.00648	1	05/05/2021 21:01	WG1663472
Benzo(a)pyrene	0.00646	J	0.00193	0.00648	1	05/05/2021 21:01	WG1663472
Benzo(b)fluoranthene	0.00974		0.00165	0.00648	1	05/05/2021 21:01	WG1663472
Benzo(g,h,i)perylene	0.00906		0.00191	0.00648	1	05/05/2021 21:01	WG1663472
Benzo(k)fluoranthene	0.00324	J	0.00232	0.00648	1	05/05/2021 21:01	WG1663472
Chrysene	0.00596	J	0.00250	0.00648	1	05/05/2021 21:01	WG1663472
Dibenz(a,h)anthracene	U		0.00186	0.00648	1	05/05/2021 21:01	WG1663472
Fluoranthene	0.0117		0.00245	0.00648	1	05/05/2021 21:01	WG1663472
Fluorene	U		0.00221	0.00648	1	05/05/2021 21:01	WG1663472
Indeno(1,2,3-cd)pyrene	0.00743		0.00195	0.00648	1	05/05/2021 21:01	WG1663472
Naphthalene	U		0.00440	0.0216	1	05/05/2021 21:01	WG1663472
Phenanthrene	0.00326	J	0.00249	0.00648	1	05/05/2021 21:01	WG1663472
Pyrene	0.0109		0.00216	0.00648	1	05/05/2021 21:01	WG1663472



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
1-Methylnaphthalene	U		0.00485	0.0216	1	05/05/2021 21:01	WG1663472
2-Methylnaphthalene	U		0.00461	0.0216	1	05/05/2021 21:01	WG1663472
2-Chloronaphthalene	U		0.00503	0.0216	1	05/05/2021 21:01	WG1663472
<i>(S)</i> Nitrobenzene-d5	87.8			14.0-149		05/05/2021 21:01	WG1663472
<i>(S)</i> 2-Fluorobiphenyl	77.6			34.0-125		05/05/2021 21:01	WG1663472
<i>(S)</i> p-Terphenyl-d14	100			23.0-120		05/05/2021 21:01	WG1663472

- 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
Total Solids	91.7		1	05/05/2021 09:58	WG1664620

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Lead	48.5		0.108	2.18	5	05/05/2021 16:04	WG1664520

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		1.01	2.99	25	05/05/2021 11:50	WG1664566
(S) a,a,a-Trifluorotoluene(FID)	118			77.0-120		05/05/2021 11:50	WG1664566

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000558	0.00120	1	05/05/2021 06:44	WG1664423
Toluene	0.0668		0.00155	0.00598	1	05/05/2021 06:44	WG1664423
Ethylbenzene	U		0.000881	0.00299	1	05/05/2021 06:44	WG1664423
Total Xylenes	0.00585	J	0.00105	0.00777	1	05/05/2021 06:44	WG1664423
(S) Toluene-d8	116			75.0-131		05/05/2021 06:44	WG1664423
(S) 4-Bromofluorobenzene	87.1			67.0-138		05/05/2021 06:44	WG1664423
(S) 1,2-Dichloroethane-d4	94.4			70.0-130		05/05/2021 06:44	WG1664423

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

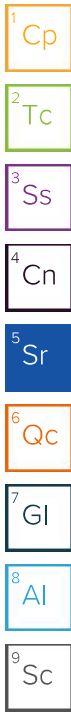
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	U		29.0	87.3	20	05/05/2021 23:21	WG1664367
Residual Range Organics (RRO)	180	J	72.6	218	20	05/05/2021 23:21	WG1664367
(S) o-Terphenyl	0.000	J7		18.0-148		05/05/2021 23:21	WG1664367

Sample Narrative:

L1347459-05 WG1664367: Cannot run at lower dilution due to viscosity of extract

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Anthracene	U		0.00251	0.00654	1	05/05/2021 21:19	WG1663472
Acenaphthene	U		0.00228	0.00654	1	05/05/2021 21:19	WG1663472
Acenaphthylene	U		0.00236	0.00654	1	05/05/2021 21:19	WG1663472
Benzo(a)anthracene	0.00556	J	0.00189	0.00654	1	05/05/2021 21:19	WG1663472
Benzo(a)pyrene	0.00660		0.00195	0.00654	1	05/05/2021 21:19	WG1663472
Benzo(b)fluoranthene	0.0130		0.00167	0.00654	1	05/05/2021 21:19	WG1663472
Benzo(g,h,i)perylene	0.0116		0.00193	0.00654	1	05/05/2021 21:19	WG1663472
Benzo(k)fluoranthene	0.00351	J	0.00235	0.00654	1	05/05/2021 21:19	WG1663472
Chrysene	0.00621	J	0.00253	0.00654	1	05/05/2021 21:19	WG1663472
Dibenz(a,h)anthracene	0.00201	J	0.00188	0.00654	1	05/05/2021 21:19	WG1663472
Fluoranthene	0.0131		0.00248	0.00654	1	05/05/2021 21:19	WG1663472
Fluorene	U		0.00224	0.00654	1	05/05/2021 21:19	WG1663472
Indeno(1,2,3-cd)pyrene	0.00805		0.00197	0.00654	1	05/05/2021 21:19	WG1663472
Naphthalene	U		0.00445	0.0218	1	05/05/2021 21:19	WG1663472
Phenanthrene	0.00411	J	0.00252	0.00654	1	05/05/2021 21:19	WG1663472
Pyrene	0.0120		0.00218	0.00654	1	05/05/2021 21:19	WG1663472



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
1-Methylnaphthalene	U		0.00490	0.0218	1	05/05/2021 21:19	WG1663472
2-Methylnaphthalene	U		0.00466	0.0218	1	05/05/2021 21:19	WG1663472
2-Chloronaphthalene	U		0.00508	0.0218	1	05/05/2021 21:19	WG1663472
<i>(S)</i> Nitrobenzene-d5	87.7			14.0-149		05/05/2021 21:19	WG1663472
<i>(S)</i> 2-Fluorobiphenyl	79.3			34.0-125		05/05/2021 21:19	WG1663472
<i>(S)</i> p-Terphenyl-d14	100			23.0-120		05/05/2021 21:19	WG1663472

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

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	39.3	<u>B</u>	31.6	100	1	05/06/2021 01:44	WG1664721
(S) a,a,a-Trifluorotoluene(FID)	100			78.0-120		05/06/2021 01:44	WG1664721

- 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 ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	05/05/2021 12:18	WG1664828
Toluene	U		0.278	1.00	1	05/05/2021 12:18	WG1664828
Ethylbenzene	U		0.137	1.00	1	05/05/2021 12:18	WG1664828
Total Xylenes	U		0.174	3.00	1	05/05/2021 12:18	WG1664828
(S) Toluene-d8	99.5			80.0-120		05/05/2021 12:18	WG1664828
(S) 4-Bromofluorobenzene	95.1			77.0-126		05/05/2021 12:18	WG1664828
(S) 1,2-Dichloroethane-d4	94.2			70.0-130		05/05/2021 12:18	WG1664828

WG1664620

Total Solids by Method 2540 G-2011

QUALITY CONTROL SUMMARY

[L1347459-01.02.03.04.05](#)

Method Blank (MB)

(MB) R3650940-1 05/05/21 09:58

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.000			

L1347459-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1347459-04 05/05/21 09:58 • (DUP) R3650940-3 05/05/21 09:58

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Total Solids	92.6	91.3	1	1.50		10

Laboratory Control Sample (LCS)

(LCS) R3650940-2 05/05/21 09:58

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Total Solids	50.0	50.0	100	85.0-115	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

WG1664520

Metals (ICPMS) by Method 6020B

QUALITY CONTROL SUMMARY

[L1347459-01.02.03.04.05](#)

Method Blank (MB)

(MB) R3650818-1 05/05/21 15:00

Analyte	MB Result mg/kg	<u>MB Qualifier</u> mg/kg	MB MDL mg/kg	MB RDL mg/kg
Lead	0.231	↓	0.0990	2.00

Laboratory Control Sample (LCS)

(LCS) R3650818-2 05/05/21 15:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Lead	100	101	101	80.0-120	

L1347459-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1347459-01 05/05/21 15:06 • (MS) R3650818-5 05/05/21 15:16 • (MSD) R3650818-6 05/05/21 15:19

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 %
Lead	105	40.5	159	149	113	103	5	75.0-125		6.87		20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG1664566

Volatile Organic Compounds (GC) by Method NWTPHGX

QUALITY CONTROL SUMMARY

[L1347459-01.02.03.04.05](#)

Method Blank (MB)

(MB) R3650953-2 05/05/21 08:02

Analyte	MB Result mg/kg	U	MB MDL mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg	LCS				MSD								
							Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier	RPD %	MS Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MSD Qualifier	RPD %
Gasoline Range Organics-NWTPH			0.0339		0.100														
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	118				77.0-120														

