

DRAFT MEMORANDUM

DATE: April 24, 2026
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CC: Pete Stoltz and Debbie Murphy, CalPortland Company

FROM:



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RE: Solidification/Stabilization Treatability Testing Memorandum
Glacier Northwest Inc. Site
Project No. 25006

1 Introduction

Black River Environmental, LLC (Black River) has prepared this Solidification/Stabilization (S/S) Treatability Testing Memorandum (Memo) on behalf of Glacier Northwest, Inc. (Glacier) to support cleanup alternative development for the Glacier Northwest, Inc. Site (Site). The Site is associated with King County Tax Parcel No. 1924049292, located at 5900 West Marginal Way SW in Seattle, Washington (the Property). This Memo was prepared to support the Feasibility Study (FS) for the Site, consistent with Agreed Order No. DE 6000 (the Agreed Order) entered with the Washington State Department of Ecology (Ecology).

The Treatability Testing Work Plan (TTWP; Aspect Consulting, 2024) defined the approach and methods to evaluate whether the S/S technology is a viable remedial technology for the Site and should be included in remedial alternative development as part of the FS. The goal of S/S treatability testing was to evaluate potential effectiveness of various cementitious materials (referred to as 'cements') for reducing the leachability of Site contaminants of potential concern (COPCs) from Site soils. The collected data would also be used to determine preliminary Site-specific design parameters that can be used in the

FS to evaluate practicable applications of the technology. This Memo presents the results and evaluation of S/S treatability testing and establishes a basis of S/S design.

2 Site Background

The Property encompasses approximately 13.7 acres of upland and 4.2 acres of aquatic property (Embayment) on the western shoreline of the Lower Duwamish Waterway (LDW). The shoreline where the upland meets the Embayment at the eastern edge of the Property has been redeveloped numerous times during the history of both the Property and the LDW. A wooden bulkhead was constructed before 1922, when the Property was filled with material from the initial dredging of the LDW. The approximate location of the bulkhead is shown on Figure 1. The current shoreline was formed from approximately 1967 to 1968 as soil from the northern portion of the Property (which had been previously dredged and placed there) was used to expand the shoreline eastward approximately 40 to 60 feet. This bank fill material to the east of the bulkhead consists of a heterogeneous mix of silt, sand, gravel, and construction debris such as bricks, wood, and concrete.

Historical Property operations have resulted in contamination primarily in the fill soils and silt aquitard, and in the groundwater present in both the fill and underlying sand aquifer units (ERM, 2020). Two distinct aquifers are present at the Site: shallow, unconfined groundwater is present within the shallow and dredged fill material at depths between 4 and 13 feet below ground surface, and deep, confined groundwater is present within the lower alluvial sand unit. These two systems are hydraulically separated by the native silt floodplain/tidal deposits, which act as an aquitard.

Site COPCs potentially targeted by S/S treatment include arsenic, copper, pentachlorophenol (PCP), and dioxins and furans (D/F). The magnitude and extent of arsenic screening level exceedances in soil and groundwater (Figure 1) and potential discharge of dissolved arsenic to the LDW above groundwater screening levels based on surface water protection make arsenic the highest priority contaminant for S/S treatment. Higher arsenic concentrations (i.e., those more than two times the natural background value of 7.3 milligrams per kilogram [mg/kg]) are generally limited to the various fill soils and the upper portion of the silt aquitard at depths less than 15 to 20 feet below ground surface (bgs). Additionally, the majority of arsenic mass in soil (i.e., concentrations orders of magnitude higher than the natural background value) is contained within the shallow and dredge fill materials at depths of 9 to 12 feet bgs.

3 S/S Testing Scope and Objectives

S/S testing was conducted to evaluate the potential effectiveness of various S/S mixes and cement reagents (cements) in reducing the mobility of contaminant mass and mass transfer from soil to groundwater by reducing the hydraulic conductivity (K) of the soil. The primary objectives of testing were to evaluate S/S mixes based on three primary performance criteria:

1. Achieve an unconfined compressive strength (UCS) of at least 50 pounds per square inch (psi) according to ASTM International (ASTM) D1633.
2. Achieve an average K equal to or less than 1×10^{-6} centimeters per second (cm/s) according to ASTM D5084D (flexible wall permeameter).
3. Reduce leachability of arsenic as determined by the United States Environmental Protection Agency's (EPA's) leaching environmental assessment framework (LEAF; SW-846 Method 1315 and Method 1316). Specific leachability reduction targets will be evaluated in the FS based on cleanup standards and remedial alternatives yet to be determined.

The TTWP proposed a K performance criterion of less than 1×10^{-6} cm/sec. This criterion was selected because it is an industry standard value that is generally conservative for wide range of site conditions; site-specific criteria may be more appropriate. EPA (1989) proposes a site-specific criterion of reducing K to at least two orders lower than native. Slug testing at MW-13S, MW-19S, and M-33S conducted as part of the DGI concluded that Site Ks for the Shallow zone in the area of the Site being evaluated for S/S treatment ranged from 3.4×10^{-3} cm/sec to 3.2×10^{-2} cm/sec. Therefore, 1×10^{-6} cm/s is an overly conservative goal, and a target two order-of-magnitude reduction from the lower estimated K (3.4×10^{-5} cm/sec) is sufficiently conservative.

In addition to these primary objectives, the reduction of leachability of other COPCs (copper, PCP, and D/F) by S/S was also evaluated. These COPCs are not as widely distributed at the Site and have fewer and/or lesser exceedances of surface water protection screening levels near the shoreline. These COPCs are not anticipated to drive technology application and were therefore only evaluated in the mixes with the best primary performance criteria performance.

S/S testing involved collecting soil samples for testing, physically and chemically characterizing the soils, mixing them with cement stabilization reagents using a range of mixes, and testing the mixes for physical properties and chemical leachability at different

curing times. Characterization, mixing, and testing were subcontracted to ENTACT, LCC (ENTACT), who subcontracted Eurofins Environment Testing Northeast, LLC in Pittsburgh, Pennsylvania (Eurofins) for leach testing and chemical analysis.

4 Methods

Treatability testing consisted of the following general steps described in further detail below:

- The FS Data Gaps Investigation (DGI) was conducted and included well installation, soil coring, and groundwater sampling. Soil coring was conducted using sonic drilling to facilitate collection of treatability testing soil samples.
- Discrete analytical results from the DGI cores were evaluated, and intervals of the cores were selected for treatability testing and shipped to ENTACT's lab. Selection of media for treatability testing was reviewed with Ecology in a meeting on February 19, 2025. Selection of the soil and groundwater to be used for S/S testing was summarized in an email to Ecology on February 24, 2025, and Ecology approved the selections and treatability testing approach in a reply on February 25, 2025.
- Soil core intervals were homogenized for testing, and samples of the homogenates were submitted for baseline geotechnical and analytical testing including baseline leach testing. Baseline geotechnical testing was conducted by Geotechnics in Pittsburgh, Pennsylvania, and baseline analytical and leach testing were conducted by Eurofins.
- Homogenates were mixed with cements using a range of mixes, grout properties were tested, and cylinders were cast and set to cure.
- Cylinders underwent physical testing according to the pre-determined schedule between 1 and 28 days of curing.
- Based on the results of UCS testing through 28 days of curing, select mixes were tested for UCS at 56 days, and K at 28 days and 56 days.
- Based on the results of physical testing through 56 days, four mixes were selected for LEAF 1315 leach testing.
- The baseline/untreated soil and treated soil leach testing results were used to estimate potential leaching reduction to be achieved by treatment and the diffusivity of the treated soil for potential use in future groundwater modeling.

4.1 Soil Sample Collection, Selection, and Baseline Testing

The TTWP identified soil to be collected from three representative areas and water to be collected from three representative sources that would be used in testing. During the DGI, soil cores and groundwater were sampled and submitted for lab analysis to achieve DGI objectives. Soil from the same cores was set aside on-Site using 5-gallon buckets for treatability testing. DGI data were reviewed, and soil and groundwater samples were selected for treatability testing. Data reviewed to support soil and water selection included soil boring logs, Unified Soil Classification System (USCS) classification, field observations of soil moisture content, field x-ray fluorescence (XRF) analysis of arsenic, and lab analytical results. Table 1 summarizes the media selected for testing, the data evaluated in selection, and rationale for selecting those locations.

Methods used to collect soil samples were consistent with the TTWP. Soil was collected from continuous cores that were retrieved using sonic drilling methods, and soil underwent USCS logging. Soil boring logs for DGI drilling locations are provided in Appendix A. Soil selected for treatability testing was shipped to ENTACT's Pittsburgh, Pennsylvania laboratory.

Preliminary selection of media for treatability testing was reviewed with Ecology during a meeting on February 19, 2025. Selection of soils for treatability testing and modifications to the proposed mixes of Site soil/groundwater based on the DGI results were summarized in an email to Ecology on February 24, 2025, and Ecology approved the soil selections and modifications in a reply on February 25, 2025. Based on those discussions, three soils were selected for homogenization and treatability testing:

- **Soil #1** targeted high arsenic concentrations in soil and groundwater that would represent the center of a potential S/S treatment area. In addition to targeting soil with high arsenic concentrations for Soil #1, soil from four boring locations just inland of the southern shoreline area containing various materials considered more challenging for ISS (including debris, spent carbon, and sawdust) were combined to develop a potential "worst case" soil for treatment.
- **Soil #2** targeted moderate arsenic concentrations to represent the perimeter of a potential S/S treatment area. While the original objective of containing moderate arsenic concentrations was maintained, soil was selected to also include high concentrations of PCP to evaluate PCP leaching reduction.
- **Soil #3** in the TTWP was a contingency if elevated concentrations of COPCs were detected in the native alluvial sands underlying the silt aquitard. As discussed with

Ecology, Soil #3 was repurposed to test shoreline soils, which were determined during the DGI contained debris, spent carbon, and high levels of organics, and would be exposed to brackish surface water.

Once the soil core intervals comprising each treatability test soil were selected, the selected intervals of each soil were homogenized into Soil #1A, Soil#2A, and Soil #3A. Samples from Soil #1A underwent chemical analyses for pH (ASTM D4972), moisture content (ASTM D2216), organics content (ASTM D2974), arsenic and copper (EPA 6020B). Soil #2A was analyzed for the same analytes and also PCP (EPA 8270E LL), and D/F (EPA 8290A). These baseline homogenate results are summarized in Table 2¹.

To understand potential geotechnical properties of soils from two different areas of potential ISS treatment, additional homogenates were created: Soil #1G/2G, representing fill unit soils in the potential arsenic source area farther inland, and Soil #3G, representing bank fill and the upper portion of the silt aquitard along the shoreline. Each of these homogenates underwent geotechnical characterization consisting of analysis of grain size distribution, Atterberg limits, USCS classification, moisture content, and optimal compaction moisture content (Proctor test). The results of those analyses were consistent with field observations and are summarized in Appendix B.

Soils selected for leach testing (Soils #1A and #2A) underwent baseline leach testing using EPA LEAF Method 1316, which consists of mixing the soil with water at specified liquid-to-solid (L/S) ratios and analyzing eluate for target constituents. The EPA Method 1316 results are evaluated with respect to Site hydrogeologic and potential S/S treatment area dimensions to transform the L/S ratios into equivalent time intervals to facilitate comparison with EPA Method 1315 results. The EPA Method 1316 results and analysis are discussed in Section 6.

4.1.1 Soil #1A Baseline Results

As described in the TTWP, the purpose of Soil #1A testing was to test the treatability of a “worst case” soil containing high arsenic concentrations. Soil from the locations and depth intervals with high arsenic concentrations were composited to create Soil #1A. The DGI results for soils used in treatability testing averaged 274 milligrams per kilogram (mg/kg) arsenic (Table 1). Baseline homogenate results for Soil #1A confirmed that the selection criterion was achieved with an arsenic concentration of 240 mg/kg. Soil #1A also contained

¹ Soil #1A was not analyzed for PCP or D/F in baseline testing or leachate testing based on DGI results from discrete sample intervals which indicated relatively low or non-detect PCP concentrations.

68 mg/kg copper, above the preliminary screening level of 36 mg/kg, indicating suitability for copper leach testing. Soil #1A was determined to have a circumneutral pH of 7.17 and a moisture content of 32.4%.

Soil #1A was also selected to include materials which, based on USCS classification and field observations, could affect physical properties of the treated soil, and included wood debris and sawdust, bentonite, potential spent carbon, and other anthropogenic debris. The baseline organics content of Soil #1A was 6.3 percent, confirming elevated organics.

4.1.2 Soil #2A Baseline Results

The purpose of Soil #2A was to test soil with lower arsenic concentrations more representative of the periphery of a proposed treatment area and also containing a high PCP content suitable for leaching testing. The DGI analytical results for Soil #2A intervals contained an average arsenic concentration of 62 mg/kg and was confirmed to be suitable for leach testing by the homogenate concentration of 150 mg/kg. Soils selected to make up Soil #2A contained an average PCP concentration of 5.1 micrograms per kilogram (µg/kg) and was confirmed to be suitable for leach testing by the homogenate concentration of 8 mg/kg. DGI soil cores were not analyzed for D/F, but baseline testing of Soil #2A confirmed substantial concentrations of D/F (summarized in Table 2) that confirmed it was suitable for D/F leach testing.

4.1.3 Soil #3A Selection and Soil #3G Baseline Results

The purpose of Soil #3A was to evaluate shoreline soils for S/S treatment. Soil cores intervals comprising Soil #3A included bank fill material that contained debris and potential spent carbon and silt aquitard material representative of the vertical interval of the riverbank identified for potential solidification.

Geotechnical testing of soil #3G, also from the shoreline area, indicated a pH of 4.09. Groundwater in this area has also exhibited acidic pH, including a pH of 5.4 measured at MW-12S, located just upgradient of the Soil #3G location.

4.2 Water Sample Collection and Selection

The TTWP identified three types of water to be used during testing:

- **Water #1** consisted of Site groundwater representing ambient groundwater that would be mixed into the solidified soil during solidification. The TTWP stated that Water #1 would consist of shallow groundwater containing moderate concentrations of arsenic exceeding the screening level, collected from the potential

treatment area. Groundwater from MW-13S was selected based on its DGI results of 650 micrograms per liter ($\mu\text{g/L}$) total arsenic and 590 $\mu\text{g/L}$ dissolved arsenic. Baseline analytical testing indicated a concentration of 620 $\mu\text{g/L}$ total arsenic, confirming suitability for use in treatability testing.

- **Water #2** consisted of tap water from an on-site source, representing makeup water to be used during S/S mixing. Water #2 was collected from a hose bib located on a facility building in the western portion of the Property (Figure 2). The hose bib is understood to be connected to a municipal water supply, and did not contain detectable arsenic or PCP
- **Water #3** consisted of deionized water made anaerobic at the laboratory by nitrogen sparging and was used as the leach testing eluent. Laboratory testing indicated that nitrogen sparging reduced the dissolved oxygen (DO) concentration from 7.5 to 3.5 mg/L. The DO concentrations measured in shallow, shoreline wells during the DGI ranged between 0.13 and 1.47 mg/L².

Baseline analytical results for treatability testing waters are provided in Appendix B.

4.3 S/S Mixing and Mix Testing

4.3.1 S/S Mixing

The TTWP identified 22 different combinations of soil, cements, and water (mixes) for testing. Eight mixes were specified for Soil #1A, and eight mixes containing the same cement dosing were specified for Soil #2A. These mixes consisted of total cement dosing³ ranging from 4 percent to 10 percent, which included varying percentages of Type IL ("standard") Portland Cement (PC) and ground granulated blast furnace slag (BFS). Three additional mixes included Type V (sulfate-resistant) PC in place of Type IL PC, mixed with BFS and Soil #2A. Three mixes of Type IL PC and BFS were specified for mixing with Soil #3A. The final mixes are summarized in Table 3.

Cements were shipped from suppliers directly to ENTACT's lab. Type IL PC was supplied by CalPortland in Seattle, WA, Type V PC was supplied by CalPortland in Redding, CA, and BFS

² While the eluent DO concentration exceeds those measured in Shallow wells, this is an expected and unavoidable byproduct of the methods prescribed in EPA Method 1315. The leaching baths' exposure to oxygenated air over each leaching period inevitably causes elevated DO in eluent during the test.

³ All cement doses described in this memo are expressed in percentages of cementitious materials by mass.

was supplied by LaFarge in Seattle, WA. ENTACT measured and mixed the soil, cement, and water to the specified ratios, tested properties of the grout mixtures, cast cylinders for testing, and initiated curing. Physical testing was then conducted over the following 56 days, followed by leach testing.

4.3.2 Physical Testing

Physical testing included UCS, K, and moisture content (conducted by Geotechnics in Pittsburgh, Pennsylvania) and volumetric expansion (conducted by ENTACT) in accordance with the methods noted in Table 3.

Results were evaluated as physical testing proceeded to select mixes for subsequent testing. The general criteria that were used to select mixes for additional testing focused on selecting mixes that 1) spanned a range of cement dosages, prioritizing efficiency, 2) facilitated comparison between Soil #1A and Soil #2A results, and 3) could potentially meet the UCS and K performance criteria specified in the TTWP. The analyses that were selected are reflected in the summary of physical test results provided in Table 3. The quantities and timing of all physical testing were conducted in accordance with the TTWP, except that two additional Soil #2A mixes were tested for K at 56 days, and four additional Soil #2A mixes were tested for moisture content at 28 days.

While removing the Soil #3A test cylinders from their molds after 7 days of curing, the cylinders did not hold shape, indicating they would likely not meet physical test criteria at later curing times, and higher cement dosing would be required to achieve test objectives. New mixes were specified with total cement dosing ranging from 15 to 20 percent, and test cylinders were cast. The mixes and results for the updated Soil #3A dosing are reflected in Table 3.

4.3.3 Leach Testing

Leach testing using EPA Method 1315 was conducted on select treated soils to evaluate leaching reduction performance by S/S treatment. EPA Method 1315 consists of submerging cylinders of treated soil in a leaching bath for discrete intervals, after each of which the eluate water is replaced by new eluent. The leach testing time intervals prescribed by Method 1315 are 2 hours, 1 day, 2 days, 7 days, 14 days, 28 days, 42 days, 49 days, and 63 days.

Two treated soil mixes of each Soil #1A and Soil #2A were selected for leach testing using EPA Method 1315. Mix selection was based on which mixes would be most likely to reliably achieve UCS and K performance criteria during implementation, at the most efficient

dosing percentages. The selected mixes contained 10 percent total cement, with one mix of each soil containing 10 percent PC and the other containing 7 percent BFS and 3 percent PC. Leachate from Soil #1A was tested for arsenic and copper, and leachate from Soil #2A was tested for arsenic, copper, PCP, and D/F using the analytical methods described in Section 4.1.

4.3.4 Waste Disposal

Following completion of treatability testing, all treated and untreated soil was shipped back to the Site, where the soil was containerized and stored for disposal with other Site waste in accordance with federal, state, and local regulations.

Excess water from treatability testing was disposed in accordance with federal, state, and local regulations. Treatability Testing Lab disposed of excess Water #1, and leach testing eluate was disposed by the Analytical Lab.

5 Physical Testing Results

Physical test results of the S/S mixes are summarized in Table 3.

The physical properties of the grout were generally consistent with expectations, with grout density and viscosity increasing with cement dosage. Pocket penetrometer results also showed increasing strength with increasing cement dosage and curing time, and all Soil #1A mixes achieved the target criteria of 4.5 psi by day 7 of curing.

Moisture content of solidified samples ranged from 28.8 percent to 32.7 percent for Soil #1A and Soil #2A, with all mixes tested for both soils having moisture contents within 1.6% of each other.

Volumetric expansion of the eight Soil #1A mixes tested ranged from 11 percent to 18 percent and did not appear to correlate with cement dosing or other physical parameters. Entact suggests the consistency in expansions is a result of the selected ratios of added water to cement, with added water decreasing as cement increases. The same eight mixes of Soil #2A (using Type IL PC) were not tested for volumetric expansion. All three Soil #2A Type V PC mixes were tested for volumetric expansion and fell within the range of Soil #1A results, with values ranging from 13 percent to 15 percent. Volumetric expansion results for Soil #3A mixes, which included mixes with 15, 15, and 20 percent cement, were 32 percent, 34 percent, and 42 percent, respectively, indicating a substantial increase in expansion with dosing exceeding 10 percent.

5.1 Unconfined Compressive Strength (UCS)

UCS results were evaluated against the performance criteria proposed in the TTWP, which was that UCS should meet or exceed 50 psi. This criterion is an industry-standard criteria that may be refined as future Site usage is evaluated during the FS. Results are summarized as follows:

- UCS generally increased with cement dosage.
- Mixes with higher proportions of BFS generally had higher 28- and 56-day UCS than corresponding mixes with only PC.
- UCS after 56 days was consistently higher than UCS after 28 days, particularly for mixes containing BFS. This is consistent with expected longer cure times for BFS mixes.
- **Soil #1A** - No Soil #1A mixes with 2, 4, and 6 percent cement exceeded 50 psi UCS by 28 days and were not expected to achieve 50 psi by 56 days and therefore not tested. All Soil #1A mixes with at least 8 percent cement exceeded 50 psi UCS by 28 days.
- **Soil #2A** - All Soil #2A mixes, which ranged from 2 percent cement to 10 percent cement exceeded 50 psi by 28 days.
- **Soil #3A** - All of the revised Soil #3A mixes, which included 15 percent and 20 percent cement, exceeded 50 psi by 28 days.
- **Type V PC** - Each of the three mixes using Type V PC had similar but higher UCS than the equivalent mixes using Type I/II or IL PC for the same soil (Soil #2A).

The consistently lower UCS of Soil #1A mixes compared to similar Soil #2A mixes may be due to the presence of debris, potential spent carbon, sawdust, and woody materials in the shallow fill and bank fill soil used to create the Soil #1A homogenate.

The higher cement dosing required to achieve UCS targets with Soil #3A may have been due to a combination of high debris content and high moisture content⁴.

⁴ Soil #3A was not measured for moisture content, but Soil #3G, which was also collected from the shoreline area and was described as having similar saturation in Table 1, had a moisture content of 50.8 percent, substantially higher than for Soils #1A (32.4 percent) and #2A (29.2 percent).

5.2 Hydraulic Conductivity (K)

Key results from K testing are summarized below:

- **Soil #1A**
 - o All Soil #1A mixes had a K less than 3.4×10^{-5} cm/sec at 28 or 56 days.⁵
 - o Only the 3% PC and 7% BFS mix at 56 days achieved a K lower than 1×10^{-6} cm/s.
- **Soil #2A**
 - o All Soil #2A mixes achieved a K of less than 3.4×10^{-5} cm/sec by 56 days.
 - o Both Soil #2A mixes with 10 percent cement achieved a K more than one order of magnitude lower than 1×10^{-6} cm/sec at 56 days.
- **Comparison between Soil #1A and Soil #2A results**
 - o For the 6 percent mixes with the same PC/BFS dosing and tested in duplicate, the K for Soil #1A and Soil #2A, both averaged 1.3×10^{-5} cm/sec.
 - o For the 10 percent mixes with the same dosing PC/BFS dosing, all K results for Soil #2A were lower than the corresponding mixes for Soil #1A.
- **Soil #3A** - Both mixes tested for K, which contained 15 percent cement and 20 percent cement, achieved a K more than an order of magnitude lower than 1×10^{-6} cm/sec at 28 days.

Overall, K results were variable at lower dosing percentages but reliably achieved two orders of magnitude reduction at 10% cement dosing for both Soil #1 and Soil #2. Both mixes with 10% dosing had lower K with higher BFS content, indicating BFS may enhance K reduction performance. The higher K results for Soil #1A compared to Soil #2A is consistent with UCS results and may be due to the higher debris content of Soil #1A, and suggests that the physical characteristics of Soil #1A make it an appropriate 'worst case' soil for leaching analysis.

⁵ For mixes tested in duplicate at 28 days, the average of the two values was compared against performance criteria.

6 Leach Testing Analysis and Results

Leach testing results were analyzed to evaluate three key parameters:

1. **The mass release vs. time relationship for treated and untreated soil:** Understanding this relationship allows for the estimation of cumulative mass release at a given time, the parameter used to evaluate leaching reduction.
2. **Leaching reduction achieved by soil treatment:** Estimated cumulative mass release for treated and untreated soil can be compared to evaluate the reduction in leaching achieved by treatment.
3. **Diffusivity of COCs within treated soil:** Diffusivity is a potential input parameter in groundwater fate and transport modeling of S/S-treated soil. Values for this parameter were calculated to facilitate future groundwater modeling, if needed.

6.1 Leach Testing Analysis

Analysis of EPA Method 1315 results followed the methods presented in Section 12.2 of EPA Method 1315, including the calculation of interval mass release, cumulative mass release, and observed diffusivity. Cumulative mass release vs. time was plotted to create a leaching curve for each soil and target analyte. A summary of the 1315 results and the results of the mass release and diffusivity calculations are presented in Table 4.

EPA Method 1316 results consist of eluate analytical results for varying L/S ratios for each untreated soil. EPA Method 1316 results were compared to EPA Method 1315 results using the methods presented in Gentry et al., 2014, which requires evaluation of Site hydrogeologic parameters to estimate a percolation rate (i.e., the rate of groundwater flow through untreated soil) that is used to transform the Method 1316 L/S ratios into equivalent time intervals. A range of Site conditions were used to estimate upper and lower bounds of percolation rate. Percolation rate calculations are summarized in Table 5. Cumulative mass releases for 1316 results were then calculated in Table 6 using the Table 5 percolation rates.

Leaching analysis was conducted for arsenic, copper, PCP, 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, OCDD, and OCDF. Other D/F analytes were not evaluated because many results for these analytes were below reporting limits, limiting the usefulness, precision, and accuracy of evaluation these results. Complete results for EPA Methods 1315 and 1316 for all analytes are provided in Appendix B.

Cumulative mass release vs time results summarized in Table 4 (1315 treated soil results) and Table 6 (1316 untreated soil results) were plotted for each soil and analyte combination, with each plot containing the two S/S mixes tested for each soil and mass release for untreated soil using the range of percolation rates calculated in Table 5. These graphs are provided in Figures 3 through 6 for arsenic, copper, PCP, and D/F, respectively. The separation between the curves (distance in the y direction) represents leaching reduction at a given time. Because the cumulative mass release datasets for the treated and untreated soils occur at different leaching timespans, a best fit power function curve was generated for each dataset and the best fit curves were used to estimate leaching reductions for each mix and analyte at 63 days. The best fit curves shown on Figures 3 through 6 for each leaching dataset and estimated leaching reductions are summarized in Table 7.

For the 1315 (treated soil) leach results for PCP for Soil #2A, 11 of the 16 results for each mix tested were nondetect, and 4 of the 16 were estimated concentrations due to detections below the reporting limit (J-flagged). Cumulative mass releases were calculated using one half the method detection limit for nondetect results and were plotted in Figure 5, and reductions were calculated and summarized in Table 7. Actual PCP leaching reductions achievable by S/S treatment may be lower.

Diffusivities were calculated using EPA Method 1315 eluent analytical result. Mean diffusivities were calculated for each analyte/soil/mix combination. Diffusivities are summarized in Table 4.

6.2 Leach Testing Results

The results of leach testing analysis are summarized as follows:

- **Arsenic:**
 - o The 10% PC mix achieved at least 99 percent arsenic leaching reduction for both soils.
 - o The 3% PC and 7% BFS mix achieved at least 97 percent arsenic leaching reduction for both soils.
- **Copper:**
 - o The 10% PC mix achieved at least 95 percent copper leaching reduction for both soils.

- o The 3% PC and 7% BFS mix achieved at least 98 percent copper leaching reduction for both soils.
- **PCP:**
 - o The accuracy of results is limited due to the frequency of nondetect results, and PCP leaching reduction estimates ranged from 65 percent to 98 percent.
- **D/F**
 - o Both mixes achieved at least 99 percent reduction for all four D/F analytes evaluated, for both soils.
- PC-only mixes reduced leaching of arsenic more than BFS-containing mixes, while BFS-containing mixes reduced leaching of copper, PCP, and D/F more than PC-only mixes.
- Greater arsenic, copper, and PCP leaching reductions were achieved for Soil #2A than for Soil #1A.
- The difference in leaching reduction percentages between the two mixes was less than 3 percent for all analytes except PCP.
- High-end leaching reduction estimates exceeded 99 percent for all mixes, soils, and analytes except PCP.

Mean diffusivities for each analyte and mix are summarized in Table 4. Diffusivities are not evaluated directly in this memo but may be evaluated in the future if needed to support groundwater modeling.

The greater leaching reductions observed in Soil #2A compared to Soil #1A are consistent with the lower K achieved with Soil #2A. The greater leaching reductions observed for copper, PCP, and D/F when using BFS-containing mixes compared to PC-only mixes for the same soil are also consistent with the lower hydraulic conductivity achieved with the BFS-containing mixes. Arsenic leaching may have been higher when using BFS-containing mixes due to effects relating to BFS cement chemistry. However, substantial arsenic leaching reduction was achieved by both mixes.

7 Conclusions and Recommendations

The following conclusions and recommendations are made based on the results of treatability testing:

- All mixes with at least 8 percent cement achieved the 50 psi performance criteria by 56 days. Mixes with BFS consistently achieved higher UCS than PC-only mixes with the same total cement content.
- K results were variable at lower dosing percentages but reliably achieved two orders-of-magnitude reduction at all dosing percentages for both Soil #1A and Soil #2A that were tested for K. Both mixes with 10 percent dosing had lower K with higher BFS content, indicating BFS may enhance K reduction performance.
- BFS-containing mixes outperformed PC-only mixes for all physical and leach testing except arsenic leaching. Only the low-end estimate of arsenic leaching for the 'worst case' Soil #1 did not achieve a 99 percent reduction. Therefore, both PC-only and BFS-containing mixes should be retained for evaluation in the FS.
- Mixes for both Soil #1A and Soil #2A with at least 10 percent cement met physical performance criteria and achieved 97 percent or greater reduction in leaching for all analytes except PCP⁶, and are potentially suitable for use at the Site. Further evaluation of required leaching performance criteria will be performed in the FS.
- Soil #3A results indicated that mixes with at least 15 percent cement achieved physical performance criteria. Based the physical performance results these mixes are also likely to achieve leaching performance criteria.
- The high moisture content of Soil #3A may have affected dosing required to achieve physical performance criteria. Moisture content should be carefully evaluated during design.
- Type V PC mixtures performed at least as well as Type IL PC mixtures in physical testing.
- For the same mixes, treatment of Soil #2A achieved better performance, which is consistent with the lower debris content compared to Soil #1A. Therefore, design or treatability testing results for higher debris content soils should be sufficiently conservative for soils with less debris.

⁶ As noted above, leaching reduction estimates for PCP are likely overly conservative due to the high frequency of non-detects in leachate. Based on the high number of non-detected concentrations, it is highly likely that the tested treatment mixes would provide sufficient reduction in PCP leaching.

8 References

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9 Limitations

Work on this project was performed for CalPortland (Client), and this memorandum has been prepared in accordance with generally accepted professional practices for work of this nature and under comparable local conditions at the time services were provided. This letter is not intended to serve as a legal opinion, and no warranties, expressed or implied, are provided.

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Attachments

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Appendices

Appendix A. DGI Boring Logs
Appendix B. ENTACT ISS Bench Scale Study Report

TABLES



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Table 1 - Media Selection and Supporting Analysis

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

DRAFT

Soil Homogenate	Sample Selection Rationale ¹	Material Description	Saturation	Arsenic Field Screening ² (mg/kg)	Arsenic ³ (mg/kg)	PCP ³ (mg/kg)	Boring Location	Depth Interval (ft bgs)
1A	"Worst case" soil from potential upland treatment area both geotechnically (sawdust, fill debris) and chemically (high organic carbon, arsenic source mass)	Dredge Fill & Native Soil (Fibrous wood debris)	Saturated	350	240 - 390	--	GP-81	7 - 11
		Shallow Fill (Potential Carbon/Sawdust/Bentonite)	Unsaturated	153	200	1	MW-13D	2.5 - 5
		Bank Fill	Moist	100	120	--	MW-46D	0 - 5
		Bank Fill (Shallow Fill with brick and concrete debris)	Saturated	175	460	<0.05 U	MW-47D	8 - 11
1G & 2G	Representative grain size and debris	Shallow Fill & Dredge Fill	Unsaturated & Saturated	32.4	36	--	GP-82	5 - 10
2A	Soil from potential upland treatment area containing PCP source mass and D/F	Shallow Fill	Unsaturated	59.2	83	23	GP-83	1 - 5
		Dredge Fill & Native Soil	Unsaturated & Saturated	4.5	41	5.1	GP-83	8 - 11
3A	Soil representing potential shoreline treatment area	Bank Fill (with debris/potential spent carbon)	Saturated	877	67 - 940	--	MW-46D	8 - 12
3G	Soil representing potential shoreline treatment area	Bank Fill (Shallow Fill)	Saturated	19	--	<0.05 U	MW-48D	5 - 8.5
		Silt Aquitard	Moist	6.5	9.5	--	MW-48D	8.5 - 12
NS	Excess soils not selected for treatability testing. DGI results indicated Deep zone contained low arsenic concentrations, therefore only limited aquitard material	Silt Aquitard	Moist	87	24	<0.05 U	GP-81	12 - 15
		Silt Aquitard	Moist	6	6.7	<0.05 U	GP-82	11 - 15
		Bank Fill (Shallow Fill)	Unsaturated	54	50	0.87	MW-47D	3 - 8

Notes

1. Treatability test media selection was approved by Ecology in an email on February 25, 2025.
2. Field screening was conducting using X-ray fluorescence (XRF) testing during soil coring and sample collection and represent estimated concentrations
3. Arsenic and PCP results presented in this table are from discrete samples collected during the DGI. Analytical results for soil homogenates are presented in Table 2.
- mg/kg = milligrams per kilogram
- ft bgs = feet below ground surface
- D/F - Dioxins and furans
- NS - not selected for treatability testing
- PCP - Pentachlorophenol
- "A" soils were used for physical, chemical, and leach testing of treated and untreated soils
- "G" soils were used for sieve analysis, Atterberg limit, and Proctor testing



Table 2 - Baseline Homogenate Results

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

			Soil 1A	Soil 2A
Analyte or Property	Method	Units	Result	Result
Homogenate Soil Properties - 6/26/2025				
Soil pH	ASTM D4972	standard units	7.17	6.95
Average Moisture Content	ASTM D2216	percent	32.4	29.2
Organics content	ASTM D2974	percent	6.3	6.9
Homogenate Analytical Results - 5/27/2025				
Arsenic	6020B	mg/kg	240	150
Copper			68	330
Pentachlorophenol	8270E LL	ug/kg	NT	8,000 E 4 FL
1,2,3,4,6,7,8-HpCDD	8290A	ng/kg	NT	34,000
1,2,3,4,6,7,8-HpCDF			NT	18,000
1,2,3,4,7,8-HxCDD			NT	<1,900
1,2,3,4,7,8-HxCDF			NT	5,400
1,2,3,4,7,8,9-HpCDF			NT	2,800 J
1,2,3,6,7,8-HxCDD			NT	<1,900
1,2,3,6,7,8-HxCDF			NT	<1,900
1,2,3,7,8-PeCDD			NT	<1,900
1,2,3,7,8-PeCDF			NT	<1,900
1,2,3,7,8,9-HxCDD			NT	<1,900
1,2,3,7,8,9-HxCDF			NT	<1,900
2,3,4,6,7,8-HxCDF			NT	<1,900
2,3,4,7,8-PeCDF			NT	<1,900
2,3,7,8-TCDD			NT	<190
2,3,7,8-TCDF			NT	<580
OCDD			NT	#####
OCDF			NT	110,000

Notes:

mg/kg = milligrams per kilogram

ug/kg = micrograms per kilogram

ng/kg = nanograms per kilogram

Bold indicates analyte detected

< - result not detected; reporting limit shown

E - Result exceeded calibration range

FL - MS and/or MSD recovery below control limit

H - Sample was prepped or analyzed beyond the specified holding time

J - Result detected between method detection limit and reporting limit; concentration estimated

NT - Not Tested

4 - The analyte present in the original sample at concentration greater than 4 times the matrix

Date Mixed	Soil #	Mix ID	Mix Design					Grout Properties			Treated Soil Properties											
			Type IL Portland Cement	Type V Portland Cement	Blast Furnace Slag	Total Cement	Water: Cement Ratio	Grout pH ¹	Grout Viscosity ²	Grout Density ³	Pocket Penetrometer ⁴			Moisture Content ⁵	Volumetric Expansion ⁶	Unconfined Compressive Strength ⁷				Hydraulic Conductivity ⁸		
Units			%	%	%	%		pH	seconds	g/cm ³	tsf			%	%	psi				cm/sec		
Time of Test (Days curing)											1 day	3 days	7 days	28 days	28 days	7 days	28 days	28 days	56 days	28 days	28 days	56 days
Target Result											>4.5 tsf					> 50 psi				< 1E-06 cm/sec; <3.4E-05 cm/sec ⁹		
5/28/2025	Soil #1A	S1-2PC-2BFS	2%	--	2%	4%	1.25	12	30	1.42	2	4.5	>4.5	NT	16.1%	12	16	NT	NT	NT	NT	NT
5/28/2025		S1-6PC	6%	--	--	6%	1.25	12	32	1.43	3	>4.5	>4.5	NT	17.9%	27	33	32	NT	2.1E-07	NT	NT
5/28/2025		S1-3PC-3BFS	3%	--	3%	6%	1.25	11	30	1.42	2	>4.5	>4.5	32.8%	16.5%	22	25	23	NT	7.4E-09	NT	NT
5/28/2025		S1-2PC-4BFS	2%	--	4%	6%	1.25	12	31	1.42	2.75	>4.5	>4.5	30.6%	11.2%	30	27	27	NT	4.7E-06	2.1E-05	NT
5/28/2025		S1-8PC	8%	--	--	8%	1	12	34	1.52	4	>4.5	>4.5	30.9%	12.5%	53	66	NT	NT	2.7E-06	NT	NT
5/28/2025		S1-2PC-6BFS	2%	--	6%	8%	1	12	33	1.50	2.5	>4.5	>4.5	32.7%	16.1%	44	76	80	NT	6.9E-06	6.7E-06	NT
5/30/2025		S1-10PC	10%	--	--	10%	0.85	12	41	1.59	>4.5	>4.5	>4.5	NT	13.5%	94	129	NT	144	NT	NT	1.5E-06
5/30/2025		S1-3PC-7BFS	3%	--	7%	10%	0.85	12	40	1.58	>4.5	>4.5	>4.5	NT	17.2%	59	151	NT	197	1.6E-06	NT	5.0E-07
5/29/2025	Soil #2A	S2-2PC-2BFS	2%	--	2%	4%	1.25	NT	NT	NT	NT	NT	NT	28.8%	NT	NT	56	NT	NT	1.8E-08	2.3E-05	NT
5/29/2025		S2-6PC	6%	--	--	6%	1.25	NT	NT	NT	NT	NT	NT	29.4%	NT	NT	114	NT	NT	NT	NT	NT
5/29/2025		S2-3PC-3BFS	3%	--	3%	6%	1.25	NT	NT	NT	NT	NT	NT	31.8%	NT	NT	139	NT	NT	NT	NT	NT
5/29/2025		S2-2PC-4BFS	2%	--	4%	6%	1.25	NT	NT	NT	NT	NT	NT	31.7%	NT	NT	85	NT	NT	2.1E-05	4.9E-06	NT
5/29/2025		S2-8PC	8%	--	--	8%	1	NT	NT	NT	NT	NT	NT	30.2%	NT	NT	148	NT	NT	NT	NT	NT
5/29/2025		S2-2PC-6BFS	2%	--	6%	8%	1	NT	NT	NT	NT	NT	NT	31.1%	NT	NT	159	NT	NT	NT	NT	NT
5/29/2025		S2-10PC	10%	--	--	10%	0.85	NT	NT	NT	NT	NT	NT	29.6%	NT	NT	233	NT	309	NT	NT	4.0E-07
5/29/2025		S2-3PC-7BFS	3%	--	7%	10%	0.85	NT	NT	NT	NT	NT	NT	31.0%	NT	NT	240	NT	349	NT	NT	2.2E-08
5/30/2025		S2-2PC-V-4BFS	--	2%	4%	6%	1.25	NT	NT	NT	NT	NT	NT	NT	14.7%	66	97	NT	NT	NT	NT	NT
5/30/2025		S2-2PC-V-6BFS	--	2%	6%	8%	1	NT	NT	NT	NT	NT	NT	NT	13.4%	106	184	NT	NT	NT	NT	NT
5/30/2025	S2-3PC-V-7BFS	--	3%	7%	10%	0.85	NT	NT	NT	NT	NT	NT	NT	14.7%	101	304	NT	NT	NT	NT	NT	
6/23/2025	Soil #3A	S3-4.5PC-10.5BFS	5%	--	11%	15%	0.85	NT	NT	NT	NT	NT	NT	NT	32.4%	32	61	NT	NT	NT	NT	NT
6/23/2025		S3-15PC	15%	--	0%	15%	0.85	NT	NT	NT	NT	NT	NT	NT	34.1%	84	109	NT	154	6.8E-09	NT	NT
6/23/2025		S3-6PC-14BFS	6%	--	14%	20%	0.85	NT	NT	NT	NT	NT	NT	NT	43.0%	100	254	NT	428	6.3E-08	NT	NT

Notes:

- Green shading indicates target criteria are met or exceeded
- Yellow shading indicates criteria of <3.39E-5 cm/sec is met, and 1E-6 cm/sec is not.
- Red shading indicates target criteria are not met
- NT - Not Tested
- - Reagent not used

1. Grout pH tested using method API RP 13B-1
2. Grout Viscosity tested by Marsh Funnel using method ASTM D6910
3. Grout Density tested using method ASTM D4380
4. Unconfined compressive strength estimated using pocket penetrometer by method ASTM WK27337
5. Moisture Content estimated using method ASTM D2216

6. The method for volumetric expansion (i.e., swell) testing is described in Section 3.2 of Appendix A.
7. Unconfined Compressive Strength tested using method ASTM D2166
8. Hydraulic Conductivity ASTM D5084
9. <1E-6 cm/sec was the criteria proposed in the TTWP. The criteria of <3.39 E-5 cm/sec represents a two order of magnitude reduction in K. See Section 5.2 for a discussion of K performance criteria.



Table 4 - Estimated Mass Release of Treated Soil

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

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Purpose of Calculation: To evaluate the mass release vs time relationship for treated soil (LEAF 1315 Results) to compare to results for untreated soil (LEAF 1316 Results).

Mix Design	Test ID	Leach Testing Parameters						Arsenic Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S1-10PC	T01	203	359.3	1744	1323	1.8	0.08	240	12	1.1	1.5E-04	1.1	1.3E-15	1.2E-15
	T02	203	364.5	1769	1343	1.8	1	240	39	3.5	4.4E-05	4.5	2.0E-15	
	T03	203	364.3	1768	1342	1.8	2	240	24	2.1	2.5E-05	6.7	2.3E-15	
	T04	203	364.7	1770	1343	1.8	7	240	75	6.7	1.5E-05	13.3	2.6E-15	
	T05	203	365.2	1773	1345	1.8	14	240	38	3.4	5.6E-06	16.7	8.3E-16	
	T06	203	365.3	1773	1345	1.8	28	240	31	2.8	2.3E-06	19.4	2.8E-16	
	T07	203	365.2	1773	1345	1.8	42	240	25	2.2	1.8E-06	21.7	3.0E-16	
	T08	203	365.2	1773	1345	1.8	49	240	17	1.5	2.5E-06	23.2	7.4E-16	
	T09	203	365.5	1774	1346	1.8	63	240	18	1.6	1.3E-06	24.8	2.5E-16	

Mix Design	Test ID	Leach Testing Parameters						Copper Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S1-10PC	T01	203	359.3	1744	1323	1.8	0.08	68	2.3	0.2	3.0E-05	0.2	5.9E-16	3.1E-15
	T02	203	364.5	1769	1343	1.8	1	68	7.5	0.7	8.4E-06	0.9	9.4E-16	
	T03	203	364.3	1768	1342	1.8	2	68	5.5	0.5	5.7E-06	1.4	1.5E-15	
	T04	203	364.7	1770	1343	1.8	7	68	25	2.2	5.1E-06	3.6	3.5E-15	
	T05	203	365.2	1773	1345	1.8	14	68	21	1.9	3.1E-06	5.4	3.1E-15	
	T06	203	365.3	1773	1345	1.8	28	68	33	2.9	2.4E-06	8.4	3.9E-15	
	T07	203	365.2	1773	1345	1.8	42	68	30	2.7	2.2E-06	11.0	5.5E-15	
	T08	203	365.2	1773	1345	1.8	49	68	14	1.2	2.1E-06	12.3	6.2E-15	
	T09	203	365.5	1774	1346	1.8	63	68	16	1.4	1.2E-06	13.7	2.5E-15	

Mix Design	Test ID	Leach Testing Parameters						Arsenic Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S1-3PC-7BFS	T01	203	357.9	1737	1318	1.8	0.08	240	9.8	0.9	1.3E-04	0.9	8.6E-16	5.8E-15
	T02	203	362.7	1761	1336	1.8	1	240	51	4.5	5.7E-05	5.4	3.5E-15	
	T03	203	362.1	1758	1334	1.8	2	240	42	3.7	4.3E-05	9.1	7.2E-15	
	T04	203	363.2	1763	1338	1.8	7	240	130	11.5	2.7E-05	20.7	7.8E-15	
	T05	203	363	1762	1337	1.8	14	240	110	9.8	1.6E-05	30.4	7.0E-15	
	T06	203	363	1762	1337	1.8	28	240	120	10.7	8.8E-06	41.1	4.2E-15	
	T07	203	363.8	1766	1340	1.8	42	240	100	8.9	7.3E-06	50.0	4.9E-15	
	T08	203	363.2	1763	1338	1.8	49	240	67	6.0	9.8E-06	55.9	1.2E-14	
	T09	203	363.5	1765	1339	1.8	63	240	84	7.5	6.2E-06	63.4	5.6E-15	

Table 4 - Estimated Mass Release of Treated Soil

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

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Mix Design	Test ID	Leach Testing Parameters						Copper Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S1-3PC-7BFS	T01	203	357.9	1737	1318	1.8	0.08	68	0.9	0.1	1.2E-05	0.1	9.0E-17	1.7E-15
	T02	203	362.7	1761	1336	1.8	1	68	4.2	0.4	4.7E-06	0.5	3.0E-16	
	T03	203	362.1	1758	1334	1.8	2	68	2.1	0.2	2.2E-06	0.6	2.2E-16	
	T04	203	363.2	1763	1338	1.8	7	68	9.1	0.8	1.9E-06	1.4	4.7E-16	
	T05	203	363	1762	1337	1.8	14	68	16	1.4	2.3E-06	2.9	1.8E-15	
	T06	203	363	1762	1337	1.8	28	68	25	2.2	1.8E-06	5.1	2.3E-15	
	T07	203	363.8	1766	1340	1.8	42	68	27	2.4	2.0E-06	7.5	4.5E-15	
	T08	203	363.2	1763	1338	1.8	49	68	10	0.9	1.5E-06	8.4	3.2E-15	
	T09	203	363.5	1765	1339	1.8	63	68	16	1.4	1.2E-06	9.8	2.5E-15	