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

(LCS) R3650953-1 05/05/21 07:18 • (LCSD) R3650953-3 05/05/21 09:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier	RPD %	MSD												
							MS Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MSD Qualifier	RPD %						
Gasoline Range Organics-NWTPH	5.50	5.10	92.7	71.0-124		9.66													
(S) <i>a,a,a</i> -Trifluorotoluene(FID)			106	77.0-120															

L1345428-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1345428-01 05/05/21 19:55 • (MS) R3650953-4 05/05/21 22:29 • (MSD) R3650953-5 05/05/21 22:51

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MS Rec. %	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	RPD %	MSD							
												MS Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MSD Qualifier	RPD %	
Gasoline Range Organics-NWTPH	213	99.3	219	56.3	211	52.4	32.3	10.0-149			3.90								
(S) <i>a,a,a</i> -Trifluorotoluene(FID)				109	77.0-120														

WG1664721

Volatile Organic Compounds (GC) by Method NWTPHGX

QUALITY CONTROL SUMMARY

[L1347459-06](#)

Method Blank (MB)

(MB) R3650989-2 05/06/21 00:39

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	67.1	J	31.6	100
(S) <i>a,a</i> -Trifluorotoluene(FID)	98.9			78.0-120

Laboratory Control Sample (LCS)

(LCS) R3650989-1 05/05/21 23:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5440	98.9	70.0-124	
(S) <i>a,a</i> -Trifluorotoluene(FID)		110		78.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

Method Blank (MB)

(MB) R3650508-2 05/05/21 05:09

Analyte	MB Result mg/kg	<u>MB Qualifier</u>	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	120			75.0-131
(S) 4-Bromofluorobenzene	89.3			67.0-138
(S) 1,2-Dichloroethane-d4	93.4			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3650508-1 05/05/21 04:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	0.125	0.113	90.4	70.0-123	
Ethylbenzene	0.125	0.125	100	74.0-126	
Toluene	0.125	0.130	104	75.0-121	
Xylenes, Total	0.375	0.355	94.7	72.0-127	
(S) Toluene-d8			113	75.0-131	
(S) 4-Bromofluorobenzene			92.3	67.0-138	
(S) 1,2-Dichloroethane-d4			110	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

WG1664828

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

QUALITY CONTROL SUMMARY

L1347459-06

Method Blank (MB)

(MB) R3650680-3 05/05/21 11:31

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
Toluene	U		0.278	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	96.7			80.0-120
(S) 4-Bromofluorobenzene	92.5			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

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

(LCS) R3650680-1 05/05/21 10:31 • (LCSD) R3650680-2 05/05/21 10:51

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	4.75	5.28	95.0	106	70.0-123			10.6	20
Ethylbenzene	5.00	4.76	5.50	95.2	110	79.0-123			14.4	20
Toluene	5.00	4.63	5.35	92.6	107	79.0-120			14.4	20
Xylenes, Total	15.0	13.7	15.4	91.3	103	79.0-123			11.7	20
(S) Toluene-d8				91.4	93.9	80.0-120				
(S) 4-Bromofluorobenzene				92.4	95.1	77.0-126				
(S) 1,2-Dichloroethane-d4				98.0	99.7	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

Method Blank (MB)

(MB) R3650891-1 05/05/21 19:31

Analyte	MB Result mg/kg	<u>MB Qualifier</u> mg/kg	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO) U	U	1.33	4.00	4.00
Residual Range Organics (RRO) U	U	3.33	10.0	10.0
<i>(S) o-Terphenyl</i>	67.7		18.0-148	18.0-148

Laboratory Control Sample (LCS)

(LCS) R3650891-2 05/05/21 19:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Diesel Range Organics (DRO)	50.0	39.4	78.8	50.0-150	
<i>(S) o-Terphenyl</i>		48.0	48.0	18.0-148	

L1345871-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1345871-04 05/05/21 19:57 • (MS) R3650891-3 05/05/21 20:10 • (MSD) R3650891-4 05/05/21 20:23

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 %
Diesel Range Organics (DRO)	67.8	U	41.8	41.8	61.6	63.9	1	50.0-150		0.000	0.000	20
<i>(S) o-Terphenyl</i>			35.3	36.6	35.3	36.6		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 SC

WG1663472

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

QUALITY CONTROL SUMMARY

[L1347459-01.02.03.04.05](#)

Method Blank (MB)

(MB) R3650880-2 05/05/21 15:05

Analyte	MB Result mg/kg	<u>MB Qualifier</u>	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) Nitrobenzene-d5	86.2			14.0-149
(S) 2-Fluorobiphenyl	85.9			34.0-125
(S) p-Terphenyl-d14	110			23.0-120

Laboratory Control Sample (LCS)