Mix Design	Test ID	Leach Testing Parameters						Arsenic Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-10PC	T01	203	373.1	1811	1398	1.8	0.08	150	1.2	0.1	1.5E-05	0.1	2.9E-17	6.1E-17
	T02	203	377.6	1833	1414	1.8	1	150	1.9	0.2	2.1E-06	0.3	1.1E-17	
	T03	203	378	1835	1416	1.8	2	150	2.3	0.2	2.4E-06	0.5	4.9E-17	
	T04	203	378.3	1836	1417	1.8	7	150	5.7	0.5	1.2E-06	1.0	3.4E-17	
	T05	203	378.6	1838	1418	1.8	14	150	5.8	0.5	8.5E-07	1.5	4.4E-17	
	T06	203	378.1	1835	1416	1.8	28	150	7.7	0.7	5.7E-07	2.2	3.9E-17	
	T07	203	378.7	1838	1418	1.8	42	150	7.5	0.7	5.5E-07	2.9	6.3E-17	
	T08	203	379.1	1840	1420	1.8	49	150	5.4	0.5	7.9E-07	3.3	1.7E-16	
	T09	203	379.1	1840	1420	1.8	63	150	7.7	0.7	5.7E-07	4.0	1.1E-16	

Mix Design	Test ID	Leach Testing Parameters						Copper Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-10PC	T01	203	373.1	1811	1398	1.8	0.08	330	2.4	0.2	3.1E-05	0.2	2.4E-17	1.8E-17
	T02	203	377.6	1833	1414	1.8	1	330	5.3	0.5	5.9E-06	0.7	1.8E-17	
	T03	203	378	1835	1416	1.8	2	330	3.1	0.3	3.2E-06	1.0	1.8E-17	
	T04	203	378.3	1836	1417	1.8	7	330	8.5	0.8	1.7E-06	1.7	1.6E-17	
	T05	203	378.6	1838	1418	1.8	14	330	8.1	0.7	1.2E-06	2.4	1.8E-17	
	T06	203	378.1	1835	1416	1.8	28	330	12	1.1	8.8E-07	3.5	2.0E-17	
	T07	203	378.7	1838	1418	1.8	42	330	8.3	0.7	6.1E-07	4.2	1.6E-17	
	T08	203	379.1	1840	1420	1.8	49	330	4	0.4	5.9E-07	4.6	1.9E-17	
	T09	203	379.1	1840	1420	1.8	63	330	6.2	0.6	4.6E-07	5.1	1.4E-17	

Table 4 - Estimated Mass Release of Treated Soil

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

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Mix Design	Test ID	Leach Testing Parameters						Pentachlorophenol Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-10PC	T01	203	373.1	1811	1398	1.8	0.08	8	0.46	0.0	5.9E-06	0.0	1.5E-15	1.6E-14
	T02	203	377.6	1833	1414	1.8	1	8	0.425	0.0	4.7E-07	0.1	2.0E-16	
	T03	203	378	1835	1416	1.8	2	8	0.405	0.0	4.2E-07	0.1	5.3E-16	
	T04	203	378.3	1836	1417	1.8	7	8	1.3	0.1	2.7E-07	0.2	6.2E-16	
	T05	203	378.6	1838	1418	1.8	14	8	0.46	0.0	6.8E-08	0.3	9.8E-17	
	T06	203	378.1	1835	1416	1.8	28	8	4.1	0.4	3.0E-07	0.6	3.9E-15	
	T07	203	378.7	1838	1418	1.8	42	8	0.46	0.0	3.4E-08	0.7	8.3E-17	
	T08	203	379.1	1840	1420	1.8	49	8	7.5	0.7	1.1E-06	1.3	1.2E-13	
	T09	203	379.1	1840	1420	1.8	63	8	5.8	0.5	4.3E-07	1.9	2.1E-14	

Mix Design	Test ID	Leach Testing Parameters						1,2,3,4,6,7,8-HpCDD Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(pg/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-10PC	T01	203	373.1	1811	1398	1.8	0.08	0.034	390	0.00003	5.0E-09	0.000035	6.0E-17	7.0E-18
	T02	203	377.6	1833	1414	1.8	1	0.034	59	0.000005	6.6E-11	0.000040	2.1E-19	
	T03	203	378	1835	1416	1.8	2	0.034	110	0.000010	1.1E-10	0.000050	2.2E-18	
	T04	203	378.3	1836	1417	1.8	7	0.034	53	0.000005	1.1E-11	0.000054	5.7E-20	
	T05	203	378.6	1838	1418	1.8	14	0.034	62	0.000006	9.1E-12	0.000060	9.9E-20	
	T06	203	378.1	1835	1416	1.8	28	0.034	58	0.000005	4.3E-12	0.000065	4.3E-20	
	T07	203	378.7	1838	1418	1.8	42	0.034	44	0.000004	3.2E-12	0.000069	4.2E-20	
	T08	203	379.1	1840	1420	1.8	49	0.034	21	0.000002	3.1E-12	0.000071	5.0E-20	
	T09	203	379.1	1840	1420	1.8	63	0.034	27	0.000002	2.0E-12	0.000073	2.6E-20	

Mix Design	Test ID	Leach Testing Parameters						1,2,3,4,6,7,8-HpCDF Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(pg/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-10PC	T01	203	373.1	1811	1398	1.8	0.08	0.018	250	0.00002	3.2E-09	0.000022	8.9E-17	1.0E-17
	T02	203	377.6	1833	1414	1.8	1	0.018	39	0.000003	4.4E-11	0.000026	3.3E-19	
	T03	203	378	1835	1416	1.8	2	0.018	75	0.000007	7.7E-11	0.000032	3.6E-18	
	T04	203	378.3	1836	1417	1.8	7	0.018	35	0.000003	7.2E-12	0.000035	8.9E-20	
	T05	203	378.6	1838	1418	1.8	14	0.018	36	0.000003	5.3E-12	0.000039	1.2E-19	
	T06	203	378.1	1835	1416	1.8	28	0.018	39	0.000003	2.9E-12	0.000042	7.0E-20	
	T07	203	378.7	1838	1418	1.8	42	0.018	31	0.000003	2.3E-12	0.000045	7.5E-20	
	T08	203	379.1	1840	1420	1.8	49	0.018	13	0.000001	1.9E-12	0.000046	6.9E-20	
	T09	203	379.1	1840	1420	1.8	63	0.018	14	0.000001	1.0E-12	0.000047	2.4E-20	

Table 4 - Estimated Mass Release of Treated Soil

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

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Mix Design	Test ID	Leach Testing Parameters						OCDD Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(pg/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ³)	(m ² /sec)	(m ² /sec)
S2-10PC	T01	203	373.1	1811	1398	1.8	0.08	11	19000	0.00169	2.4E-07	0.001687	1.4E-18	1.6E-19
	T02	203	377.6	1833	1414	1.8	1	11	5200	0.000462	5.8E-09	0.002149	1.6E-20	
	T03	203	378	1835	1416	1.8	2	11	4700	0.000417	4.8E-09	0.002567	3.8E-20	
	T04	203	378.3	1836	1417	1.8	7	11	1200	0.000107	2.5E-10	0.002673	2.8E-22	
	T05	203	378.6	1838	1418	1.8	14	11	1300	0.000115	1.9E-10	0.002789	4.1E-22	
	T06	203	378.1	1835	1416	1.8	28	11	1400	0.000124	1.0E-10	0.002913	2.4E-22	
	T07	203	378.7	1838	1418	1.8	42	11	860	0.000076	6.3E-11	0.002989	1.5E-22	
	T08	203	379.1	1840	1420	1.8	49	11	850	0.000075	1.2E-10	0.003065	7.9E-22	
	T09	203	379.1	1840	1420	1.8	63	11	4800	0.000426	3.5E-10	0.003491	7.7E-21	

Mix Design	Test ID	Leach Testing Parameters						OCDF Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(pg/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ³)	(m ² /sec)	(m ² /sec)
S2-10PC	T01	203	373.1	1811	1398	1.8	0.08	0.11	410	0.00004	5.3E-09	0.000036	6.4E-18	7.4E-19
	T02	203	377.6	1833	1414	1.8	1	0.11	70	0.000006	7.8E-11	0.000043	2.8E-20	
	T03	203	378	1835	1416	1.8	2	0.11	110	0.000010	1.1E-10	0.000052	2.1E-19	
	T04	203	378.3	1836	1417	1.8	7	0.11	41	0.000004	8.4E-12	0.000056	3.3E-21	
	T05	203	378.6	1838	1418	1.8	14	0.11	41	0.000004	6.0E-12	0.000060	4.1E-21	
	T06	203	378.1	1835	1416	1.8	28	0.11	31	0.000003	2.3E-12	0.000062	1.2E-21	
	T07	203	378.7	1838	1418	1.8	42	0.11	19	0.000002	1.4E-12	0.000064	7.5E-22	
	T08	203	379.1	1840	1420	1.8	49	0.11	19	0.000002	2.8E-12	0.000066	3.9E-21	
	T09	203	379.1	1840	1420	1.8	63	0.11	39	0.000003	2.9E-12	0.000069	5.1E-21	

Mix Design	Test ID	Leach Testing Parameters						Arsenic Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ³)	(m ² /sec)	(m ² /sec)
S2-3PC-7BFS	T01	203	369.8	1795	1385	1.8	0.08	150	2.3	0.2	3.0E-05	0.2	1.1E-16	1.9E-16
	T02	203	373.8	1815	1400	1.8	1	150	8.2	0.7	9.2E-06	0.9	2.1E-16	
	T03	203	374.4	1817	1402	1.8	2	150	6.5	0.6	6.7E-06	1.5	4.0E-16	
	T04	203	374	1816	1401	1.8	7	150	13	1.2	2.7E-06	2.7	1.8E-16	
	T05	203	374	1816	1401	1.8	14	150	11	1.0	1.6E-06	3.6	1.6E-16	
	T06	203	374.6	1818	1403	1.8	28	150	14	1.2	1.0E-06	4.9	1.3E-16	
	T07	203	373	1811	1397	1.8	42	150	10	0.9	7.3E-07	5.8	1.2E-16	
	T08	203	374.4	1817	1402	1.8	49	150	6	0.5	8.8E-07	6.3	2.2E-16	
	T09	203	374.1	1816	1401	1.8	63	150	10	0.9	7.3E-07	7.2	1.8E-16	

Table 4 - Estimated Mass Release of Treated Soil

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

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Mix Design	Test ID	Leach Testing Parameters						Copper Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-3PC-7BFS	T01	203	369.8	1795	1385	1.8	0.08	330	1.1	0.1	1.4E-05	0.1	5.2E-18	4.3E-18
	T02	203	373.8	1815	1400	1.8	1	330	2.3	0.2	2.6E-06	0.3	3.5E-18	
	T03	203	374.4	1817	1402	1.8	2	330	1.5	0.1	1.5E-06	0.4	4.4E-18	
	T04	203	374	1816	1401	1.8	7	330	3.7	0.3	7.6E-07	0.8	3.0E-18	
	T05	203	374	1816	1401	1.8	14	330	3.7	0.3	5.4E-07	1.1	3.8E-18	
	T06	203	374.6	1818	1403	1.8	28	330	6.1	0.5	4.5E-07	1.6	5.2E-18	
	T07	203	373	1811	1397	1.8	42	330	4.3	0.4	3.2E-07	2.0	4.4E-18	
	T08	203	374.4	1817	1402	1.8	49	330	2.1	0.2	3.1E-07	2.2	5.5E-18	
	T09	203	374.1	1816	1401	1.8	63	330	3.3	0.3	2.4E-07	2.5	4.2E-18	

Mix Design	Test ID	Leach Testing Parameters						Pentachlorophenol Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(ug/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-3PC-7BFS	T01	203	369.8	1795	1385	1.8	0.08	5	0.44	0.0	5.7E-06	0.0	3.6E-15	3.3E-14
	T02	203	373.8	1815	1400	1.8	1	5	0.46	0.0	5.1E-07	0.1	6.0E-16	
	T03	203	374.4	1817	1402	1.8	2	5	0.46	0.0	4.7E-07	0.1	1.8E-15	
	T04	203	374	1816	1401	1.8	7	5	0.46	0.0	9.5E-08	0.2	2.0E-16	
	T05	203	374	1816	1401	1.8	14	5	0.44	0.0	6.5E-08	0.2	2.4E-16	
	T06	203	374.6	1818	1403	1.8	28	5	2.6	0.2	1.9E-07	0.4	4.1E-15	
	T07	203	373	1811	1397	1.8	42	5	0.48	0.0	3.5E-08	0.5	2.4E-16	
	T08	203	374.4	1817	1402	1.8	49	5	4	0.4	5.9E-07	0.8	8.7E-14	
	T09	203	374.1	1816	1401	1.8	63	5	11	1.0	8.1E-07	1.8	2.0E-13	

Mix Design	Test ID	Leach Testing Parameters						1,2,3,4,6,7,8-HpCDD Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(pg/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-3PC-7BFS	T01	203	369.8	1795	1385	1.8	0.08	0.034	130	0.00001	1.7E-09	0.000012	6.8E-18	9.5E-19
	T02	203	373.8	1815	1400	1.8	1	0.034	58	0.000005	6.5E-11	0.000017	2.1E-19	
	T03	203	374.4	1817	1402	1.8	2	0.034	42	0.000004	4.3E-11	0.000020	3.2E-19	
	T04	203	374	1816	1401	1.8	7	0.034	51	0.000005	1.0E-11	0.000025	5.4E-20	
	T05	203	374	1816	1401	1.8	14	0.034	64	0.000006	9.4E-12	0.000031	1.1E-19	
	T06	203	374.6	1818	1403	1.8	28	0.034	170	0.000015	1.2E-11	0.000046	3.8E-19	
	T07	203	373	1811	1397	1.8	42	0.034	140	0.000012	1.0E-11	0.000058	4.4E-19	
	T08	203	374.4	1817	1402	1.8	49	0.034	39	0.000003	5.7E-12	0.000062	1.8E-19	
	T09	203	374.1	1816	1401	1.8	63	0.034	38	0.000003	2.8E-12	0.000065	5.2E-20	

Table 4 - Estimated Mass Release of Treated Soil

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

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Mix Design	Test ID	Leach Testing Parameters						1,2,3,4,6,7,8-HpCDF Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(pg/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-3PC-7BFS	T01	203	369.8	1795	1385	1.8	0.08	0.018	28	0.00000	3.6E-10	0.000002	1.1E-18	3.2E-19
	T02	203	373.8	1815	1400	1.8	1	0.018	31	0.000003	3.5E-11	0.000005	2.1E-19	
	T03	203	374.4	1817	1402	1.8	2	0.018	18	0.000002	1.9E-11	0.000007	2.1E-19	
	T04	203	374	1816	1401	1.8	7	0.018	39	0.000003	8.0E-12	0.000010	1.1E-19	
	T05	203	374	1816	1401	1.8	14	0.018	44	0.000004	6.5E-12	0.000014	1.8E-19	
	T06	203	374.6	1818	1403	1.8	28	0.018	84	0.000007	6.2E-12	0.000022	3.3E-19	
	T07	203	373	1811	1397	1.8	42	0.018	77	0.000007	5.7E-12	0.000029	4.8E-19	
	T08	203	374.4	1817	1402	1.8	49	0.018	23	0.000002	3.4E-12	0.000031	2.2E-19	
	T09	203	374.1	1816	1401	1.8	63	0.018	19	0.000002	1.4E-12	0.000032	4.6E-20	

Mix Design	Test ID	Leach Testing Parameters						OCDD Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(pg/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-3PC-7BFS	T01	203	369.8	1795	1385	1.8	0.08	11	10000	0.00089	1.3E-07	0.000888	3.9E-19	7.7E-20
	T02	203	373.8	1815	1400	1.8	1	11	7800	0.000693	8.7E-09	0.001581	3.6E-20	
	T03	203	374.4	1817	1402	1.8	2	11	8500	0.000755	8.7E-09	0.002336	1.3E-19	
	T04	203	374	1816	1401	1.8	7	11	1200	0.000107	2.5E-10	0.002442	2.9E-22	
	T05	203	374	1816	1401	1.8	14	11	2100	0.000186	3.1E-10	0.002629	1.1E-21	
	T06	203	374.6	1818	1403	1.8	28	11	5500	0.000488	4.0E-10	0.003117	3.8E-21	
	T07	203	373	1811	1397	1.8	42	11	24000	0.002131	1.8E-09	0.005249	1.2E-19	
	T08	203	374.4	1817	1402	1.8	49	11	3300	0.000293	4.8E-10	0.005542	1.2E-20	
	T09	203	374.1	1816	1401	1.8	63	11	4300	0.000382	3.2E-10	0.005924	6.4E-21	

Mix Design	Test ID	Leach Testing Parameters						OCDF Mass Release Calculations						
		Sample Surface Area ¹	Sample Mass ²	Calculated Sample Density ³	Soil Dry Density ⁴	Eluate Volume ⁵	Time Interval	Total Soil Concentration ⁶	Eluate Concentration ⁷	Interval Mass Release	Interval Mass Flux	Cumulative Mass Release	Diffusivity	Mean Diffusivity
		(cm ²)	(g)	kg/m3	kg/m3	(L)	(days)	(mg/kg)	(pg/L)	(mg/m ²)	(mg/m ² /sec)	(mg/m ²)	(m ² /sec)	(m ² /sec)
S2-3PC-7BFS	T01	203	369.8	1795	1385	1.8	0.08	0.11	110	0.00001	1.4E-09	0.000010	4.7E-19	7.5E-20
	T02	203	373.8	1815	1400	1.8	1	0.11	91	0.000008	1.0E-10	0.000018	4.9E-20	
	T03	203	374.4	1817	1402	1.8	2	0.11	58	0.000005	6.0E-11	0.000023	5.9E-20	
	T04	203	374	1816	1401	1.8	7	0.11	17	0.000002	3.5E-12	0.000025	5.8E-22	
	T05	203	374	1816	1401	1.8	14	0.11	37	0.000003	5.4E-12	0.000028	3.4E-21	
	T06	203	374.6	1818	1403	1.8	28	0.11	58	0.000005	4.3E-12	0.000033	4.2E-21	
	T07	203	373	1811	1397	1.8	42	0.11	180	0.000016	1.3E-11	0.000049	7.0E-20	
	T08	203	374.4	1817	1402	1.8	49	0.11	40	0.000004	5.9E-12	0.000052	1.8E-20	
	T09	203	374.1	1816	1401	1.8	63	0.11	47	0.000004	3.5E-12	0.000057	7.6E-21	

Notes:

- 1. Based on the dimensions of tested ISS molds
 - 2. Based on reported weight of ISS molds by Eurofins
 - 3. Bulk density of ISS treated soils
 - 4. Calculated based on adjusted for moisture content.
 - 5. Volume of eluate used in leach testing. Provided by Eurofins
 - 6. Total COC concentration of soil as reported by Eurofins
 - 7. EPA Method 1315 testing analytical results provided by Eurofins
 - 8. Calculated in accordance with the procedure outlined in EPA Method 1315
- Red text indicates J flag - result is between method detection limit and reporting limit, and result is estimated
- Orange text indicates a value that is 1/2 of the method detection limit of a nondetect result
- Purple text indicates I flag - estimated maximum possible concentration
- cm³ = cubic centimeters
- g = grams
- kg/m³ = kilograms per cubic meter L = liter
- mg/m² = milligrams per square meter mg/kg = milligrams per kilogram
- mg/m²/sec = milligrams per square meter per second
- m²/sec = square meters per second

Table 5 - Estimated Percolation Rate

Purpose of Calculation: To estimate the percolation rate through the control volume to relate LEAF 1316 L/S ratios to leaching times to facilitate comparison with LEAF 1315 results.

Parameter	Unit	Value	Notes
Properties of the ISS Area (Unit volume)			
ISS Width Perpendicular to Flow (North-South)	ft	250	Assumed width of ISS treatment
ISS Thickness Perpendicular to Flow (Vertical)	ft	15	Assumed depth of ISS treatment
ISS Thickness Along Flow Direction (East-west)	ft	150	Assumed length of ISS treatment
ISS Cross-section Area Perpendicular to Flow	ft ²	3750	Assumed area of ISS treatment
ISS Unit Volume	ft ³	562500	Calculated from dimensions of unit volume
Soil Density	pcf	100	Estimated
Mass of unit volume	kg-dry	25,568,182	Calculated from volume and density of unit volume
Hydrogeologic Parameters (MINIMUM)			
Hydraulic Conductivity	ft/day	9.6	Minimum average (slug-in + slug-out) conductivity measured in the shallow aquifer as part of the DGI (MW-13S).
	cm/sec	3.39E-03	
Horizontal Hydraulic Gradient	ft/ft	0.021	Average gradient near MW-13S measured during six Site-wide monitoring events.
Specific discharge per unit area	ft/day	0.20	Calculated from hydraulic conductivity and gradient
Flow rate through ISS unit volume	ft ³ /day	756	Calculated from cross-section area and specific discharge
Percolation rate (MINIMUM)	L/kg/day	8.37E-04	Calculated by dividing flow rate by mass of unit volume
Hydrogeologic Parameters (MAXIMUM)			
Hydraulic Conductivity	ft/day	92	Maximum average (slug-in + slug-out) conductivity measured in the shallow aquifer during the DGI (MW-19S).
	cm/sec	3.25E-02	
Horizontal Hydraulic Gradient	ft/ft	0.011	Average gradient near MW-19S measured during six Site-wide monitoring events.
Specific discharge per unit area	ft/day	0.98	Calculated from hydraulic conductivity and gradient
Flow rate through ISS unit volume	ft ³ /day	3657	Calculated from cross-section area and specific discharge
Percolation rate (MAXIMUM)	L/kg/day	4.05E-03	Calculated by dividing flow rate by mass of unit volume

Notes:

LEAF = Leaching Environmental Assessment Framework
L/S = liquid to solid
ft = feet
ft² = square feet
ft³ = cubic feet
pcf = pounds per cubic foot
kg = kilograms
ft/day = feet per day
cm/sec = centimeters per second
ft³/day = cubic feet per day
L/kg/day = liters per kilogram per day
ISS = In Situ Soldification

Table 6 - Estimated Mass Release of Untreated Soil

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

DRAFT

Purpose of Calculation: To estimate mass release rate from untreated soils using 1316 results.

Estimated Aquifer Percolation Time (Min/Max - See Table 5)						
Method 1316 L/S Ratio	L/kg	10	5	2	1	0.5
Estimated Time (MIN Percolation Rate)	days	11,942	5,971	2,388	1,194	597
Estimated Time (MAX Percolation Rate)	days	2,469	1,234	494	247	123

Soil 1A Composite Mass Release Estimates						
Method 1316 L/S Ratio	L/kg	10	5	2	1	0.5
Method 1316 Leach Results						
Arsenic	ug/L	540	540	580	640	620
Copper	ug/L	12	24	32	45	41
Calculated Mass Release Rate						
Arsenic	mg/kg-dry	5.4	2.7	1.16	0.64	0.31
Copper	mg/kg-dry	0.12	0.12	0.064	0.045	0.021
Calculated Mass Release for ISS Area						
Arsenic	mg/m ²	395,894	197,947	85,044	46,921	22,727
Copper	mg/m ²	8,798	8,798	4,692	3,299	1,503

Soil 2A Composite Mass Release Estimates						
Method 1316 L/S Ratio	L/kg	10	5	2	1	0.5
Method 1316 Leach Results						
Arsenic	ug/L	270	270	240	200	200
Copper	ug/L	41	26	24	30	36
Pentachlorophenol	ug/L	31	11	9	6	560
1,2,3,4,6,7,8-HpCDD	pg/L	19,000	110,000	23,000	19,000	25,000
1,2,3,4,6,7,8-HpCDF	pg/L	11,000	44,000	14,000	8,700	21,000
OCDD	pg/L	1,900,000	15,000,000	1,100,000	1,500,000	1,200,000
OCDF	pg/L	36,000	150,000	29,000	22,000	39,000
Calculated Mass Release Rate						
Arsenic	mg/kg-dry	2.7	1.35	0.48	0.2	0.1
Copper	mg/kg-dry	0.41	0.13	0.048	0.03	0.018
Pentachlorophenol	mg/kg-dry	0.31	0.055	0.0184	0.0063	0.280
1,2,3,4,6,7,8-HpCDD	mg/kg-dry	0.00019	0.00055	0.000046	0.000019	0.000013
1,2,3,4,6,7,8-HpCDF	mg/kg-dry	0.00011	0.00022	0.000028	0.0000087	0.000011
OCDD	mg/kg-dry	0.019	0.075	0.0022	0.0015	0.0006
OCDF	mg/kg-dry	0.00036	0.00075	0.000058	0.000022	0.000020
Calculated Mass Release for ISS Area						
Arsenic	mg/m ²	197,947	98,974	35,191	14,663	7,331
Copper	mg/m ²	30,059	9,531	3,519	2,199	1,320
Pentachlorophenol	mg/m ²	22,727	4,032	1,349	462	20,528
1,2,3,4,6,7,8-HpCDD	mg/m ²	14	40	3.4	1.4	0.9
1,2,3,4,6,7,8-HpCDF	mg/m ²	8.1	16	2.1	0.6	0.8
OCDD	mg/m ²	1,393	5,499	161	110	44
OCDF	mg/m ²	26	55	4.3	1.6	1.4

Notes:

Yellow text indicates H flag - Sample was prepped or analyzed beyond holding time.

Blue text indicates E flag - result exceeds calibration range

L/S = liquid to solid ratio

mg/kg = milligrams per kilogram

L/kg = liters per kilogram

mg/m² = milligrams per square meter

ug/L = micrograms per liter

pg/L = picograms per liter

Table 7 - Estimated Leaching Reductions**DRAFT**

S/S Treatability Testing Memo | Glacier Northeast Inc. Site

Purpose of Calculation: To estimate the reduction in cumulative mass release at 63 days achieved by soil treatment, based on EPA Methods 1315 and 1316 results.

Analyte	Soil	Treatment Mix	Min Percent Reduction	Max Percent Reduction
Arsenic	Soil #1	10% PC	99.0%	99.8%
		3% PC, 7% BFS	97.5%	99.4%
	Soil #2	10% PC	99.4%	99.9%
		3% PC, 7% BFS	98.7%	99.8%
Copper	Soil #1	10% PC	97.2%	98.9%
		3% PC, 7% BFS	98.1%	99.3%
	Soil #2	10% PC	95.4%	99.1%
		3% PC, 7% BFS	97.8%	99.6%
PCP	Soil #2	10% PC	71%	98%
		3% PC, 7% BFS	79%	98%
1,2,3,4,6,7,8-HpCDD	Soil #2	10% PC	99.88%	99.98%
		3% PC, 7% BFS	99.88%	99.98%
1,2,3,4,6,7,8-HpCDF	Soil #2	10% PC	99.94%	99.99%
		3% PC, 7% BFS	99.90%	99.98%
OCDD	Soil #2	10% PC	99.80%	99.98%
		3% PC, 7% BFS	99.68%	99.97%
OCDF	Soil #2	10% PC	99.90%	99.98%
		3% PC, 7% BFS	99.92%	99.99%

Notes:

PC = Type IL Portland Cement

BFS = ground granulated blast furnace slag

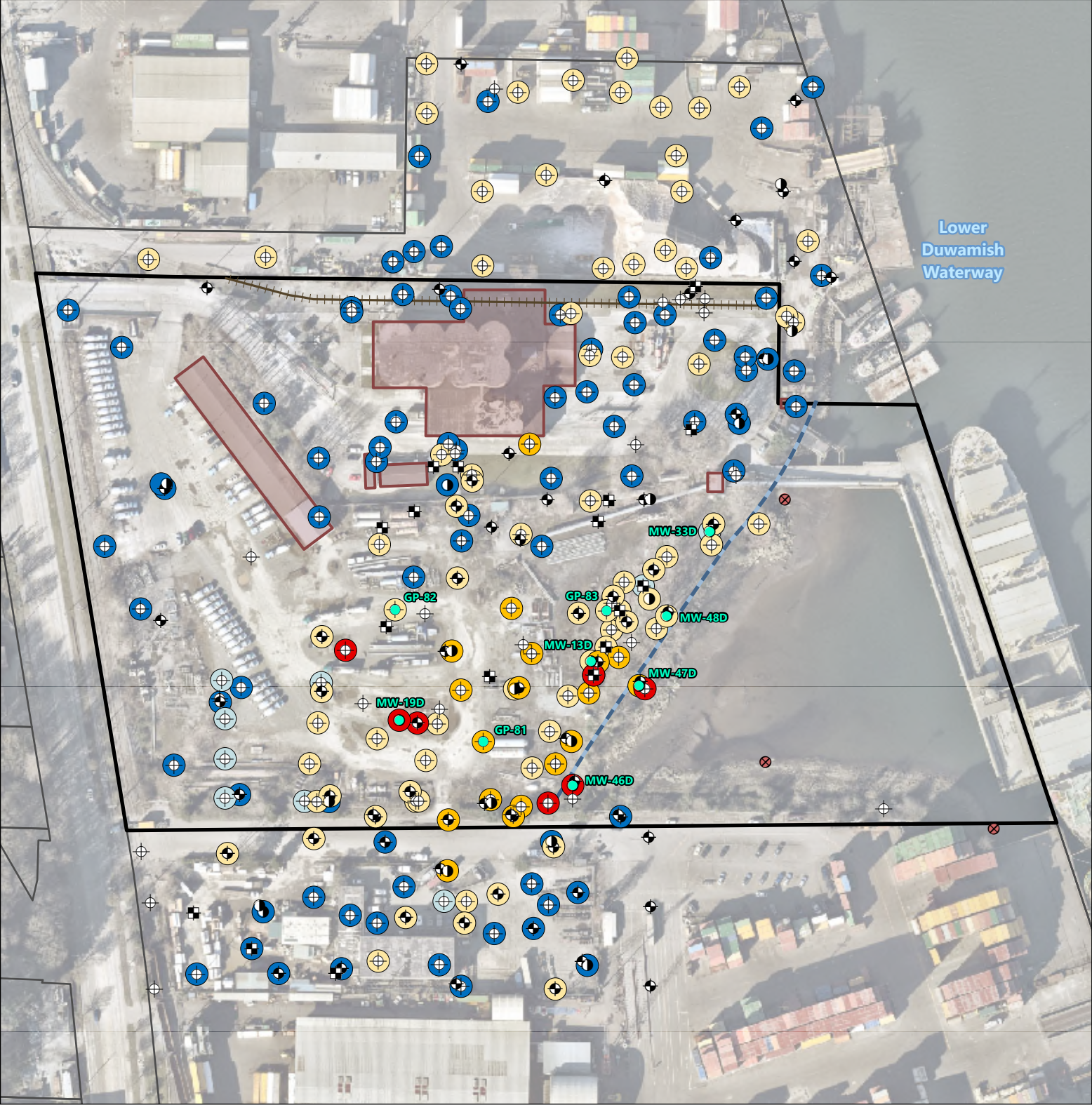
% = percent

FIGURES

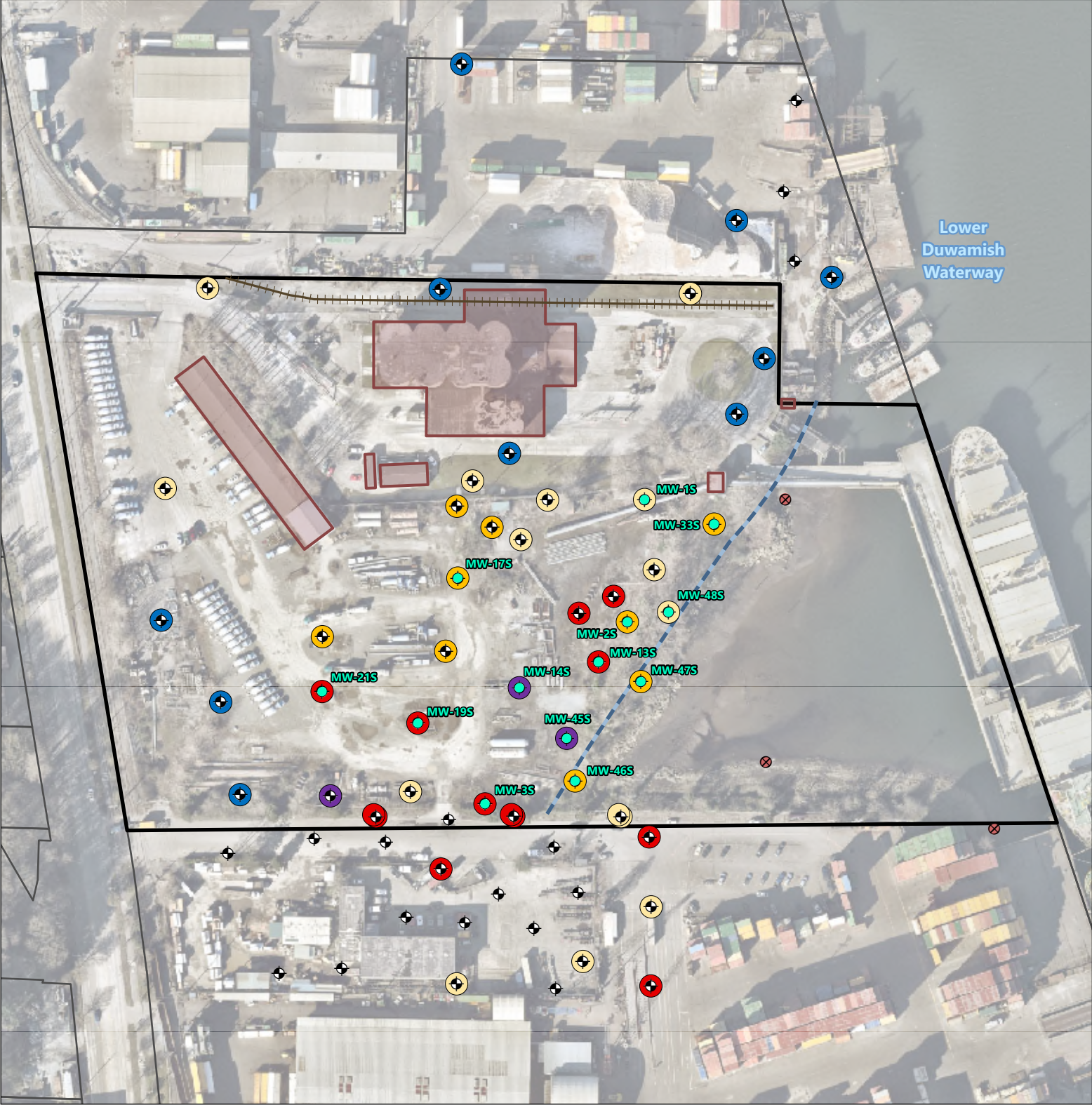


**BLACK
RIVER**
environmental

Arsenic in Saturated Soil



Arsenic in Shallow Groundwater



Legend:

- △ Porewater Sample
- ⊕ Soil Boring
- ⬢ Shallow Monitoring Well
- Deep Monitoring Well
- ⊕ Test Pit
- Seep Location
- FS Data Gaps Exploration Location

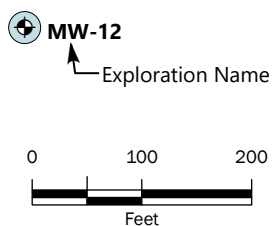
- ⊗ Outfall
- Approximate Historic Bulkhead Location
- Railspur
- Building
- Subject Property
- King County Tax Parcel

Saturated Soil:

- Detection > 730 mg/kg
- Detection between 146 mg/kg and 730 mg/kg
- Detection between 7.3 mg/kg and 730 mg/kg
- Nondetect >7.3 mg/kg
- Nondetect <7.3 mg/kg

Shallow Groundwater:

- Detection > 2,200 µg/L
- Detection between 220 µg/L and 2,200 µg/L
- Detection between 40 µg/L and 220 µg/L
- Detection between 8 µg/L and 40 µg/L
- Nondetect >8 µg/L
- Nondetect <8 µg/L



Arsenic in Saturated Soil
and Shallow Groundwater

S/S Treatability Testing Memorandum
Glacier Northwest, Inc. Site
5900 West Marginal Way SW
Seattle, Washington



BY: MC / PM
PROJECT NO: 25010

FIGURE NO:
1

Figure 3 - Arsenic - Estimated Mass Release vs. Time

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

DRAFT

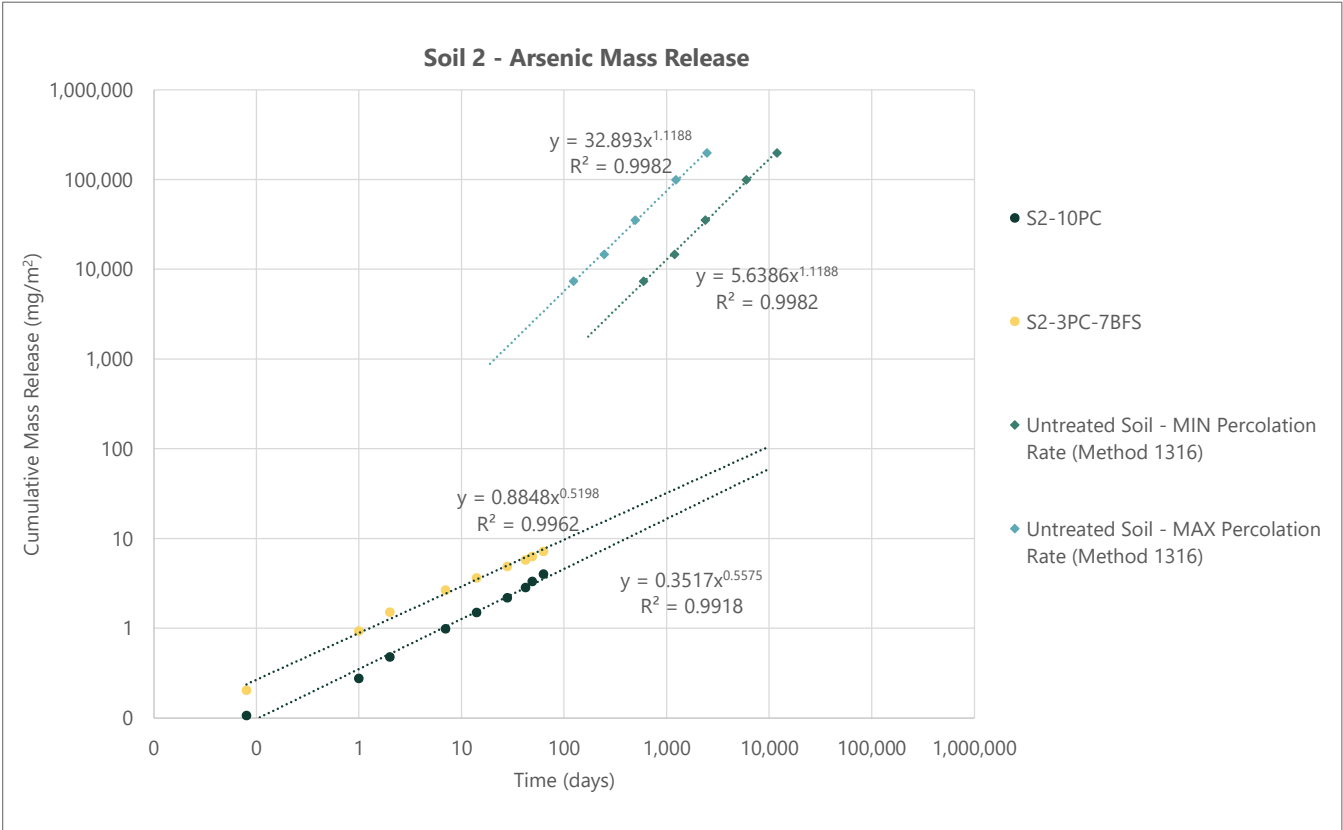
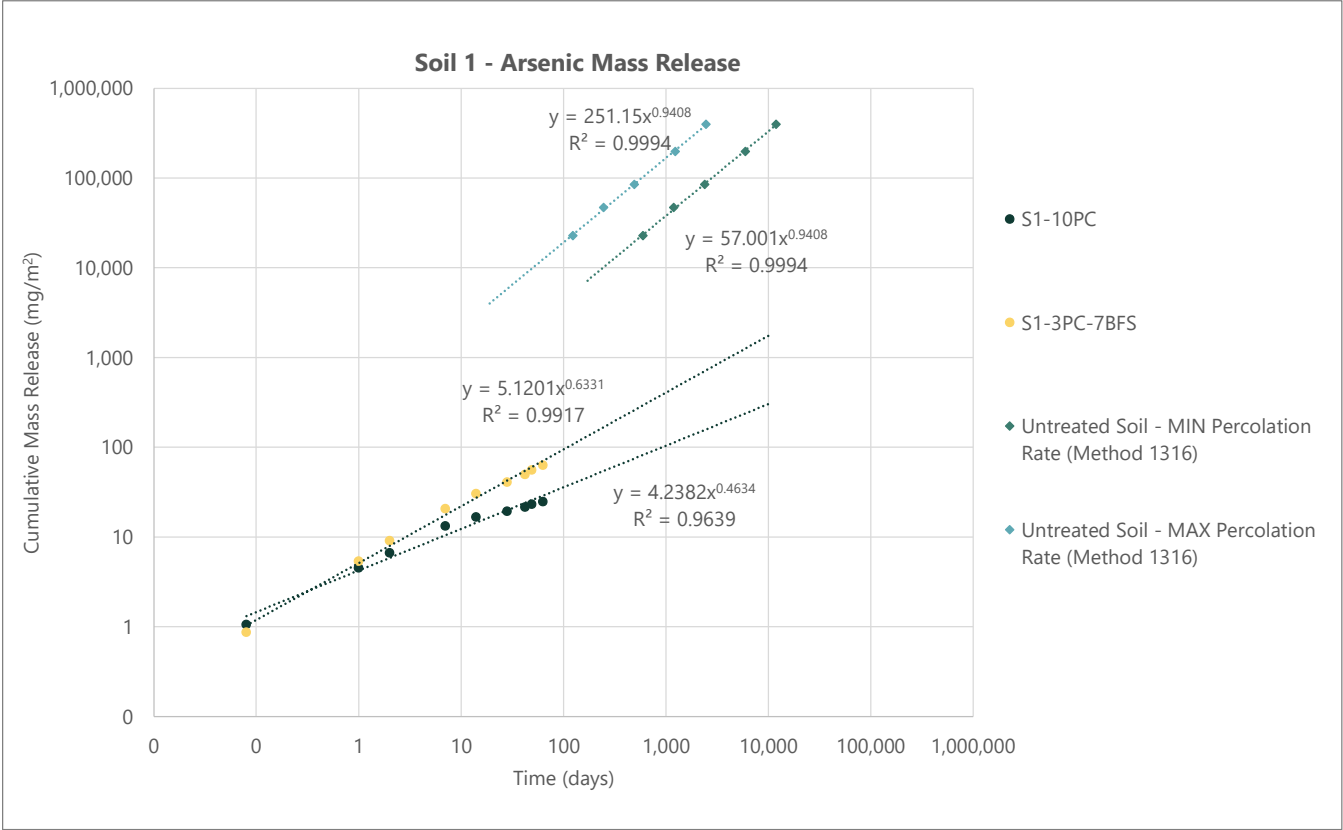