(LCS) R3650880-1 05/05/21 14:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Anthracene	0.0800	0.0717	89.6	50.0-126	
Acenaphthene	0.0800	0.0770	96.3	50.0-120	
Acenaphthylene	0.0800	0.0775	96.9	50.0-120	
Benzo(a)anthracene	0.0800	0.0783	97.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0704	88.0	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0756	94.5	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0794	99.3	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0755	94.4	49.0-125	
Chrysene	0.0800	0.0809	101	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0748	93.5	47.0-125	
Fluoranthene	0.0800	0.0782	97.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3650880-1 05/05/21 14:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0778	97.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0740	92.5	46.0-125	
Naphthalene	0.0800	0.0781	97.6	50.0-120	
Phenanthrene	0.0800	0.0720	90.0	47.0-120	
Pyrene	0.0800	0.0851	106	43.0-123	
1-Methylnaphthalene	0.0800	0.0835	104	51.0-121	
2-Methylnaphthalene	0.0800	0.0795	99.4	50.0-120	
2-Chloronaphthalene	0.0800	0.0697	87.1	50.0-120	
(S) Nitrobenzene-d5			95.7	14.0-149	
(S) 2-Fluorobiphenyl			95.8	34.0-125	
(S) p-Terphenyl-d14			124	23.0-120	J1

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

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.
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.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.



ACCREDITATIONS & LOCATIONS

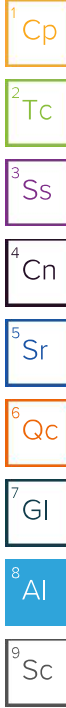
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



Agency, Authorized Purchaser or Agent:
 ODOT

Send Lab Report To: Michelle Peterson

Address: 3012 Island Avenue
 La Grande, OR 97850

Tel. #: (541) 963-1334
E-mail: michelle.l.peterson@odot.state.or.us

Project Name: John Day Sidewalks - Clean Fill Determination
Project #: K18918

Sampler Name: Michelle Peterson

Contract Laboratory Name:
 Pace Analytical

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

Sample ID#	Collection Date/Time	Matrix	Number of Containers	Requested Analyses								Comments
				NWTPH-DX	NWTPH-GX	PAHs (8270 SIM)	RCRA 8 Metals	BTEX (8260)	VOCs (8260)	Total lead		
HA-04-SC0-8"	4/30/21 11:30AM	Soil	3	X	X	X	X	X	X	X		1347459-01
HA-05-SC0-12"	4/30/21 12:35PM	Soil	3	X	X	X	X	X	X	X		02
HA-06-SC0-9.5"	4/30/21 12:38PM	Soil	3	X	X	X	X	X	X	X		03
HA-07-SC0-6.5"	4/30/21 2:40PM	Soil	3	X	X	X	X	X	X	X		04
HA-08-SC0-31"	4/30/21 2:48PM	Soil	3	X	X	X	X	X	X	X		05
Trip Blank		H ₂ O	1 X PL	X								06

Notes: Please discard methanol container w/ no sample.
 Please report trip blank for the level 2 PSI + Clean Fill Determination (level 2 PSI samples listed on separate chain of custody).

Relinquished By: Michelle Peterson
Signature: *Michelle Peterson*
Relinquished By: *Michelle Peterson*
Signature: *Michelle Peterson*

Received By: *PACE*
Signature: *Barber*
Received By: *Barber*

Agency/Agent: ODOT
Time & Date: 11 AM 5/3/21
Agency/Agent:
Time & Date: 5/11/20

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT #1. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS APPLY TO THIS PURCHASE.

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

5.2-175.1
 470T

Version: 4/4/2008

Appendix E3

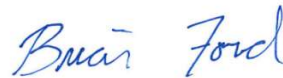
Laboratory Report for TCLP Testing of Samples HA-05 and HA-06)

Oregon Dept of Transportation - ODOT

Sample Delivery Group: L1349675
Samples Received: 05/04/2021
Project Number: K18918
Description: John Day Sidewalks - Clean Fill Determination

Report To: Michelle Peterson
3012 Island Ave.
La Grande, OR 97850










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.