Figure 4 - Copper - Estimated Mass Release vs. Time

S/S Treatability Testing Memo | Glacier Northwest, Inc. Site

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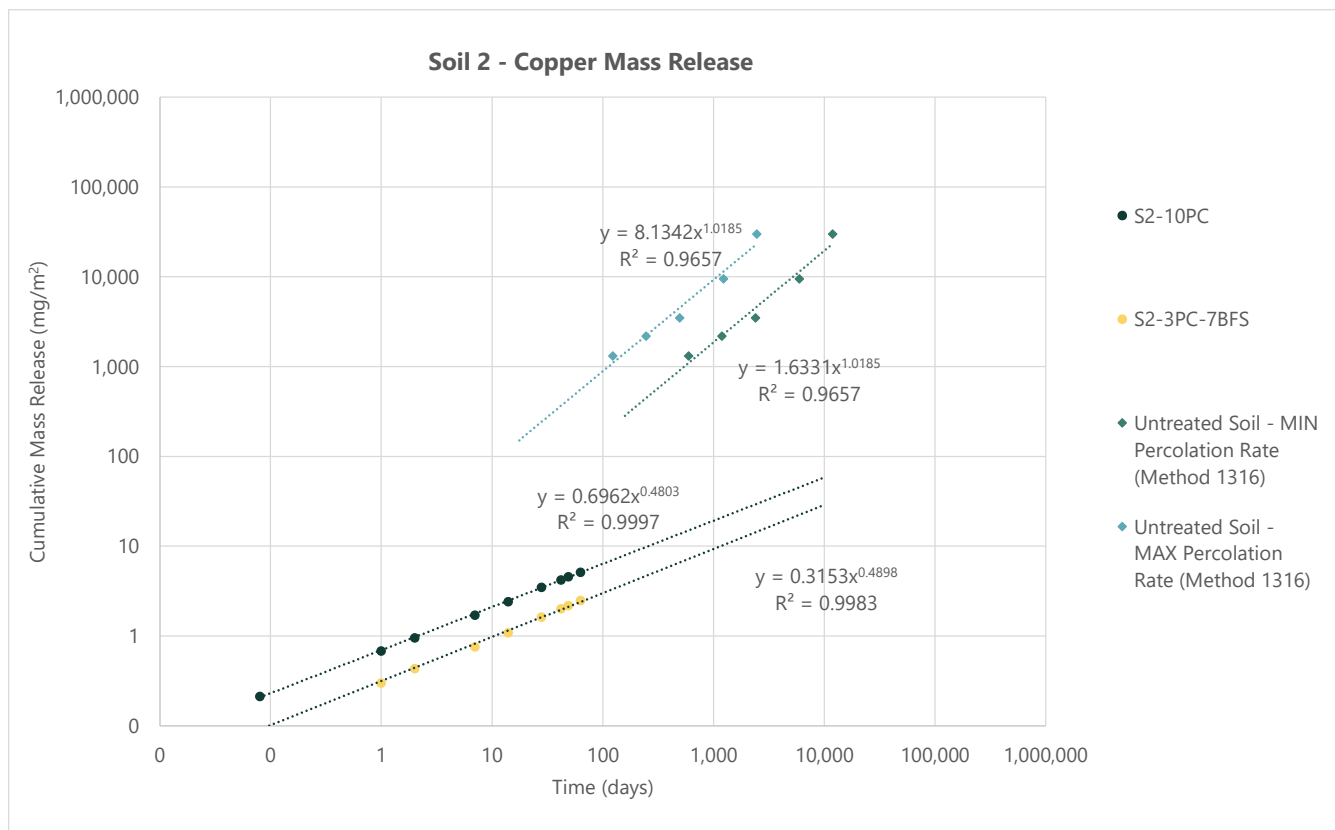
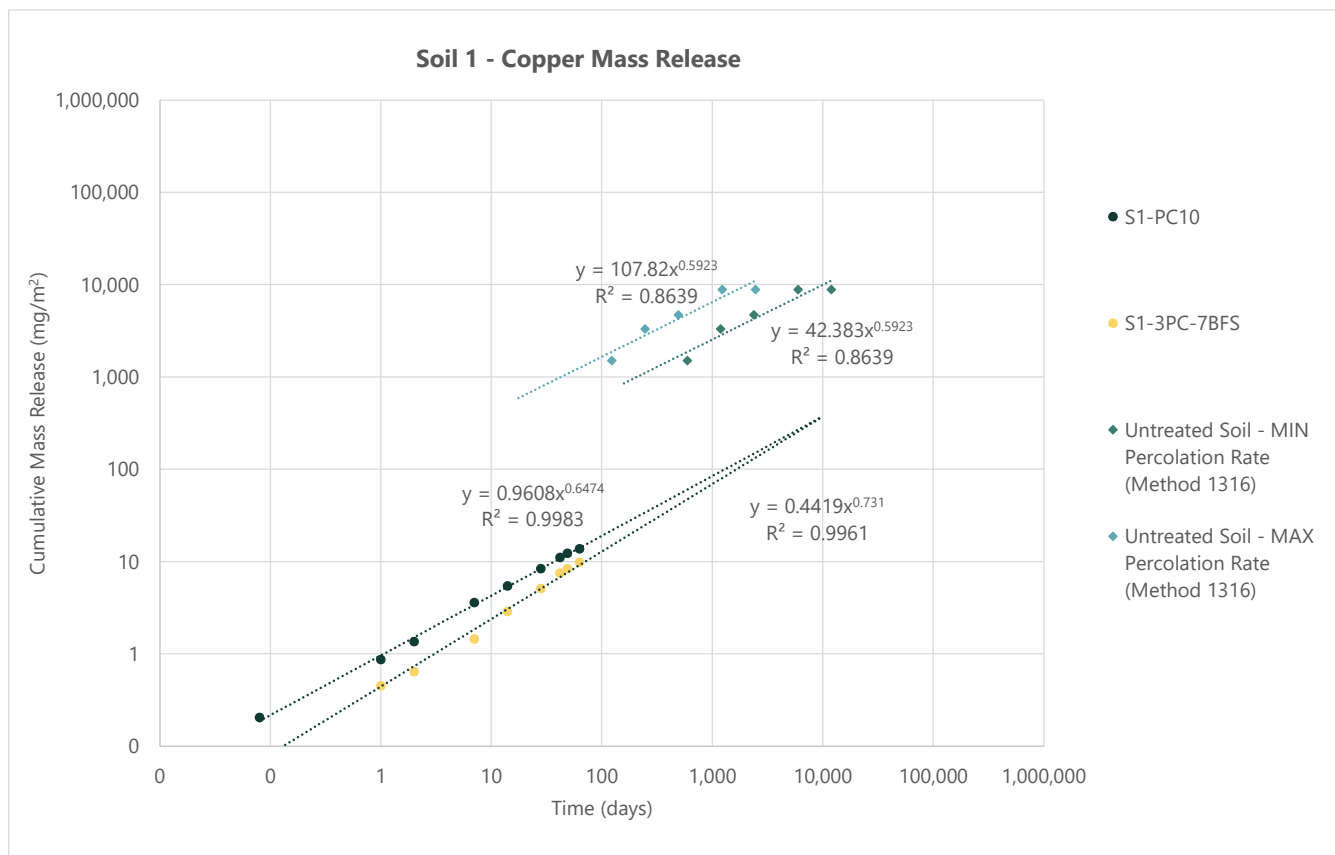
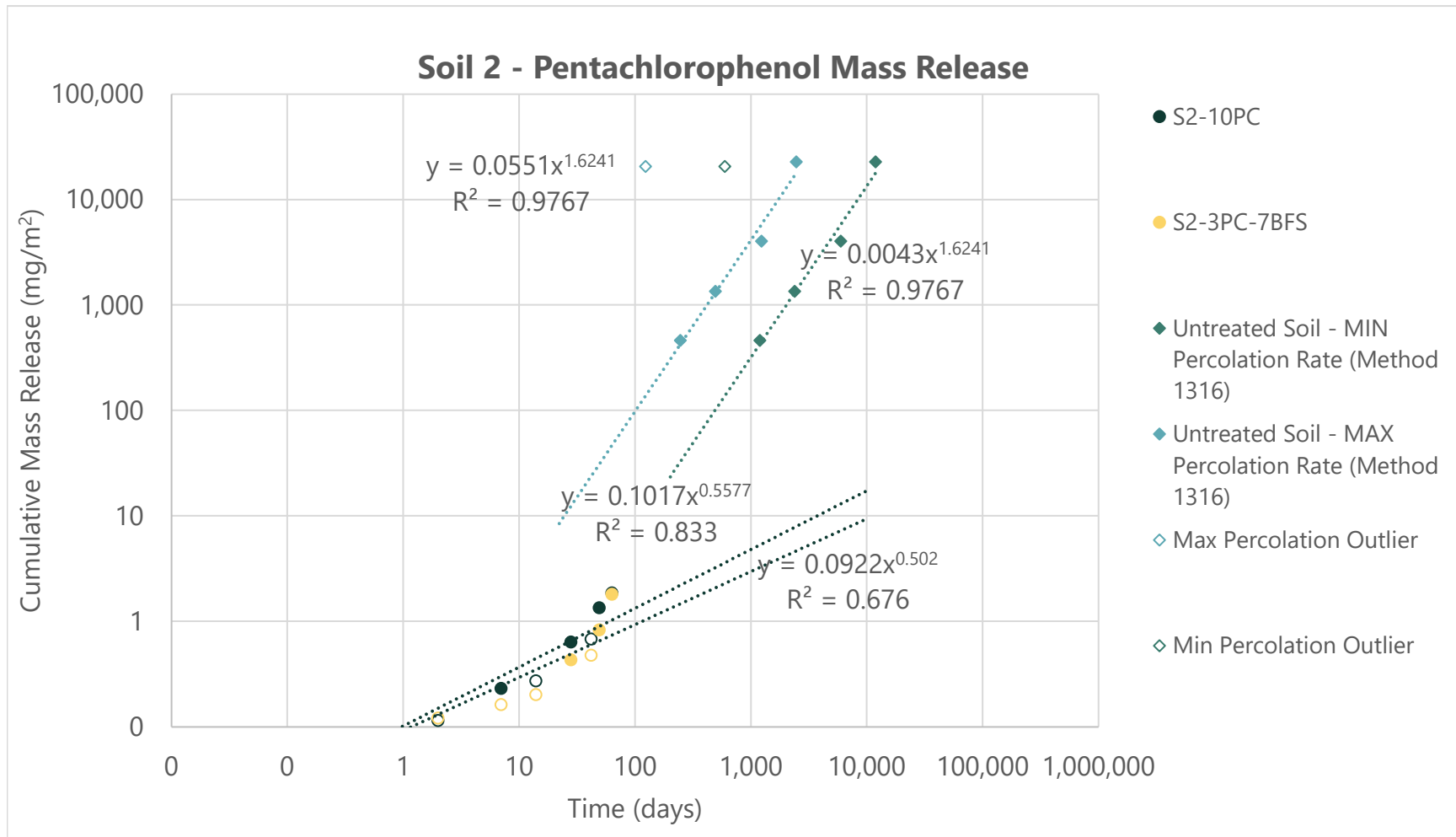


Figure 5 - PCP - Estimated Mass Release vs. Time

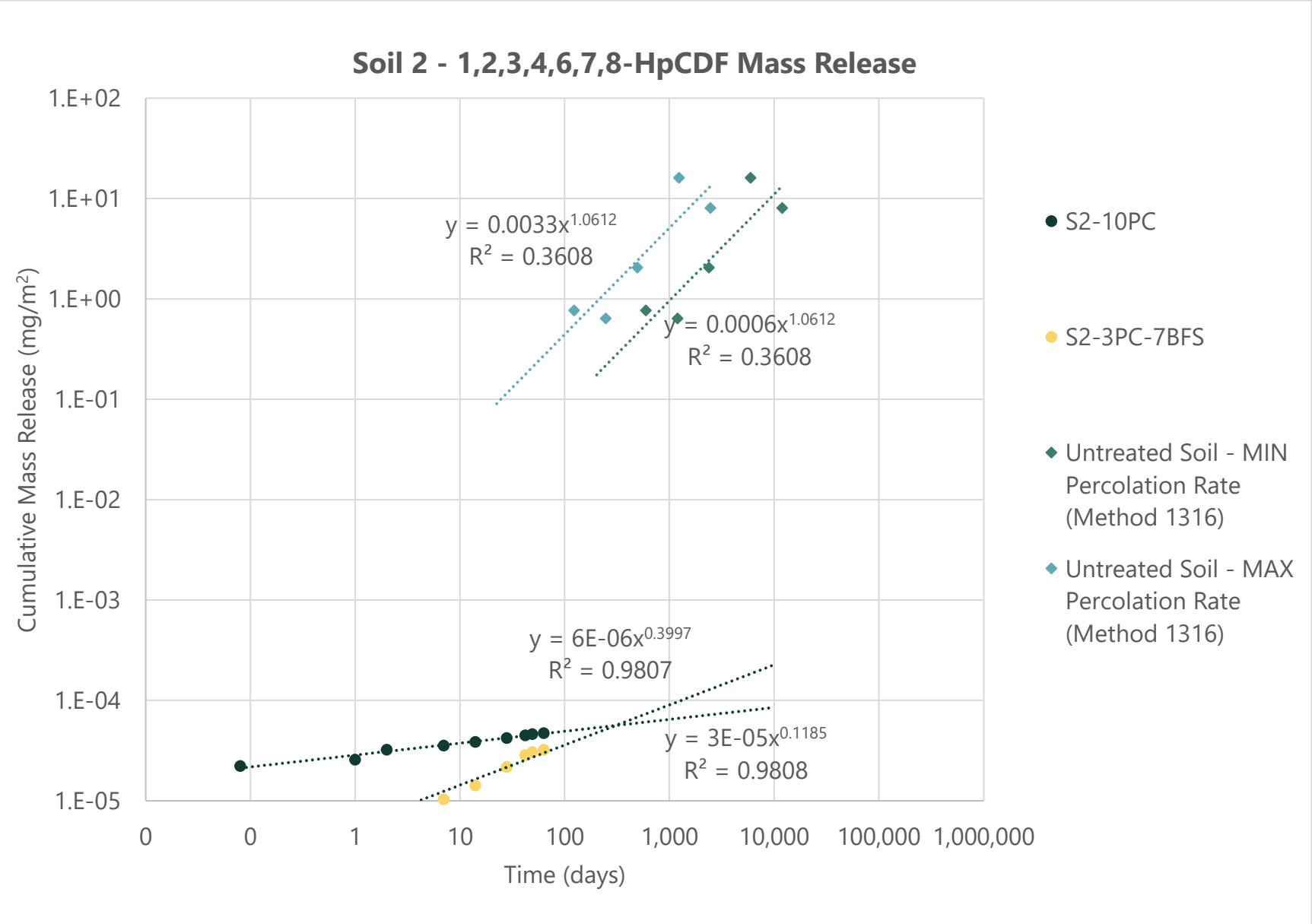
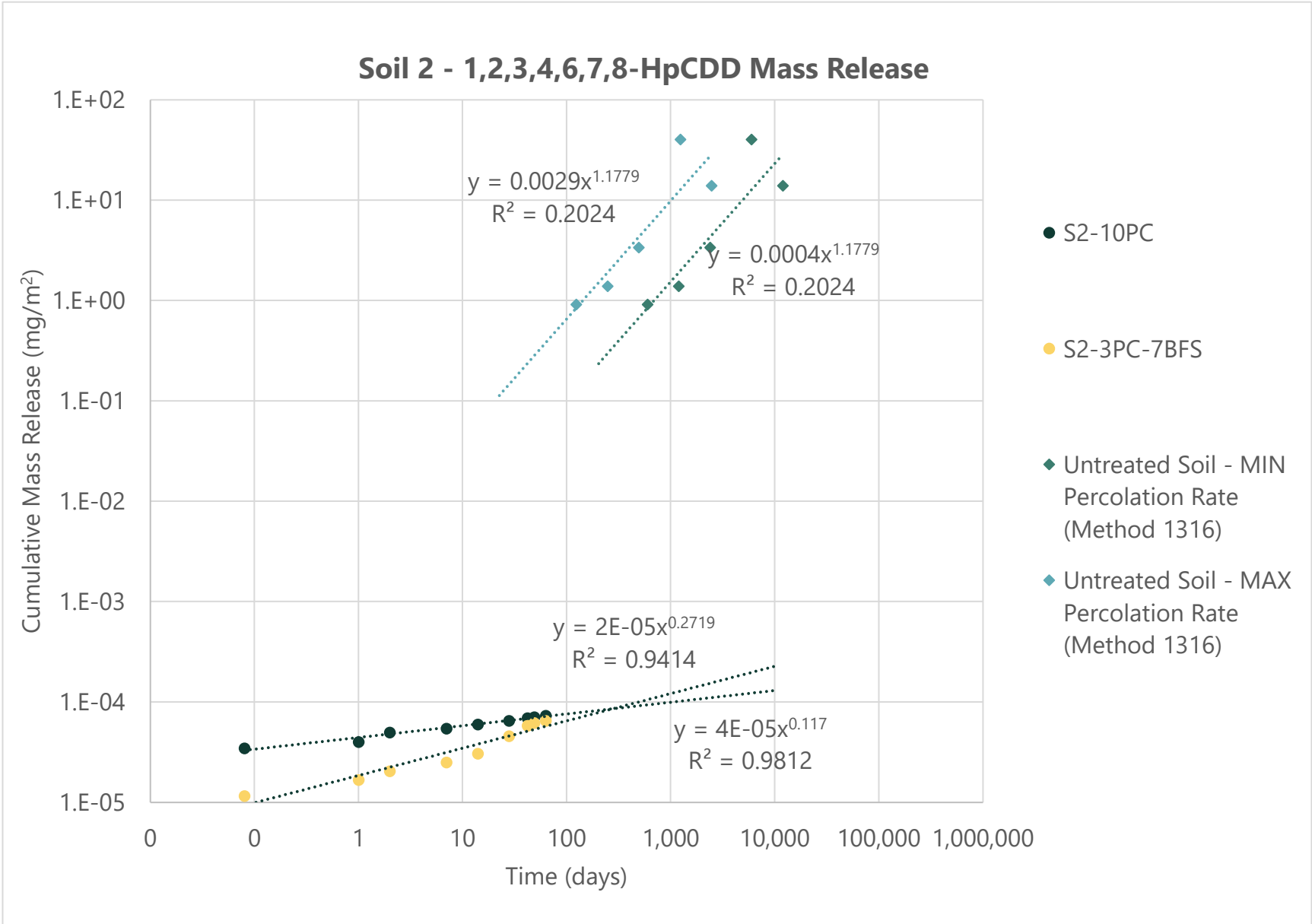
Solidification/Stabilization Treatability Testing Memorandum | Glacier Northeast Inc. Site

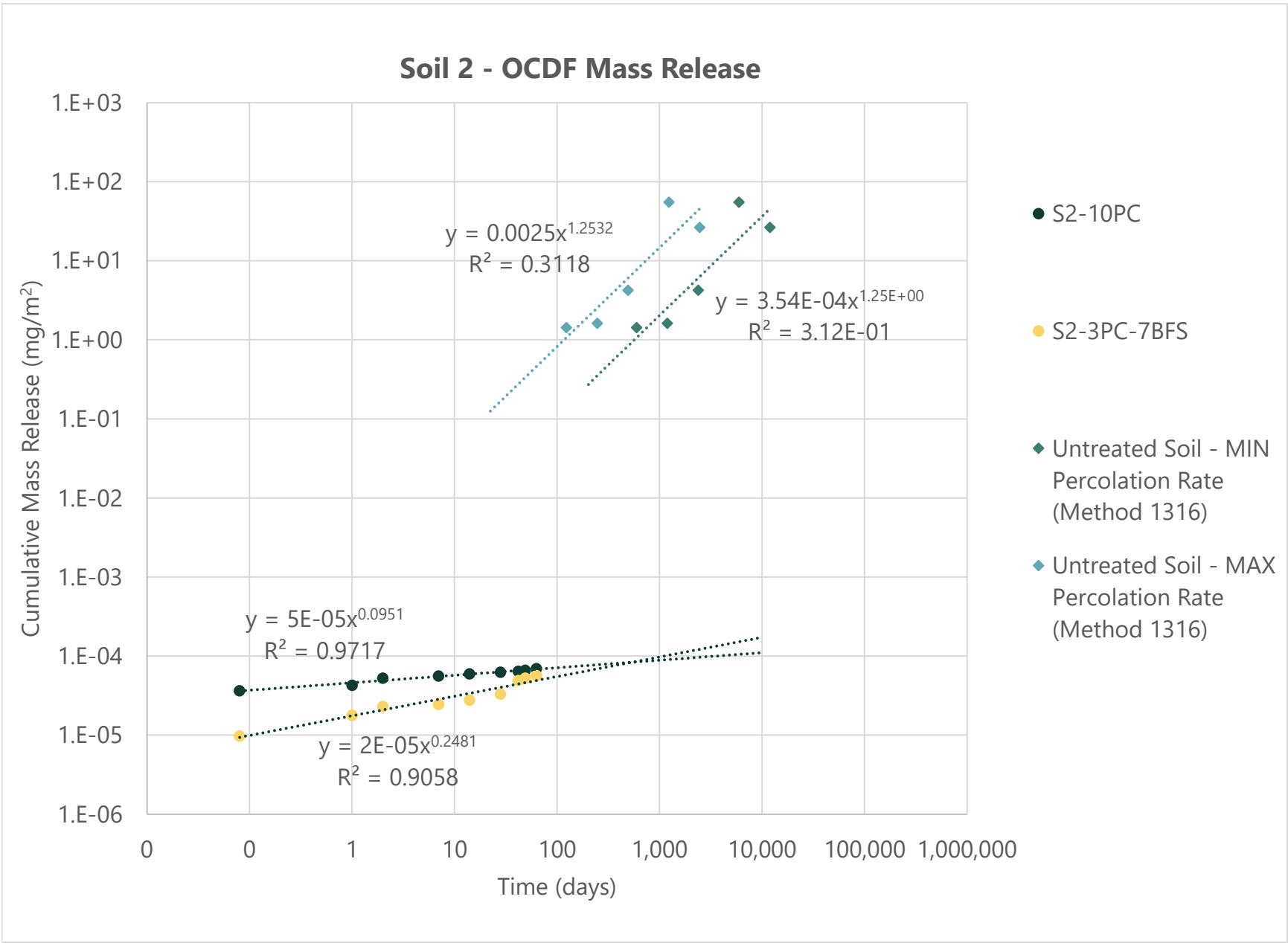
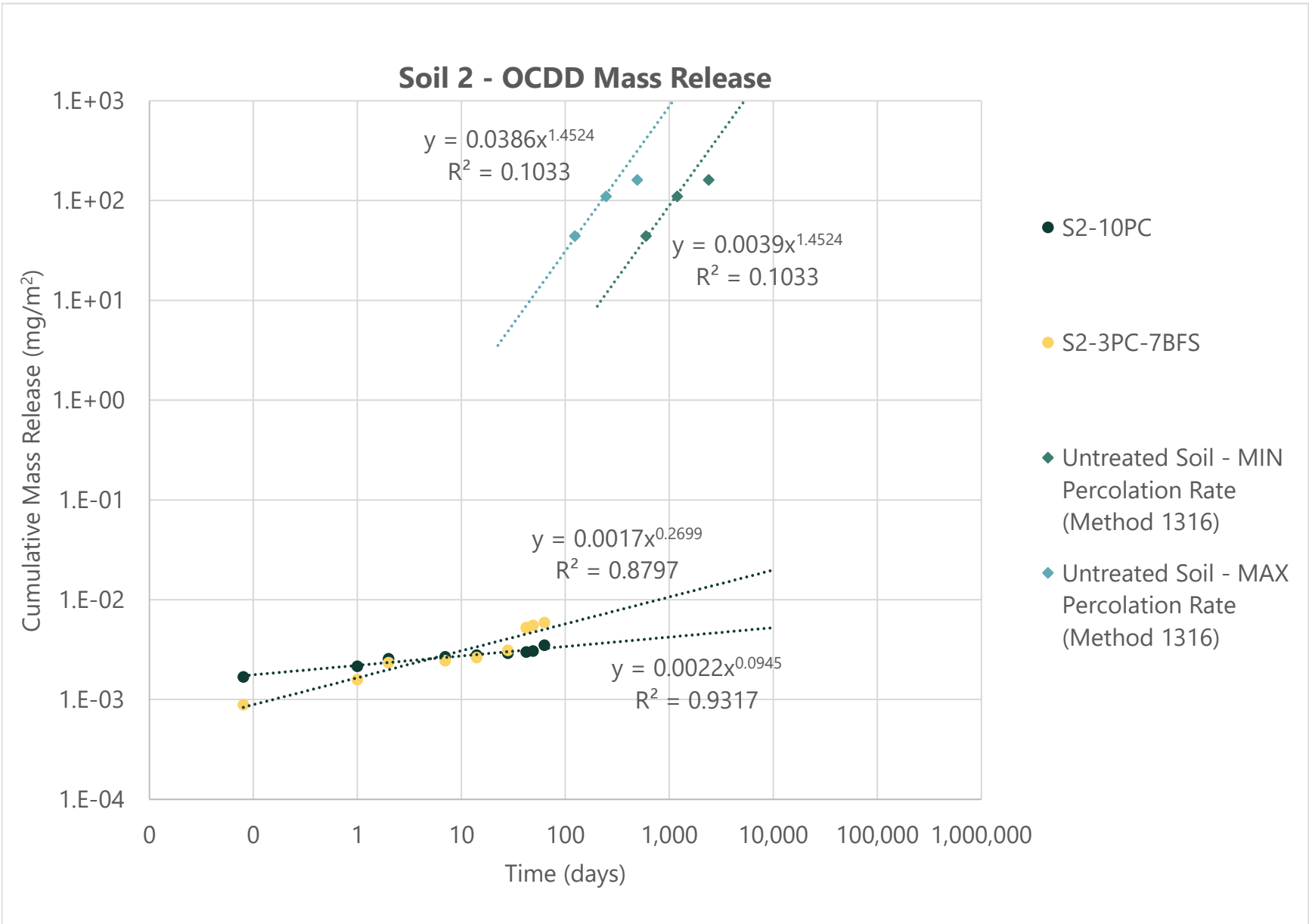
DRAFT



Notes

1. The 1316 result for the 0.5 L/S ratio, which represents the earliest time step in the untreated soil leaching curves, was determined to be an outlier in the data and was not used in the curve fitting dataset.
2. Data points with no fill indicate cumulative mass release intervals that were calculated from nondetect eluate results. This includes most treated soil PCP results. See Table 4.





APPENDIX A

DGI BORING LOGS



**BLACK
RIVER**
environmental



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, SW corner of site

Environmental Exploration Log

Coordinates (NAD83)

E:1267563 N:203742 (est)

Exploration Number

GP-81

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/18/2024 to 11/19/2024

Ground Surface Elev. (NAVD88)

17' (est)

Top of Casing Elev. (NAVD88)

NA

Depth to Water (Below GS)

7' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		3/8 inch NSF 60 bentonite chips		GP-81-1-3	XRF-As=4 ppm PID=0.1 ppm Sheen=None XRF-As=32 ppm PID=0.0 ppm Sheen=Slight XRF-As=56 ppm PID=0.0 ppm Sheen=Slight XRF-As=< 1 ppm PID=0.1 ppm Sheen=None XRF-As=22 ppm PID=0.1 ppm Sheen=Slight XRF-As=47 ppm PID=0.0 ppm Sheen=None XRF-As=34 ppm PID=0 ppm Sheen=None XRF-As=61 ppm PID=0 ppm Sheen=Slight XRF-As=286 ppm PID=0.0 ppm Sheen=Slight		SHALLOW FILL SILTY SAND WITH GRAVEL (SM); dark gray to gray, slightly moist; fine to coarse sand; fine to coarse, angular gravel; no chemical-like odor. Becomes gray. Increased silt content. Becomes black, potential spent carbon. WOODY DEBRIS; brown to yellow brown, slightly moist; less than 1" diameter wood pieces with sawdust; no chemical-like odor.	
5				GP-81-8-10	XRF-As=273 ppm PID=0.0 ppm Sheen=None XRF-As=118 ppm PID=0.0 ppm Sheen=None		DREDGE FILL SAND WITH SILT (SP-SM); black, slightly moist; fine to medium sand; some fibrous wood debris throughout; no chemical-like odor. Becomes wet.	5
10		11/18/2024		GP-81-10-12	XRF-As=719 ppm PID=0.0 ppm Sheen=Slight			10
5				GP-81-12-14	XRF-As=273 ppm PID=0.0 ppm Sheen=Moderate XRF-As=171 ppm PID=0.0 ppm Sheen=None XRF-As=9 ppm PID=0.0 ppm Sheen=None XRF-As=81 ppm PID=0.0 ppm Sheen=None XRF-As=59 ppm PID=0.0 ppm Sheen=None		NATIVE SOIL SILTY SAND (SM); black, wet; fine to medium sand; fine, subrounded to subangular gravel; no chemical-like odor; layer of moisture above silt at 12 ft bgs. SILT AQUITARD SILT (ML); dark gray brown mottled black, moist; low to medium plasticity; high organic content; no chemical-like odor. SANDY SILT (ML); gray brown, moist; low plasticity silt; fine sand; no chemical-like odor. SILTY SAND (SM); gray brown, moist; fine sand; no chemical-like odor. SANDY SILT (ML); gray brown, moist; low plasticity; no chemical-like odor.	15
15		10-in diam. conductor casing set at 14 ft bentonite seal set 12-15 ft.		GP-81-17-19	XRF-As=580 ppm PID=0.0 ppm Sheen=Slight XRF-As=3 ppm PID=0.0 ppm Sheen=Slight XRF-As=7 ppm PID=0.0 ppm Sheen=Slight XRF-As=17 ppm PID=0.0 ppm Sheen=Slight		ALLUVIAL SAND SAND WITH SILT (SP-SM); black, wet; fine to medium sand; no chemical-like odor.	20

Legend

- Continuous core 4" ID
- Grab sample

Water Level

Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
GP-81

Sheet 1 of 2

		Glacier Northwest - AS230067			Environmental Exploration Log			
		Project Address & Site Specific Location 5900 West Marginal Way SW Seattle, WA, SW corner of site			Coordinates (NAD83) E:1267563 N:203742 (est)		Exploration Number GP-81	
Contractor Cascade		Equipment TSi 150 CC	Sampling Method Rotary core		Ground Surface Elev. (NAVD88) 17' (est)			
Operator Chris Baker		Exploration Method(s) Sonic	Work Start/Completion Dates 11/18/2024 to 11/19/2024		Top of Casing Elev. (NAVD88) NA			
						Depth to Water (Below GS) 7' (ATD)		
Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
-5				GP-81-21-23	XRF-As=5 ppm PID=0.1 ppm Sheen=Slight		SILTY SAND (SM); dark brown, wet; fine to medium sand; no chemical-like odor.	
							SAND (SP); black, wet; fine to medium sand; no chemical-like odor.	
25					XRF-As=3 ppm PID=0.0 ppm Sheen=None			25
-10					XRF-As=3 ppm PID=0.0 ppm Sheen=None			
30				GP-81-28-30	XRF-As=2 ppm PID=0.0 ppm Sheen=None			30
-15					XRF-As=6 ppm PID=0.0 ppm Sheen=None			
35				GP-81-32-34	XRF-As=2 ppm PID=0.0 ppm Sheen=None		SILTY SAND (SM); dark gray brown, wet; fine sand; no chemical-like odor.	35
-20					XRF-As=< 1ppm PID=0.1 ppm Sheen=None			
40				GP-81-38-40	XRF-As=< 1ppm PID=0.1 ppm Sheen=None			40
							Bottom of exploration at 40 ft. bgs.	

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\230067 CALPORTLAND SEATTLE CEMENT TERMINAL GPJ February 11, 2025

Review Stage:DRAFT Rev.2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, Center of site

Environmental Exploration Log

Coordinates (NAD83)

E:1267449 N:203913 (est)

Exploration Number

GP-82

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/18/2024

Ground Surface Elev. (NAVD88)

17' (est)

Top of Casing Elev. (NAVD88)

NA

Depth to Water (Below GS)

8' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		3/8 inch NSF 60 bentonite chips		GP-82-2-4	XRF-As=17 ppm PID=0.2 ppm Sheen=Slight		SHALLOW FILL SILTY SAND WITH GRAVEL (SM); gray brown, slightly moist; fine to coarse sand; fine to coarse, angular gravel; no chemical-like odor. Becomes dark brown.	
					XRF-As=5 ppm PID=0.1 ppm Sheen=None		SILTY GRAVEL WITH SAND (GM); gray brown, slightly moist; fine to coarse, subrounded to angular gravel; fine to coarse sand; cobble sized concrete debris; no chemical-like odor.	
					XRF-As=19 ppm PID=0.7 ppm Sheen=None			
5					XRF-As=10 ppm PID=0.4 ppm Sheen=Slight		GRAVEL WITH SILT AND SAND (GP-GM); gray, wet; fine to coarse, angular gravel; fine to coarse sand; no chemical-like odor.	5
					XRF-As=15 ppm PID=0.0 ppm Sheen=Slight		SILTY SAND WITH GRAVEL (SM); black, moist; fine to medium sand; fine to coarse, rounded to subrounded gravel; 20% silt decreasing with depth; no chemical-like odor.	
10					XRF-As=7 ppm PID=0.2 ppm Sheen=Slight			
					XRF-As=39 ppm PID=0.2 ppm Sheen=Slight			
				GP-82-7-9	XRF-As=48 ppm PID=0.2 ppm Sheen=Slight		DREDGE FILL SAND (SP); black, very moist to wet; fine sand; no chemical-like odor. Becomes wet.	
10					XRF-As=53 ppm PID=0.1 ppm Sheen=Slight			10
					XRF-As=14 ppm PID=0.1 ppm Sheen=None			
5					XRF-As=5 ppm PID=0.2 ppm Sheen=Slight		SILT AQUITARD SILT (ML); light brown with black mottling, moist; low to medium plasticity; significant organic content (wood fiber); slight hydrogen sulfide odor.	
				GP-82-11-13	XRF-As=6 ppm PID=0.1 ppm Sheen=Slight		0.25 in sand layer.	
					XRF-As=5 ppm PID=0.3 ppm Sheen=None			
15					XRF-As=8 ppm PID=0.4 ppm Sheen=None		SAND WITH SILT (SP-SM); dark brown, wet; fine sand; some less than 0.25 inch silt layers; trace roots; no chemical-like odor.	15
					XRF-As=5 ppm PID=0.3 ppm Sheen=None			
0					XRF-As=4 ppm PID=0.1 ppm Sheen=None			
				GP-82-15-17	XRF-As=1 ppm PID=0.0 ppm Sheen=None			
					XRF-As=2 ppm PID=0.0 ppm Sheen=Slight		SANDY SILT (ML); dark brown, wet; low plasticity silt; fine sand with some small sand layers; trace roots; no chemical-like odor.	
					XRF-As=3 ppm PID=0.0 ppm Sheen=None			
20					XRF-As=3 ppm PID=0.1 ppm Sheen=None		SAND WITH SILT (SP-SM); dark gray brown, wet; fine to medium sand; no chemical-like odor.	20

Legend

- Continuous core 4" ID
- Grab sample

Water Level

Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
GP-82

Sheet 1 of 2



Glacier Northwest - AS230067

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (NAD83)

Exploration Number

5900 West Marginal Way SW Seattle, WA, Center of site

E:1267449 N:203913 (est)

GP-82

Contractor

Equipment

Sampling Method

Ground Surface Elev. (NAVD88)

Cascade

TSi 150 CC

Rotary core

17' (est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Chris Baker

Sonic

11/18/2024

NA

8' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
-5				GP-82-21-23	XRF-As=3 ppm PID=0.1 ppm Sheen=Slight		SAND WITH SILT (SP-SM); dark gray brown, wet; fine to medium sand; no chemical-like odor. (continued)	
					XRF-As=2 ppm PID=0.1 ppm Sheen=None		SANDY SILT (ML); dark brown, wet; fine to medium sand; trace roots; alternating silt and fine sand layers; slight hydrogen sulfide like odor.	
					XRF-As=2 ppm PID=0.1 ppm Sheen=None		ALLUVIAL SAND	
25					XRF-As=2 ppm PID=0.1 ppm Sheen=None		SAND (SP); black, wet; fine to medium sand; no chemical-like odor.	25
-10							Branch and wood fibers.	
				GP-82-28-30	XRF-As=10 ppm PID=0.1 ppm Sheen=None			
30					XRF-As=3 ppm PID=0.1 ppm Sheen=None			30
-15							Becomes fine to coarse sand.	
				GP-82-33-35	XRF-As=3 ppm PID=0.2 ppm Sheen=None			
35					XRF-As=4 ppm PID=0.2 ppm Sheen=None			35
-20							Becomes with trace fine to coarse, rounded gravel.	
				GP-82-37-39	XRF-As=3 ppm PID=0.2 ppm Sheen=None			
40					XRF-As=3 ppm PID=0.1 ppm Sheen=None		SILTY SAND (SM); dark gray brown, wet; fine sand; no chemical-like odor.	
							Bottom of exploration at 40 ft. bgs.	40

Legend

- Continuous core 4" ID
- Grab sample

Water Level

Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
GP-82

Sheet 2 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, Center West side of site

Environmental Exploration Log

Coordinates (NAD83)

E:1267723 N:203912 (est)

Exploration Number

GP-83

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/19/2024

Ground Surface Elev. (NAVD88)

16' (est)

Top of Casing Elev. (NAVD88)

NA

Depth to Water (Below GS)

8' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		3/8 inch NSF 60 bentonite chips			XRF-As=42 ppm PID=0.1 ppm Sheen=Slight		SHALLOW FILL GRAVEL WITH SILT AND SAND (GW-GM); brown, moist; fine to coarse sand; fine to coarse, angular to subangular gravel; no chemical-like odor. Becomes light gray to gray, slightly moist; trace wood and organic debris; no chemical-like odor.	
					XRF-As=30 ppm PID=0.1 ppm Sheen=None			
					XRF-As=64 ppm PID=0.1 ppm Sheen=Moderate			
					XRF-As=18 ppm PID=0.1 ppm Sheen=Moderate			
5			GP-83-3-5		XRF-As=105 ppm PID=0.2 ppm Sheen=Slight		SILTY SAND (SM); black, slightly moist; fine to medium sand; appears loose; no chemical-like odor.	
			GP-83-5		XRF-As=79 ppm PID=0.2 ppm Sheen=Slight		Trace red coloring.	5
10					XRF-As=5 ppm PID=0.1 ppm Sheen=None		DREDGE FILL SAND (SP); black, moist; fine to medium sand; trace rounded to subrounded gravel; trace red and white sand grains; no chemical-like odor.	
					XRF-As=4 ppm PID=0.1 ppm Sheen=None			
					XRF-As=2 ppm PID=0.1 ppm Sheen=None		Becomes wet.	
					XRF-As=5 ppm PID=0.2 ppm Sheen=None			
10					XRF-As=3 ppm PID=0.1 ppm Sheen=None		NATIVE SOIL SILTY SAND (SM); dark gray brown, wet; fine to medium sand; trace roots; no chemical-like odor.	10
5			GP-83-9.5-11.5		XRF-As=8 ppm PID=0.1 ppm Sheen=Slight			
					XRF-As=6 ppm PID=0.2 ppm Sheen=None		SILT AQUITARD SILT (ML); gray brown black mottling, moist; low to medium plasticity; little organic material and wood fibers; hydrogen sulfide like odor.	
			GP-83-12-14		XRF-As=10 ppm PID=0.0 ppm Sheen=None			
					XRF-As=3 ppm PID=0.0 ppm Sheen=None			
15					XRF-As=3 ppm PID=0.0 ppm Sheen=None		Becomes gray, moist; small sand lenses.	15
0					XRF-As=7 ppm PID=0.1 ppm Sheen=None			
			GP-83-15-17		XRF-As=10 ppm PID=0.1 ppm Sheen=None		ALLUVIAL SAND SAND (SP); black, wet; fine to coarse sand; trace fine to coarse, rounded gravel; trace red and white sand grains; no chemical-like odor.	
					XRF-As=5 ppm PID=0.1 ppm Sheen=None			
					XRF-As=2 ppm PID=0.2 ppm Sheen=None			
20					XRF-As=5 ppm PID=0.0 ppm Sheen=None			20

Legend

- ☐ No Soil Sample Recovery
- ☒ Continuous core 4" ID
- ☒ Grab sample

Water Level

▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
GP-83

Sheet 1 of 2

Glacier Northwest - AS230067
Project Address & Site Specific Location
5900 West Marginal Way SW Seattle, WA, Center West side of site

Environmental Exploration Log
Coordinates (NAD83)
E:1267723 N:203912 (est)

Exploration Number
GP-83

Contractor Cascade	Equipment TSi 150 CC	Sampling Method Rotary core	Ground Surface Elev. (NAVD88) 16' (est)
Operator Chris Baker	Exploration Method(s) Sonic	Work Start/Completion Dates 11/19/2024	Top of Casing Elev. (NAVD88) NA
		Depth to Water (Below GS) 8' (ATD)	

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							ALLUVIAL SAND SAND (SP); black, wet; fine to coarse sand; trace fine to coarse, rounded gravel; trace red and white sand grains; no chemical-like odor. (continued)	
25	-10			GP-83-23-25	XRF-As=5 ppm PID=0.0 ppm Sheen=None			25
					XRF-As=4 ppm PID=0.0 ppm Sheen=Slight			
				GP-83-28-30	XRF-As=3 ppm PID=0.0 ppm Sheen=None			30
					XRF-As=3 ppm PID=0.0 ppm Sheen=None			
				GP-83-33-35	XRF-As=3 ppm PID=0.2 ppm Sheen=None			35
					XRF-As=3 ppm PID=0.1 ppm Sheen=None		SILT (ML); dark gray, moist; low to medium plasticity; no chemical-like odor.	
					XRF-As=3 ppm PID=0.1 ppm Sheen=None		SILTY SAND (SM); dark gray, wet; fine sand; silt content decreasing with depth; no chemical-like odor.	
				GP-83-38-40	XRF-As=3 ppm PID=0.1 ppm Sheen=None			40
							Bottom of exploration at 40 ft. bgs.	

Legend
☐ No Soil Sample Recovery
☒ Continuous core 4" ID
☒ Grab sample

Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log GP-83
Sheet 2 of 2

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\230067 CALPORTLAND SEATTLE CEMENT TERMINAL GPJ February 11, 2025

Review Stage: DRAFT Rev.2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, Center West side of site

Monitoring Well Log

Coordinates (NAD83)

E:1267706.62 N:203847.44

Exploration Number

MW-13D

Ecology Well Tag No.
BNV 331

Depth to Water (Below GS)

6.5' (ATD)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/25/2024

Ground Surface Elev. (NAVD88)

16.71'

Top of Casing Elev. (NAVD88)

15.96'

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		Flush well box expansion plug			XRF-As=25 ppm PID=0.1 ppm Sheen=None		SHALLOW FILL SILTY GRAVEL WITH SAND (GM); brown, moist; fine to coarse sand; fine to coarse, subangular to angular gravel; no chemical-like odor. Becomes gray with concrete debris. Becomes dark brown. Becomes gray with concrete debris.	
		Concrete seal			XRF-As=26 ppm PID=0.2 ppm Sheen=Slight			
		2-inch diam. Sch 40 PVC casing			XRF-As=358 ppm PID=0.2 ppm Sheen=Slight		SILTY SAND (SM); black, moist; fine to medium sand; no chemical-like odor. Potential spent carbon.	
				MW-13D-2.5-4.5	XRF-As=50 ppm PID=0.2 ppm Sheen=Slight		WOODY DEBRIS; brown, moist; wood mulch, shredded wood, and sawdust; no chemical-like odor.	
5		3/8 inch NSF 60 bentonite chips			XRF-As=50 ppm PID=0.5 ppm Sheen=Slight		SAND WITH SILT (SP-SM); very dark gray and black, wet; fine to coarse sand; fine to coarse, subangular to angular gravel; bentonite present; no chemical-like odor.	5
		11/25/2024			XRF-As=15 ppm PID=0.4 ppm Sheen=Slight			
10					XRF-As=52 ppm PID=0.3 ppm Sheen=Slight		Becomes wet.	
		12/19/2024			XRF-As=18 ppm PID=0.2 ppm Sheen=None		DREDGE FILL SILTY SAND WITH GRAVEL (SM); very dark gray brown and black, wet; fine to medium sand; no chemical-like odor.	
				MW-13D-9.5-11.5	XRF-As=19 ppm PID=0.2 ppm Sheen=None			
10					XRF-As=16 ppm PID=0.2 ppm Sheen=None			10
					XRF-As=15 ppm PID=0.1 ppm Sheen=None			
5					XRF-As=276 ppm Sheen=-- Sheen=--		SILT AQUITARD SILT (ML); brown with black mottling, moist; low to medium plasticity; high organic content with wood fragments; slight hydrogen sulfide odor.	
				MW-13D-11.5-13.5	XRF-As=6 ppm PID=-- PID=--			
					XRF-As=8 ppm PID=0.1 ppm Sheen=None			
					PID=0.2 ppm Sheen=None			
15		10-in diam. conductor casing set at 14 ft bentonite seal set 12-15 ft.			XRF-As=36 ppm PID=0.2 ppm Sheen=None		SILTY SAND (SM); black, wet; fine to medium sand; small silt layers; wood; slight hydrogen sulfide like odor.	15
				MW-13D-14.5-16.5	XRF-As=39 ppm PID=0.1 ppm Sheen=None		SILT (ML); dark gray brown, wet; fine to medium sand; low plasticity silt; wood fragments; slight hydrogen sulfide like odor.	
					XRF-As=10 ppm PID=0.1 ppm Sheen=None		SILTY SAND (SM); black, wet; fine to medium sand; small silt layers; wood fragments; slight hydrogen sulfide like odor.	
					XRF-As=5 ppm PID=0.2 ppm Sheen=None			
20					XRF-As=17 ppm PID=0.2 ppm Sheen=Slight		ALLUVIAL SAND SAND WITH SILT (SP-SM); black, wet; fine to medium sand; no chemical-like odor.	20
				MW-13D-19-21			SAND (SP); black, wet; fine to medium sand with trace coarse grains; subtrace fine to coarse, subrounded gravel; trace red and white sand grains; no chemical-like odor.	

Legend

- Continuous core 4" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-13D

Sheet 1 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, Center West side of site

Monitoring Well Log

Coordinates (NAD83)

E:1267706.62 N:203847.44

Exploration Number

MW-13D

Ecology Well Tag No.
BNV 331

Depth to Water (Below GS)

6.5' (ATD)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/25/2024

Ground Surface Elev. (NAVD88)

16.71'

Top of Casing Elev. (NAVD88)

15.96'

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
25	-10				XRF-As=7 ppm PID=0.2 ppm Sheen=None		SAND (SP); black, wet; fine to medium sand with trace coarse grains ; subtrace fine to coarse, subrounded gravel; trace red and white sand grains; no chemical-like odor. (continued)	25
					XRF-As=7 ppm PID=0.2 ppm Sheen=Slight			
					XRF-As=5 ppm PID=0.1 ppm Sheen=None			
30	-15				XRF-As=6 ppm PID=0.2 ppm Sheen=None			30
					XRF-As=3 ppm PID=0.2 ppm Sheen=None			
35	-20	2-12 NSF 61 silica sand			XRF-As=< 1 ppm PID=0.1 ppm Sheen=None		SILT WITH SAND (ML); black, wet; fine sand; no chemical-like odor.	35
					XRF-As=2 ppm PID=0.2 ppm Sheen=None		SILTY SAND (SM); black, wet; fine sand; no chemical-like odor.	
							SAND WITH SILT (SP-SM); black, wet; fine sand; no chemical-like odor.	
		Sch 40 PVC screen 0.010 inch slot					SILTY SAND (SM); black, wet; fine sand; no chemical-like odor.	
							SAND WITH SILT (SP-SM); black, wet; fine sand; no chemical-like odor.	
40	-25				XRF-As=3 ppm PID=0.2 ppm Sheen=Slight			40
							Bottom of exploration at 41 ft. bgs.	

Legend

- Continuous core 4" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-13D

Sheet 2 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, Center South side of site

Monitoring Well Log

Coordinates (NAD83)

E:1267457.54 N:203770.97

Exploration Number

MW-19D

Ecology Well Tag No.
BNV 332

Depth to Water (Below GS)

7.5' (ATD)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/25/2024

Ground Surface Elev. (NAVD88)

17.44'

Top of Casing Elev. (NAVD88)

16.8'

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		Flush well box expansion plug					SHALLOW FILL	
		Concrete seal			XRF-As=12 ppm PID=0.3 ppm Sheen=slight		SILTY GRAVEL WITH SAND (GM); gray brown, moist; fine to coarse sand; fine to coarse, subangular gravel; cohesive silt; no chemical-like odor.	
		2-inch diam. Sch 40 PVC casing			XRF-As=25 ppm PID=0.4 ppm Sheen=slight		SILTY SAND WITH GRAVEL (SM); gray, moist; fine to coarse sand; fine to coarse, subangular gravel; trace shell and brick fragments; slight hydrocarbon-like odor.	
					XRF-As=248 ppm PID=0.3 ppm Sheen=Slight		SILTY SAND (SM); black, moist; fine to medium sand; no chemical-like odor. Potential spent carbon.	
5		3/8 inch NSF 60 bentonite chips		MW-19D-2.5-5	XRF-As=378 ppm PID=0.3 ppm Sheen=Slight		SAND WITH SILT (SP-SM); very dark grey brown, moist; fine to medium sand; trace wood fragments; trace brick fragments; no chemical-like odor.	5
					XRF-As=1063 ppm PID=0.3 ppm Sheen=None		SILT WITH SAND (ML); black, moist; fine sand; low plasticity silt; trace roots; no chemical-like odor.	
					XRF-As=538 ppm PID=0.1 ppm Sheen=Slight		DREDGE FILL	
10		11/25/2024			XRF-As=575 ppm PID=0.1 ppm Sheen=slight		SAND WITH SILT (SP-SM); black, very moist to wet. Becomes wet.	
					XRF-As=130 ppm PID=0.2 ppm Sheen=Slight			
10		12/16/2024			XRF-As=67 ppm PID=0.2 ppm Sheen=slight			
				MW-19D-10-12	XRF-As=37 ppm PID=0.2 ppm Sheen=None			10
					XRF-As=117 ppm PID=0.2 ppm Sheen=None			
5					XRF-As=35 ppm PID=0.2 ppm Sheen=None		SILT AQUITARD	
				MW-19D-12-14	XRF-As=1522 ppm PID=0.1 ppm Sheen=None		SILT (ML); brown with black mottling, moist; low to medium plasticity silt; wood and organics decomposing throughout; hydrogen sulfide like odor.	
					XRF-As=23 ppm PID=0.2 ppm Sheen=None			
15		10-in diam. conductor casing set at 14 ft bentonite seal set 12-15 ft.			XRF-As=3 ppm PID=0.1 ppm Sheen=None			15
				MW-19D-14.5-16				
0								
20							ALLUVIAL SAND	20
				MW-19D-20-22			SAND (SP); black, wet; fine to medium sand; no chemical-like odor.	

Legend

- No Soil Sample Recovery
- Continuous core 4" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-19D

Sheet 1 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, Center South side of site

Monitoring Well Log

Coordinates (NAD83)

E:1267457.54 N:203770.97

Exploration Number

MW-19D

Ecology Well Tag No.
BNV 332

Depth to Water (Below GS)

7.5' (ATD)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/25/2024

Ground Surface Elev. (NAVD88)

17.44'

Top of Casing Elev. (NAVD88)

16.8'

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
-5					XRF-As=4 ppm PID=0.1 ppm Sheen=None		ALLUVIAL SAND SAND (SP); black, wet; fine to medium sand; no chemical-like odor. (continued)	
25					XRF-As=6 ppm PID=0.1 ppm Sheen=None			25
-10					XRF-As=2 ppm PID=0.2 ppm Sheen=Slight			
30				MW-19D-28-30	XRF-As=3 ppm PID=0.2 ppm Sheen=None		Becomes fine to coarse sand; trace fine, rounded gravel.	30
-15					XRF-As=5 ppm PID=0.1 ppm Sheen=None			
35		2-12 NSF 61 silica sand		MW-19D-33-35	XRF-As=2 ppm PID=0.1 ppm Sheen=None		SAND WITH SILT (SP-SM); black, wet; fine to very fine sand; interbedded with 0.25 in layers of silt every 0.5 ft; no chemical-like odor.	35
-20		Sch 40 PVC screen 0.010 inch slot			XRF-As=2 ppm PID=0.4 ppm Sheen=None			
40				MW-19D-38-40	XRF-As=4 ppm PID=0.4 ppm Sheen=None			40
-25							Bottom of exploration at 41 ft. bgs.	