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SAMPLE SUMMARY

HA-05-5@0-12" L1349675-01 Waste

Collected by: Michelle Peterson
 Collected date/time: 04/30/21 12:35
 Received date/time: 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1669016	1	05/12/21 15:23	05/12/21 15:23	IDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1669071	1	05/18/21 09:17	05/19/21 02:37	CCE	Mt. Juliet, TN

HA-06-5@0-9.5" L1349675-02 Waste

Collected by: Michelle Peterson
 Collected date/time: 04/30/21 12:50
 Received date/time: 05/04/21 12:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1669016	1	05/12/21 15:23	05/12/21 15:23	IDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1669071	1	05/18/21 09:17	05/19/21 02:40	CCE	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 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

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

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		5/12/2021 3:23:44 PM	WG1669016
Fluid	1		5/12/2021 3:23:44 PM	WG1669016
Initial pH	8.54		5/12/2021 3:23:44 PM	WG1669016
Final pH	5.05		5/12/2021 3:23:44 PM	WG1669016

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	05/19/2021 02:37	WG1669071

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		5/12/2021 3:23:44 PM	WG1669016
Fluid	1		5/12/2021 3:23:44 PM	WG1669016
Initial pH	8.06		5/12/2021 3:23:44 PM	WG1669016
Final pH	4.96		5/12/2021 3:23:44 PM	WG1669016

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	05/19/2021 02:40	WG1669071

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3656348-1 05/19/21 01:44

Analyte	MB Result mg/l	<u>MB Qualifier</u> mg/l	MB MDL mg/l	MB RDL mg/l
Lead	U	0.0333	0.100	0.100

Laboratory Control Sample (LCS)

(LCS) R3656348-2 05/19/21 01:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Lead	10.0	9.69	96.9	80.0-120	

L1349728-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1349728-01 05/19/21 01:49 • (MS) R3656348-4 05/19/21 01:55 • (MSD) R3656348-5 05/19/21 01:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	MSD Result mg/l	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u> %	<u>MSD Qualifier</u> %	RPD %	RPD Limits %
Lead	10.0	ND	9.70	96.6	9.73	96.9	1	75.0-125	0.306	0.306	20	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

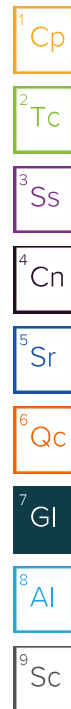
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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

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



ACCREDITATIONS & LOCATIONS

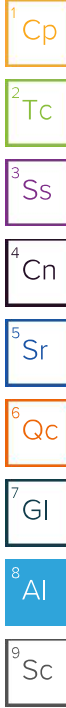
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 Sample Chain of Custody

Agency, Authorized Purchaser or Agent:
ODOT

Send Lab Report To: Michelle Peterson
 Address: 3012 Island Avenue
 La Grande, OR 97850
 Tel. #: (541) 963-1334
 E-mail: michelle.l.peterson@odot.state.or.us

Contract Laboratory Name:
 Pace Analytical
 Lab Batch #:
 Invoice #:
 To: Same
 Address:
 Tel. #:

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

Project Name: John Day Sidewalks - (Clean Fill Determination)
Project #: K18918

Sampler Name: Michelle Peterson

Sample ID#	Collection Date/Time	Matrix	Number of Containers	NWTPH-DX	NWTPH-GX	PAHs (8270 SIM)	RCRA 8 Metals	BTEX (8260)	VOCs (8260)	Total lead	Comments
HA-04-SQ-0-8"	4/30/21 11:30AM	Soil	3	X	X	X	X	X	X	X	1349675
HA-05-SQ-0-12"	4/30/21 12:35PM	Soil	3	X	X	X	X	X	X	X	1349675
HA-06-SQ-0-9.5"	4/30/21 12:38PM	Soil	3	X	X	X	X	X	X	X	1349675
HA-07-SQ-0-6.5"	4/30/21 2:40PM	Soil	3	X	X	X	X	X	X	X	1349675
HA-08-SQ-0-31"	4/30/21 2:40PM	Soil	3	X	X	X	X	X	X	X	1349675
Trip Blank		H ₂ O	1 X PL	X							

Notes: Please discard methanol container w/ no sample.
 please report trip blank for the level 2 PSI + Clean Fill Determination (level 2 PSI samples listed on separate chain of custody).

Relinquished By: Michelle Peterson
 Signature: *Michelle Peterson*
 Agency/Agent: ODOT
 Time & Date: 11AM 5/3/21

Received By:
 Signature: *Barber Polk*
 Agency/Agent: PACE
 Time & Date: 5/4/21 12:00

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT #11. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS APPLY TO THIS PURCHASE.

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

5.2-175.1
 47 OT

Version: 4/14/2008

L1347459 OREGONDOT re-log

R5


Please re-log the following for TCLP PBICP as R5 due 05/14.

L1347459-02 (HA-05-5@0-12")

L1347459-03 (HA-06-5@0-9.5")

Time estimate: oh	Time spent: oh
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Members

 Brian Ford