Legend

- ☐ No Soil Sample Recovery
- ☒ Continuous core 4" ID
- ☒ Grab sample

Water Level

- ☒ Static Water Level
- ☒ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-19D

Sheet 2 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, North side of shoreline

Monitoring Well Log

Coordinates (NAD83)

E: 1267860.72 N: 204016.00

Exploration Number

MW-33D

Ecology Well Tag No.
BNV 324

Depth to Water (Below GS)

6.5' (ATD)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/19/2024

Ground Surface Elev. (NAVD88)

16.05'

Top of Casing Elev. (NAVD88)

15.58'

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		Flush well box expansion plug			XRF-As=4 ppm Sheen=None PID=0.1 ppm		SHALLOW FILL SILTY SAND WITH GRAVEL (SM); dark brown, moist; fine to coarse sand; fine to coarse angular gravel; few roots; no chemical-like odor.	
		Concrete seal			XRF-As=3 ppm PID=0.1 ppm Sheen=None			
		2-inch diam. Sch 40 PVC casing			XRF-As=7 ppm PID=0.2 ppm Sheen=None		SILTY GRAVEL WITH COBBLES (GM); concrete debris; fine to coarse gravel; platy fractured rock; no chemical-like odor.	
					XRF-As=6 ppm PID=0.1 ppm Sheen=None		SILTY SAND WITH GRAVEL (SM); black, very moist; fine to coarse sand; fine to coarse, subangular to angular gravel; trace wood fibers; trace brick fragments; trace foam pieces; no chemical-like odor.	
5		3/8 inch NSF 60 bentonite chips		MW-33D-3-5	XRF-As=477 ppm PID=0.1 ppm Sheen=None			
		11/18/2024			XRF-As=161 ppm PID=0.1 ppm Sheen=None		DREDGE FILL SAND (SP); black, very moist; fine to medium sand; no chemical-like odor. Becomes wet.	5
10					XRF-As=16 ppm PID=0.4 ppm Sheen=Slight			
		12/19/2024			XRF-As=14 ppm PID=0.6 ppm Sheen=Slight			
				MW-33D-7-9	XRF-As=13 ppm PID=0.6 ppm Sheen=Slight			
10					XRF-As=5 ppm PID=0.3 ppm Sheen=None			
					XRF-As=7 ppm PID=0.4 ppm Sheen=Slight			10
5					XRF-As=4 ppm PID=0.4 ppm Sheen=Slight		SILT AQUITARD SILT (ML); brown, moist; low to medium plasticity; high organic content; black mottling; wood fiber; hydrogen sulfide like odor.	
				MW-33D-10.5-12.5	XRF-As=4 ppm PID=0.2 ppm Sheen=None			
					XRF-As=4 ppm PID=0.3 ppm Sheen=None			
					XRF-As=4 ppm PID=0.4 ppm Sheen=Slight		Increased wood debris content.	
15		10-in diam. conductor casing set at 13.5 ft bentonite seal set 11-15 ft.			XRF-As=4 ppm PID=0.3 ppm Sheen=Slight		SAND WITH SILT (SP-SM); black, wet; fine to medium sand; trace roots; no chemical-like odor.	15
0					XRF-As=8 ppm PID=0.2 ppm Sheen=None		SILT (ML); dark gray/brown, wet; low to medium plasticity, cohesive; trace wood fiber; no chemical-like odor.	
				MW-33D-16-18	XRF-As=< 1 ppm PID=0.3 ppm Sheen=Slight			
		2-12 NSF 61 silica sand			XRF-As=4 ppm PID=0.3 ppm Sheen=None		ALLUVIAL SAND SAND (SP); black, wet; fine to medium sand; no chemical-like odor.	
					XRF-As=5 ppm PID=0.5 ppm Sheen=Slight			
20					XRF-As=7 ppm PID=0.3 ppm Sheen=Slight		SAND WITH SILT AND GRAVEL (SP-SM); black with red and white grains, wet; fine to coarse sand; fine to coarse, subrounded to rounded gravel; no chemical-like odor.	20
-5		Sch 40 PVC screen 0.010 inch slot						

Legend

- Continuous core 4" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-33D

Sheet 1 of 2

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\230067 CALPORTLAND SEATTLE CEMENT TERMINAL GPJ February 11, 2025

Review Stage: DRAFT Rev. 2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, North side of shoreline

Monitoring Well Log

Coordinates (NAD83)

E:1267860.72 N:204016.00

Exploration Number

MW-33D

Ecology Well Tag No.
BNV 324

Depth to Water (Below GS)

6.5' (ATD)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/19/2024

Ground Surface Elev. (NAVD88)

16.05'

Top of Casing Elev. (NAVD88)

15.58'

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
25	-10			MW-33D-23-25	XRF-As=4 ppm PID=0.3 ppm Sheen=None		SAND WITH SILT AND GRAVEL (SP-SM); black with red and white grains, wet; fine to coarse sand; fine to coarse, subrounded to rounded gravel; no chemical-like odor. (continued)	
25					XRF-As=3 ppm PID=0.3 ppm Sheen=None		SAND WITH GRAVEL (SP); black, wet; fine to coarse sand; fine to coarse, subrounded gravel; no chemical-like odor.	25
30	-15			MW-33D-28-30	XRF-As=2 ppm PID=0.3 ppm Sheen=None		SAND (SP); black, wet; fine to medium sand; no chemical-like odor.	
30		3/8 inch NSF 60 bentonite chips			XRF-As=4 ppm PID=0.2 ppm Sheen=None			30
35	-20			MW-33D-33-35	XRF-As=2 ppm PID=0.2 ppm Sheen=None		SAND WITH SILT (SP-SM); black, wet; very fine sand; no chemical-like odor.	35
40	-25			MW-33D-38-40	XRF-As=< 1 ppm PID=0.2 ppm Sheen=None		SILT (ML); 0.3 in thick silt layer.	
40					XRF-As=2 ppm PID=0.2 ppm Sheen=None		Bottom of exploration at 40 ft. bgs.	40

Legend

- Continuous core 4" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-33D

Sheet 2 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, South side of shoreline

Monitoring Well Log

Coordinates (NAD83)

E:1267683.16 N:203686.60

Exploration Number

MW-46D

Ecology Well Tag No.
BNV 325

Depth to Water (Below GS)

10' (ATD)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/20/2024

Ground Surface Elev. (NAVD88)

17.01'

Top of Casing Elev. (NAVD88)

16.32'

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		Flush well box expansion plug			XRF-As=13 ppm PID=0.4 ppm Sheen=Slight		BANK FILL	
		Concrete seal			XRF-As=14 ppm PID=0.4 ppm Sheen=None		SILTY GRAVEL WITH SAND (GM); gray brown, very moist; fine to coarse sand; fine to coarse, angular gravel; few roots; no chemical-like odor.	
		2-inch diam. Sch 40 PVC casing			XRF-As=22 ppm PID=0.4 ppm Sheen=None			
		3/8 inch NSF 60 bentonite chips			XRF-As=32 ppm PID=0.4 ppm Sheen=Slight		SILTY SAND WITH GRAVEL (SM); first 2 inches black then becomes dark gray brown, moist; fine to coarse sand; fine to coarse, subangular gravel; no chemical-like odor.	
5				MW-46D-3-5	XRF-As=417 ppm PID=0.5 ppm Sheen=Slight			5
					XRF-As=82 ppm PID=0.1 ppm Sheen=Slight			
					XRF-As=109 ppm PID=0.1 ppm Sheen=Slight		SILTY SAND WITH GRAVEL (SM); dark gray brown, moist; fine to coarse sand; fine to coarse, subangular gravel; no chemical-like odor.	
10				MW-46D-7-9	XRF-As=114 ppm PID=0.4 ppm Sheen=Slight		SILTY SAND WITH GRAVEL AND COBBLES (SM); dark gray brown, moist; fine to coarse sand; fine to coarse, subangular gravel; brick fragments; wood, branches, and roots; concrete debris; no chemical-like odor.	
				MW-46D-9	XRF-As=102 ppm PID=0.5 ppm Sheen=Moderate			
					XRF-As=77 ppm PID=1.5 ppm Sheen=Moderate		1 ft thick concrete block.	
10					PID=9.7 ppm Sheen=Moderate		Becomes wet.	10
					XRF-As=1024 ppm PID=0.4 ppm Sheen=Slight		SILTY SAND WITH GRAVEL (SM); black, wet; fine to coarse sand; fine to coarse, subangular to angular gravel; no chemical-like odor.	
5				MW-46D-11-12.5	XRF-As=1034 ppm PID=0.5 ppm Sheen=Moderate		Potential spent carbon.	
					XRF-As=2147 ppm PID=0.4 ppm Sheen=Moderate		SILT AQUITARD	
				MW-46D-12.5-14.5	XRF-As=138 ppm PID=0.4 ppm Sheen=Slight		SILT (ML); gray brown with black mottling, moist; low to medium plasticity; cohesive; slight hydrogen sulfide odor. 0.5 ft wood chunk.	
15					XRF-As=159 ppm PID=0.5 ppm Sheen=Slight			15
					XRF-As=16 ppm PID=0.2 ppm Sheen=None			
					XRF-As=20 ppm PID=0.5 ppm Sheen=Slight		SILTY SAND (SM); dark gray brown, wet; fine to medium sand; borderline silt; no chemical-like odor.	
					XRF-As=19 ppm PID=0.6 ppm Sheen=Slight		SILT (ML); brown, wet; small silt layer; small to medium sand; no chemical-like odor.	
				MW-46D-17.5-19.5	XRF-As=45 ppm PID=0.7 ppm Sheen=Slight		SILTY SAND (SM); dark gray brown, wet; fine to medium sand; borderline silt; no chemical-like odor.	
20					XRF-As=83 ppm PID=0.3 ppm Sheen=Slight		ALLUVIAL SAND	20
				MW-46D-20-22			SAND (SP); black with red and white sand grains, wet; fine to medium sand; no chemical-like odor.	

Legend

- No Soil Sample Recovery
- Continuous core 4" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-46D

Sheet 1 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, South side of shoreline

Monitoring Well Log

Coordinates (NAD83)

E: 1267683.16 N: 203686.60

Exploration Number

MW-46D

Ecology Well Tag No.
BNV 325

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/20/2024

Ground Surface Elev. (NAVD88)

17.01'

Top of Casing Elev. (NAVD88)

16.32'

Depth to Water (Below GS)

10' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
					XRF-As=36 ppm PID=0.4 ppm Sheen=None		ALLUVIAL SAND SAND (SP); black with red and white sand grains, wet; fine to medium sand; no chemical-like odor. (continued)	
25					XRF-As=12 ppm PID=0.6 ppm Sheen=None		Becomes with fine to coarse, subrounded gravel.	25
-10					XRF-As=4 ppm PID=0.5 ppm Sheen=None		Becomes with fine to coarse sand.	
30		3/8 inch NSF 60 bentonite chips		MW-46D-28-30	XRF-As=2 ppm PID=0.6 ppm Sheen=None			30
-15					XRF-As=2 ppm PID=0.1 ppm Sheen=None			
35				MW-46D-33-35	XRF-As=8 ppm PID=0.5 ppm Sheen=None		SAND WITH SILT (SP-SM); black, wet; fine sand; trace coarse, rounded gravel; no chemical-like odor.	35
-20					XRF-As=142 ppm PID=0.4 ppm Sheen=Slight			
40				MW-46D-36-38	XRF-As=2 ppm PID=0.5 ppm Sheen=Slight		Bottom of exploration at 40 ft. bgs.	40
-25								

Legend

- ☐ No Soil Sample Recovery
- ☒ Continuous core 4" ID
- ☒ Grab sample

Water Level

- ☒ Static Water Level
- ☒ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-46D

Sheet 2 of 2

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\230067 CALPORTLAND SEATTLE CEMENT TERMINAL GPJ February 11, 2025

		Glacier Northwest - AS230067			Monitoring Well Log			
		Project Address & Site Specific Location 5900 West Marginal Way SW Seattle, WA, South side of shoreline			Coordinates (NAD83) E:1267685.36 N:203692.06		Exploration Number MW-46S	
Contractor Cascade		Equipment TSi 150 CC		Sampling Method Rotary core		Ground Surface Elev. (NAVD88) 16.89'		Ecology Well Tag No. BNV 326
Operator Chris Baker		Exploration Method(s) Sonic		Work Start/Completion Dates 11/20/2024		Top of Casing Elev. (NAVD88) 16.16'		
								Depth to Water (Below GS) 10' (ATD)
Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1	16	Flush well box expansion plug					BANK FILL SILTY GRAVEL WITH SAND (GM); gray brown, very moist; fine to coarse sand; fine to coarse, angular gravel; few roots; no chemical-like odor.	1
2	15	Concrete seal						2
3	14	2-inch diam. Sch 40 PVC casing						3
4	13	3/8 inch NSF 60 bentonite chips					SILTY SAND WITH GRAVEL (SM); first 2 inches black then becomes dark gray brown, moist; fine to coarse sand; fine to coarse, sub-angular gravel; no chemical-like odor.	4
5	12	2-12 NSF 61 silica sand						5
6	11	10 Slot PVC Screen					SILTY SAND WITH GRAVEL (SM); dark gray brown, moist; fine to coarse sand; fine to coarse, sub-angular gravel; no chemical-like odor.	6
7	10	▼ 12/18/2024					SILTY SAND WITH GRAVEL AND COBBLES (SM); dark gray brown, moist; fine to coarse sand; fine to coarse, sub-angular gravel; brick fragments; wood, branches, and roots; concrete debris; no chemical-like odor.	7
8	9							8
9	8	Sch 40 PVC screen 0.010 inch slot					1 ft thick concrete block.	9
10	7	▽ 11/20/2024					Becomes wet.	10
11	6							11
12	5						SILTY SAND WITH GRAVEL (SM); black, wet; fine to coarse sand; fine to coarse, sub-angular to angular gravel; no chemical-like odor. Potential spent carbon.	12
13	4						SILT AQUITARD SILT (ML); gray brown with black mottling, moist; low to medium plasticity; cohesive; slight hydrogen sulfide odor. Bottom of exploration at 13 ft. bgs.	13
14	3						Note: Lithology copied from co-located monitoring well MW-46D.	14
2								
Legend								
Sample Type	Water Level		See Exploration Log Key for explanation of symbols					
	▼	Static Water Level	Logged by: DJM					
	▽	Water Level ATD	Approved by: AJY					
							Exploration Log MW-46S	
							Sheet 1 of 1	

Review Stage: DRAFT Rev.2



Glacier Northwest - AS230067

Project Address & Site Specific Location
5900 West Marginal Way SW Seattle, WA, Center South side of shoreline

Monitoring Well Log

Coordinates (NAD83)
E:1267769.00 N:203815.91

Exploration Number

MW-47D

Ecology Well Tag No.
BNV 329

Depth to Water (Below GS)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/22/2024

Ground Surface Elev. (NAVD88)

17.4'

Top of Casing Elev. (NAVD88)

16.72'

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		Flush well box expansion plug			XRF-As=38 ppm PID=0.2 ppm Sheen=None		BANK FILL SILTY SAND WITH GRAVEL (SM); brown, moist; fine to coarse sand; fine to coarse, subrounded to subangular gravel; concrete debris; some roots; no chemical-like odor.	
		Concrete Seal			XRF-As=55 ppm PID=0.4 ppm Sheen=None			
5		2-inch diam. Sch 40 PVC casing		MW-47D-2-4	XRF-As=92 ppm PID=0.2 ppm Sheen=None		SAND WITH SILT (SP-SM); light brown to brown, slightly moist; fine to medium sand; some subrounded to angular gravel; trace organics; no chemical-like odor.	5
		3/8 inch NSF 60 bentonite chips			XRF-As=66 ppm PID=0.2 ppm Sheen=None			
10					XRF-As=77 ppm PID=0.2 ppm Sheen=None			
					XRF-As=22 ppm PID=0.1 ppm Sheen=None			
					XRF-As=53 ppm PID=0.3 ppm Sheen=None			
					XRF-As=51 ppm PID=0.3 ppm Sheen=None			
10		12/19/2024			XRF-As=28 ppm PID=0.2 ppm Sheen=None		SILTY SAND (SM); light brown to brown, moist; fine to coarse sand; rounded to subrounded gravel; trace concrete debris; no chemical-like odor.	
		11/22/2024			XRF-As=18 ppm PID=0.2 ppm Sheen=None			
5				MW-47D-11-13	XRF-As=44 ppm PID=0.3 ppm Sheen=None		Becomes wet. SILT WITH SAND (ML); loose, dark gray, wet; fine to medium sand; trace fine to medium, rounded to subrounded gravel; no chemical-like odor.	10
					XRF-As=42 ppm PID=0.3 ppm Sheen=None			
					XRF-As=595 ppm PID=0.3 ppm Sheen=None		No recovery 13-15 ft bgs; large cobbles.	
15					XRF-As=363 ppm PID=0.3 ppm Sheen=Slight			
					XRF-As=417 ppm PID=0.5 ppm Sheen=Slight		Construction debris (rebar, concrete, rebar ties)	15
					XRF-As=467 ppm PID=0.4 ppm Sheen=None		SILT WITH SAND (ML); dark brown to brown, moist; low plasticity silt; fine to medium sand; slight hydrogen sulfide like odor.	
0		10-in diam. conductor casing set at 16.5 ft bentonite seal set 15-18 ft.		MW-47D-16-18	XRF-As=69 ppm PID=0.4 ppm Sheen=None		SILT AQUITARD SILT WITH SAND (ML); dark brown to brown, moist; low plasticity silt; fine to medium sand; some organic material (wood and sticks); slight hydrogen sulfide like odor. No recovery 18-20 ft bgs; large cobble.	
					XRF-As=734 ppm PID=0.3 ppm Sheen=None			
20		2-12 NSF 61 silica sand			XRF-As=243 ppm PID=0.3 ppm Sheen=None		ALLUVIAL SAND SAND (SP); black, wet; fine to medium sand; trace fine to medium, rounded to subrounded gravel; trace red and white sand grains; no chemical-like odor.	20

Legend

- No Soil Sample Recovery
- Continuous core 4" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: ECR
Approved by: AJY

Exploration Log
MW-47D

Sheet 1 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location
5900 West Marginal Way SW Seattle, WA, Center South side of shoreline

Monitoring Well Log

Coordinates (NAD83)
E:1267769.00 N:203815.91
Ground Surface Elev. (NAVD88)
17.4'
Top of Casing Elev. (NAVD88)
16.72'

Exploration Number
MW-47D
Ecology Well Tag No.
BNV 329
Depth to Water (Below GS)
11' (ATD)

Contractor Cascade	Equipment TSi 150 CC	Sampling Method Rotary core
Operator Chris Baker	Exploration Method(s) Sonic	Work Start/Completion Dates 11/22/2024

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
-5		Sch 40 PVC screen 0.010 inch slot		MW-47D-22-24	XRF-As=40 ppm PID=0.0 ppm Sheen=Slight		ALLUVIAL SAND SAND (SP); black, wet; fine to medium sand; trace fine to medium, rounded to subrounded gravel; trace red and white sand grains; no chemical-like odor. (continued)	
25				MW-47D-25-27	XRF-As=13 ppm PID=0.3 ppm Sheen=Slight			25
-10					XRF-As=5 ppm PID=0.3 ppm Sheen=Slight			
30		3/8 inch NSF 60 bentonite chips			XRF-As=4 ppm PID=0.4 ppm			30
-15				MW-47D-32-34	XRF-As=7 ppm PID=0.3 ppm			
35					XRF-As=2 ppm PID=0.2 ppm		SAND WITH SILT (SP-SM); black, wet; very fine sand; no chemical-like odor.	35
-20					XRF-As=< 1 ppm PID=0.2 ppm			
40				MW-47D-38-40	XRF-As=< 1 ppm PID=0.2 ppm			
							Bottom of exploration at 40 ft. bgs.	40
-25								

Legend

- No Soil Sample Recovery
- Continuous core 4" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: ECR
Approved by: AJY

Exploration Log
MW-47D

Sheet 2 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location
5900 West Marginal Way SW Seattle, WA, Center South side of shoreline

Monitoring Well Log

Coordinates (NAD83)

E: 1267770.81 N: 203821.12

Exploration Number

MW-47S

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/22/2024

Ground Surface Elev. (NAVD88)

17.61'

Top of Casing Elev. (NAVD88)

16.78'

Ecology Well Tag No.
BNV 330

Depth to Water (Below GS)

11' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
17		Flush well box expansion plug					BANK FILL	
1		Concrete seal					SILTY SAND WITH GRAVEL (SM); brown, moist; fine to coarse sand; fine to coarse, subrounded to subangular gravel; concrete debris; some roots; no chemical-like odor.	1
2		2-inch diam. Sch 40 PVC casing						2
3		3/8 inch NSF 60 bentonite chips					SAND WITH SILT (SP-SM); light brown to brown, slightly moist; fine to medium sand; some subrounded to angular gravel; trace organics; no chemical-like odor.	3
4								4
5		2-12 NSF 61 silica sand						5
6								6
7								7
8		▼ 12/19/2024					SILTY SAND (SM); light brown to brown, moist; fine to coarse sand; rounded to subrounded gravel; trace concrete debris; no chemical-like odor.	8
9		Sch 40 PVC screen 0.010 inch slot						9
10								10
11		▽ 11/22/2024					Becomes wet.	11
12							SILT WITH SAND (ML); loose, dark gray, wet; fine to medium sand; trace fine to medium, rounded to subrounded gravel; no chemical-like odor.	12
							Bottom of exploration at 12 ft. bgs.	
							Note: Lithology copied from co-located monitoring well MW-47D.	

Legend

Sample Type

Water Level

- ▼ Static Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: ECR
Approved by: AJY

Exploration Log
MW-47S

Sheet 1 of 1

Review Stage: DRAFT Rev. 2

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\230067 CALPORTLAND SEATTLE CEMENT TERMINAL GPJ February 11, 2025



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, Center North side of shoreline

Monitoring Well Log

Coordinates (NAD83)

E: 1267804.86 N: 203906.33

Exploration Number

MW-48D

Ecology Well Tag No.
BNV 327

Depth to Water (Below GS)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/21/2024

Ground Surface Elev. (NAVD88)

13.73'

Top of Casing Elev. (NAVD88)

12.87'

5' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
10		Flush well box expansion plug			XRF-As=83 ppm PID=0.1 ppm Sheen=Slight		BANK FILL	
		Concrete seal			XRF-As=93 ppm PID=0.2 ppm Sheen=Slight		SILTY SAND WITH GRAVEL (SM); dark gray brown, moist; fine to coarse sand; fine to coarse, rounded to angular gravel; brick fragments; some roots and wood; no chemical-like odor.	
5		3/8 inch NSF 60 bentonite chips			XRF-As=122 ppm PID=0.3 ppm Sheen=Slight		SAND WITH SILT (SP-SM); dark gray brown, moist; fine to medium sand; trace fine to coarse, subrounded gravel; few roots; no chemical-like odor.	
		11/21/2024			XRF-As=20 ppm PID=0.2 ppm Sheen=Slight		Becomes very moist.	
		12/20/2024			XRF-As=6 ppm PID=0.3 ppm Sheen=Slight		Becomes wet.	
		2-inch diam. Sch 40 PVC casing			XRF-As=11 ppm PID=0.2 ppm Sheen=Slight			
5					XRF-As=26 ppm PID=0.2 ppm Sheen=Slight			
					XRF-As=24 ppm PID=0.2 ppm Sheen=Slight			
					XRF-As=14 ppm PID=0.2 ppm Sheen=None			
10		10-in diam. conductor casing set at 11 ft bentonite seal set 8-12 ft.			XRF-As=10 ppm PID=0.3 ppm Sheen=None		SILT AQUITARD	
					XRF-As=8 ppm PID=0.2 ppm Sheen=None		SILT (ML); brown with black mottling, moist; low to medium plasticity; little roots; no chemical-like odor.	
					XRF-As=3 ppm PID=0.4 ppm Sheen=None		Becomes gray.	
					XRF-As=5 ppm PID=0.4 ppm Sheen=None		No recovery at 12-14.5 ft bgs; slough and bentonite.	
15		2-12 NSF 61 silica sand			XRF-As=20 ppm PID=0.1 ppm Sheen=None		SILTY SAND (SM); dark gray, wet; fine to medium sand; hydrogen sulfide like odor.	
					XRF-As=164 ppm PID=0.2 ppm Sheen=None		SILT WITH SAND (ML); gray, wet; low plasticity silt; hydrogen sulfide like odor.	
					XRF-As=3 ppm PID=0.1 ppm Sheen=None		ALLUVIAL SAND	
					XRF-As=2 ppm PID=0.1 ppm Sheen=None		SAND (SP); black, wet; fine to medium sand; trace fine to coarse, rounded gravel; hydrogen sulfide like odor.	
					XRF-As=3 ppm PID=0.1 ppm Sheen=None		No odor.	
20		Sch 40 PVC screen 0.010 inch slot			XRF-As=3 ppm PID=0.1 ppm Sheen=None			

Legend

- No Soil Sample Recovery
- Continuous core 4" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-48D

Sheet 1 of 2



Glacier Northwest - AS230067

Project Address & Site Specific Location

5900 West Marginal Way SW Seattle, WA, Center North side of shoreline

Monitoring Well Log

Coordinates (NAD83)

E:1267804.86 N:203906.33

Exploration Number

MW-48D

Ecology Well Tag No.
BNV 327

Depth to Water (Below GS)

Contractor

Cascade

Operator

Chris Baker

Equipment

TSi 150 CC

Exploration Method(s)

Sonic

Sampling Method

Rotary core

Work Start/Completion Dates

11/21/2024

Ground Surface Elev. (NAVD88)

13.73'

Top of Casing Elev. (NAVD88)

12.87'

5' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							ALLUVIAL SAND SAND (SP); black, wet; fine to medium sand; trace fine to coarse, rounded gravel; hydrogen sulfide like odor. (continued)	
-10				MW-48D-23-25	XRF-As=4 ppm PID=0.1 ppm Sheen=None			
25		3/8 inch NSF 60 bentonite chips			XRF-As=3 ppm PID=0.3 ppm Sheen=None			25
-15				MW-48D-28-30	XRF-As=< 1 ppm PID=0.2 ppm Sheen=None			
30					XRF-As=4 ppm PID=0.1 ppm Sheen=Slight			30
-20				MW-48D-33-35	XRF-As=6 ppm PID=0.2 ppm Sheen=None			
35					XRF-As=2 ppm PID=0.2 ppm Sheen=None		Becomes fine sand.	35
-25				MW-48D-38-40	XRF-As=2 ppm PID=0.2 ppm Sheen=None		SAND WITH SILT (SP-SM); black, wet; very fine sand; no chemical-like odor.	
40					XRF-As=2 ppm PID=0.1 ppm Sheen=None			40
							Bottom of exploration at 40 ft. bgs.	

Legend

- ☐ No Soil Sample Recovery
- ☒ Continuous core 4" ID
- ☒ Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DJM
Approved by: AJY

Exploration Log
MW-48D

Sheet 2 of 2

		Glacier Northwest - AS230067			Monitoring Well Log										
		Project Address & Site Specific Location 5900 West Marginal Way SW Seattle, WA, Center North side of shoreline			Coordinates (NAD83) E:1267806.73 N:203911.38		Exploration Number MW-48S								
Contractor Cascade		Equipment TSi 150 CC		Sampling Method Rotary core		Ground Surface Elev. (NAVD88) 13.59'		Ecology Well Tag No. BNV 328							
Operator Chris Baker		Exploration Method(s) Sonic		Work Start/Completion Dates 11/21/2024		Top of Casing Elev. (NAVD88) 12.93'									
Depth (feet)		Elev. (feet)		Exploration Notes and Completion Details		Sample Type/ID		Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description		Depth (ft)		
13		1		Flush well box expansion plug							BANK FILL SILTY SAND WITH GRAVEL (SM); dark gray brown, moist; fine to coarse sand; fine to coarse, rounded to angular gravel; brick fragments; some roots and wood; no chemical-like odor.		1		
12		2		Concrete seal ▼ 12/20/2024							SAND WITH SILT (SP-SM); dark gray brown, moist; fine to medium sand; trace fine to coarse, subrounded gravel; few roots; no chemical-like odor.		2		
11		3		3/8 inch NSF 60 bentonite chips									3		
10		4		2-inch diam. Sch 40 PVC casing									4		
9		5		2-12 NSF 61 silica sand							Becomes very moist		5		
8		6		▼ 11/21/2024							Becomes wet		6		
7		7		Sch 40 PVC screen 0.010 inch slot									7		
6		8											8		
5		9									SILT AQUITARD SILT (ML); brown with black mottling, moist; low to medium plasticity; little roots; no chemical-like odor.		9		
4											Bottom of exploration at 9 ft. bgs. Note: Lithology copied from co-located monitoring well MW-48D.				
Sample Type		Legend		Water Level		Static Water Level		Water Level ATD		See Exploration Log Key for explanation of symbols		Logged by: DJM Approved by: AJY		Exploration Log MW-48S Sheet 1 of 1	

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\230067 CALPORTLAND SEATTLE CEMENT TERMINAL GPJ February 11, 2025

Review Stage: DRAFT Rev.2

APPENDIX B

ENTACT ISS BENCH SCALE STUDY REPORT



**BLACK
RIVER**
environmental

GLACIER NORTHWEST, INC.

ISS BENCH SCALE STUDY REPORT

Prepared For:

Geosyntec Consultants

Prepared By:



2873 W Hardies Road, Suite 300
Gibsonia, PA

April 21, 2026

Version 2



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TABLE 1 Baseline Water Analytical Results

TABLE 2 Composite Soil Geotechnical Index Test Results

TABLE 3 Baseline Soil & EPA LEAF 1316 Analytical Results

TABLE 4 ISS Sample Mix Details and Results Table

TABLE 5 ISS Sample Swell Results

TABLE 6 EPA LEAF 1315 Results

Attachment 1 Composite Samples Geotechnical Reports

Attachment 2 ISS Mix UCS Reports

Attachment 3 ISS Mix Permeability Reports

Attachment 4 Baseline Analytical with EPA LEAF 1316 Report

Attachment 5 ISS Mix EPA LEAF 1315 Analytical Report – Soil #1 & Water

Attachment 6 ISS Mix EPA LEAF 1315 Analytical Report – Soil #2

1.0 INTRODUCTION

ENTACT, LLC. (“ENTACT,” Contractor) has prepared this In-Situ Solidification and Stabilization (ISS) Bench Scale Study Report to summarize the ISS bench scale study conducted in accordance with ENTACT’s proposal dated November 21, 2024, for Geosyntec at Glacier Northwest, Inc (Site). Samples of Site soil, groundwater, and tap water were shipped by Geosyntec to ENTACT’s Treatability Laboratory in Gibsonia, Pennsylvania.

1.1 Purpose

The objectives of the ISS bench scale study were to identify the most economical reagents and dosage rates that will achieve the performance criteria of a minimum unconfined compressive strength (UCS) of 50 pounds per square inch (psi) via ASTM D2166 at 28-days of cure, achieve an average hydraulic conductivity of the treated soils equal to or less than 1×10^{-6} centimeters per second (cm/s) according to ASTM D5084, and reduce the leachability of arsenic as determined by EPA’s leaching environmental assessment framework.

The scope of the bench scale study included analytical testing of site groundwater and tap water, soil sample compositing, baseline soil composite geotechnical and analytical testing, and ISS mix design geotechnical and analytical testing.

1.2 Testing Summary

Below is a summary of the testing conducted on water, composite, and ISS samples.

- **Baseline Groundwater, Tap Water & Anaerobic Effluent Analytical Testing (See Table 1):**
 - Total Dissolved Solids (SM2540C/E) (Groundwater & Tap Water)
 - PH (EPA 9040C) (Groundwater, Tap Water & Anaerobic Eluent)
 - Specific Conductance (SM 2510B) (Groundwater, Tap Water & Anaerobic Eluent)
 - Electrical Conductivity (SM 2520B) Groundwater & Tap Water)
 - Turbidity (EPA 180.1) (Anaerobic Eluent)
 - Dissolved Oxygen (SM 4500-O G-2016) (Anaerobic Eluent)
 - Reduction – Oxidation Potential (SM 2580B) (Anaerobic Eluent)
 - Salinity (SM 2520B) (Groundwater & Tap Water)
 - Arsenic and Copper (EPA 6020B) (Groundwater & Tap Water)
 - Sulfate (EPA 300.0) (Groundwater & Tap Water)
 - Pentachlorophenol (EPA 8270E LL) (Groundwater & Tap Water)
 - Dioxins/Furans - 17 Isomers (EPA 8290A) (Groundwater & Tap Water)
- **Composite Soil Baseline Geotechnical Testing (See Table 2):**
 - Soil pH (ASTM D4972) (Soil 1G, 2G & 3G)

- Moisture content (ASTM D2216) (Soil 1G, 2G & 3G)
- Particle Size Distribution (ASTM D422) (Soil 1G, 2G & 3G)
- Atterberg Limits (ASTM D4318) (Soil 1G, 2G & 3G)
- Soil Classification (ASTM D2488) (Soil 1G, 2G & 3G)
- 5-point Proctor (ASTM D698) (Soil 1G, 2G & 3G)
- Organic content (ASTM D2974) (Soil 1G, 2G & 3G)
- **Composite Soil Baseline Analytical Testing (See Table 3):**
 - Arsenic and Copper by ICPMS (Soil #1 & #2)
 - Pentachlorophenol (Soil #2 Only)
 - Dioxins / Furans (Soil #2 Only)
 - EPA 1316 Leach Testing – Arsenic & Copper (Soil #1 & #2), Pentachlorophenol (Soil #2 Only) and Dioxins / Furans (Soil #2 Only)
- **ISS Mix Testing (See Table 4):**
 - Grout pH (API RP-13B-1)
 - Grout Viscosity (ASTM D6910)
 - Grout Density (ASTM D4380)
 - Strength via Pocket Penetrometer of each mix at 1, 3, and 7 days after mixing (Soil #1 Only)
 - UCS (ASTM D2166) at 7, 28, and 56-days after mixing (Soil #1, #2 & #3)
 - Moisture Content (ASTM D2216) of selected mix designs (Soil #1 & #2)
 - Hydraulic Conductivity (ASTM D5084) at 28 & 56-days after mixing (Soil #1, #2 & #3)
 - Swell analysis on selected mix designs (Table 5) (Soil #1, #2 & #3)
 - EPA 1315 Leach Testing – Arsenic & Copper (Soil #1 & #2), pH (Soil #1 & #2), Pentachlorophenol (Soil #2 Only), Dioxins / Furans and Redox Potential (Soil #2 Only) (Table 6)

2.0 METHODOLOGY

Necessary equipment and materials were procured and obtained at the start of the study. This included samples of the specified reagents that were shipped to ENTACT's treatability laboratory from the supplier. The following reagents were utilized in this study:

- Type IL Portland Cement from CalPortland in Seattle, WA
- Type V Portland Cement from CalPortland in Redding, CA
- Ground Granulated Blast Furnace Slag (GGBFS) from LaFarge in Seattle, WA

2.1 Sample Receipt and Homogenization

On 4/1/2025, ENTACT received six (6) 5-gallon buckets of site soil and two (2) coolers, one containing site groundwater and the other containing site tap water. Additional soil was needed to complete the mix designs as requested, so on 4/15/2025, ENTACT received an additional seven (7) 5-gallon buckets of site soil, and on 5/20/2025, ENTACT received four (4) additional 5-gallon buckets of site soil collected by Geosyntec.

Upon receipt of the samples, containers were inspected and logged. Figure 1 below details the bucket samples that were received:

Boring	Depth Interval (ft bgs)	Number of 5-Gallon Buckets	Soil #	Material Description
GP-81	7 - 11	2	1A	Dredge Fill & Native Soil
	12 - 15	1	N/A	Silt Aquitard
GP-82	5 - 10	2	1G & 2G	Shallow Fill & Dredge Fill
	11 - 15	1	N/A	Silt Aquitard
GP-83	1 - 5	2	2A	Shallow Fill
	8 - 11	2	2A	Dredge Fill & Native Soil
MW-13D	2.5 - 5	1	1A	Shallow Fill (Potential Carbon/Sawdust/Bentonite)
MW-46D	8 - 12	1	3A	Bank Fill (with debris/potential spent carbon)
MW-47D	3 - 8	1	N/A	Bank Fill (Shallow Fill)
	8 - 11	1	1A	Bank Fill (Shallow Fill)
MW-48D	0 - 5	1	1A	Bank Fill (Shallow Fill)
	5 - 8.5	1	3G	Bank Fill (Shallow Fill)
	8.5 - 12	1	3G	Silt Aquitard

Beginning on 5/21/2025, the selected soils for each soil number/designation were homogenized and sized down through a 3/8" sieve to create five composite samples. Soil #1 material was selected from borings and depths believed to contain the highest levels of Arsenic, while Soil #2 represented material that was located at the edge of the Arsenic impact zone, which also had Pentachlorophenol impacts. Soil #3 was representative of soils located near the shoreline. At the request of Geosyntec, certain borings / depths were to be used for different purposes. Those labeled as "G" were to be used only for geotechnical baseline testing. Soils selected for analytical baseline testing and ISS mix design cylinders were marked with an "A" as they were determined to be most appropriate based on concentrations of COCs in these soils from samples submitted for lab analysis by Geosyntec at the time of collection.

Additionally, soils from GP-82 (5-10') were selected to represent both Soil 1 and Soil 2 during baseline geotechnical analysis because soils in these areas were considered to be geotechnically similar based on past USCS classification.

- Soil 1A (green highlight)
- Soil 1G (yellow highlight) comingled with Soil 2G
- Soil 2A (purple highlight)
- Soil 2G (yellow highlight) comingled with Soil 1G
- Soil 3A (blue highlight)
- Soil 3G (peach highlight)

The results of the geotechnical index testing for the composite samples are presented in **Table 2**. **Attachment 1** presents the composite geotechnical reports.

2.2 ISS Mixing and Specimen Preparation

Before sample mixing began, grout testing was performed on the 8 reagent ratios used for Soil #1 and Soil #2 mix designs. Composites used for ISS mix designs were Soil 1A, Soil 2A, and Soil 3A. Grout was tested for pH, Viscosity and Density. Sample mixing started on 5/28/2025. After the composite samples were processed, aliquots were then pulled from the composited soil types. The composite soil aliquot was weighed and set aside. The reagent dosage was weighed then incorporated into the composite soil as a grout, using 50% site groundwater & 50% site tap water. **Table 4** presents the ISS mix details. The water to cement ratios were supplied by Geosyntec for the study and varied based on the amount of reagent added to the mix, from 0.85:1 to 1.25:1.

After UCS testing was completed on cylinders at 7 days of cure, ENTACT determined that the initial set of Soil #3 mix designs outlined in the proposal were unable to meet the minimum strength criterion and visually were not achieving a typical cured consistency. After discussion with Geosyntec, ENTACT proceeded with mixing three additional mix designs for Soil #3 on 6/23/25, with higher dosages of Portland and Slag Cement. When referring to Soil #3 mixes, this report will discuss the results of the optimized mix designs.

Once the mixture was visually homogenized, each mixed specimen was packed in accordance with ASTM D1632 into individually labeled gray plastic cylinder molds measuring 2 inches by 4 inches for UCS testing, and 3 inches by 6 inches for hydraulic conductivity and swell testing. Each mold was capped and then set in a designated humidity & temperature-controlled curing box in ENTACT's Treatability Laboratory.

Cylinders for the following mix designs were generated:

- **Soil #1**
 - 2% Type IL Portland Cement & 2% BFS
 - 6% Type IL Portland Cement
 - 3% Type IL Portland Cement & 3% BFS
 - 2% Type IL Portland Cement & 4% BFS
 - 8% Type IL Portland Cement

- 2% Type IL Portland Cement & 6% BFS
- 10% Type IL Portland Cement
- 3% Type IL Portland Cement & 7% BFS
- **Soil #2**
 - 2% Type IL Portland Cement & 2% BFS
 - 6% Type IL Portland Cement
 - 3% Type IL Portland Cement & 3% BFS
 - 2% Type IL Portland Cement & 4% BFS
 - 8% Type IL Portland Cement
 - 2% Type IL Portland Cement & 6% BFS
 - 10% Type IL Portland Cement
 - 3% Type IL Portland Cement & 7% BFS
 - 2% Type V Portland Cement & 4% BFS
 - 2% Type V Portland Cement & 6% BFS
 - 3% Type V Portland Cement & 7% BFS
- **Soil #3**
 - 15% Type IL Portland Cement
 - 4.5% Type IL Portland Cement & 10.5% BFS
 - 6% Type IL Portland Cement & 14% BFS

The prepared cylinders were set aside to cure in a designated humidity & temperature-controlled curing box for the prescribed cure periods. Specimens were then strength tested in ENTACT's laboratory in Gibsonia, PA and for selected mixes, were sent to Geotechnics in Pittsburgh, PA for hydraulic conductivity testing.

2.3 Monitoring and Geotechnical Testing

Once specimens were prepared and logged, each mix design was monitored at the ENTACT laboratory for physical characteristics and penetration resistance with a pocket penetrometer (ASTM WK27337) on Days 1, 3 and 7 after mixing. UCS testing (ASTM D2166) was conducted at ENTACT's lab on Days 7, 28, and on select mixes, 56 after mixing. Duplicate 28-day UCS tests were run on select mix designs. Permeability testing (ASTM D5084) was conducted at Geotechnics in Pittsburgh, PA on select mixes at 28 and 56-days of cure. Duplicate 28-day permeability tests were run on select mix designs. Swell analysis was also completed in ENTACT's lab on selected mixes.

Samples selected for duplicate testing, permeability testing, additional strength testing, and the results of those tests are summarized in **Tables 4** and **5**. Geotechnical reports for UCS are included as **Attachment 2**. Geotechnical reports for permeability testing are included as **Attachment 3**.

2.4 EPA LEAF 1316 & 1315 Analytical Testing

Composite soils labeled as 1A and 2A were also used for baseline analytical testing along with EPA LEAF 1316 testing. Cured test 2x4 inch test cylinders were created from these material selections for EPA LEAF 1315 testing. Before beginning the study, it was noted that soils labeled for Soil #1 would be tested for Arsenic and Copper, while Soil #2 baseline material and cylinders were tested for Pentachlorophenol and Dioxins/Furans in addition to Arsenic and Copper due to known detections on the site. Tables 1 & 3 show the EPA LEAF 1316 and baseline analytical results for water and soils used during testing, while Table 6 shows EPA LEAF 1315 results.

3.0 EVALUATION

The results generated from the laboratory observations and geotechnical laboratory testing are provided in the report attachments. The following sections highlight notable findings:

3.1 Composite Testing

- **Baseline Geotechnical (Table 2)**
 - Soil #1/#2 was classified as a Silty Sand with 15.8% fines content and a pH of 6.3
 - Soil #3 was also classified as a Silty Sand with 35.4% fines content and a pH of 4.1
 - The Soil #1/#2 composite used for baseline geotechnical testing had a lower moisture content than the Soil #1/#2 composite used to create ISS mix design cylinders
 - The Soil #3 composite used for baseline geotechnical testing had noticeably more sand than Soil #3 composite used to create ISS mix design cylinders
 - Soil #1/#2 had a moisture content of 18.8%, while Soil #3 which was sampled closer to the shoreline, had a higher moisture content of 50.8%
- **Baseline Water Analytical (Table 1) & Baseline Soil Analytical (Table 3)**
 - Groundwater detections were observed for Total Dissolved Solids (370 mg/L), Sulfate (7.18 mg/L), and Arsenic (620 ug/L)
 - In comparison, site potable water had detections of (48 mg/L) for Total Dissolved Solids, (2.35 mg/L) for Sulfates and no detection for Arsenic
 - Baseline soil testing, including LEAF 1316, confirmed Geosyntec's previous analytical data showing that composite soils used for Soil #1 contained higher levels of Arsenic when compared to the composite used for Soil #2
 - The total concentration of Copper was higher in the Soil #2 composite than in the soil used for Soil #1 composite

3.2 ISS Mold Testing

- **Strength (UCS)**

- The mix designs using less than 8% total cement for Soil #1 did not meet the strength criterion of 50 psi at 28-days of cure. All other soils and mixes tested, including Soil #2 mix designs with less than 8% total cement, achieved 50 psi by 28 days of cure.
- Soil #1 mix designs with 8% total cement or higher met the strength requirement at 7-days of cure, with the two 10% cementitious reagent mixes achieving roughly three times the strength requirement at 56-days of cure
- Mixes for Soil #2 were not tested at 7-days of cure, and at the 28-day mark, all passed the strength criterion of 50 psi at 28-days of cure, with the two 10% cementitious mixes achieving roughly four times the strength requirement
- The optimized mixes for Soil #3 had two passing results at 7-days (15%PC & 6%PC/14%BFS), and all Soil #3 mixes had passing results at 28-days of cure
- **Permeability**
 - A reduction in permeability was observed as the total amount of cement addition increased.
 - While the 8% Portland cement addition mix design was close to a passing result for Soil #1 at 28-days of cure, passing results were observed from the S1-3PC-7BFS mix, the S2-10PC mix and the S2-3PC-7BFS mix at 56-days of cure.
 - Permeability testing on Soil #3 cylinders resulted in passing results for both the S3-15PC and the S3-6PC-14BFS mix at 28-days of cure
- **Swell (Table 5)**
 - In general, for Soil #1 and #2, swell percentages remained similar with increased reagent dosage. Because the water to cement ratio of the grout addition decreased as the cement increased, the swell did not increase, as was intended during the selection of mix designs and water to cement ratios for each mix
 - Soil #3 mixes were all completed at the same water to cement ratio; therefore, increased swell was observed as reagent dosage was increased.
 - The swell percentages for Soil #1 varied between 11.2% to 17.9%
 - The swell percentages for Soil #2 varied between 13.4% to 14.7%
 - The swell percentages for Soil #3 increased with increased reagent dosage, with 32.4% swell observed for a 4.5% PC/10.5% BFS reagent addition, up to 43% swell observed with a 6% PC/14% BFS reagent addition
- **EPA LEAF 1315 Testing (Table 6)**

After receipt of the ISS mix design geotechnical testing results, ENTACT and Geosyntec discussed which mix designs were to be selected for further analytical and leachability testing. Two mixes for each soil (Soil 1 & 2) were selected based on baseline analytical results and bench scale testing results, to be used for EPA LEAF 1315 testing. The 10% Portland Cement and the 3% Portland Cement / 7% GGBFS were selected and sent to Eurofins Analytical Laboratory in Pittsburgh, PA.

Arsenic & Copper

- Baseline totals and 1316 leach testing showed detections of Arsenic and Copper in both Soil #1 and Soil #2 composites
- When analyzing the cumulative mass release, a higher total mass release of Arsenic was observed with the Portland & Slag blend, however this mix also resulted in a lower overall release of Copper
- **Pentachlorophenol**
- Only Soil #2 was tested for PCP, and detections were observed in both baseline soil totals (8270E) and 1316 leach testing
- LEAF 1315 testing for PCP resulted in several testing intervals with non-detection results. For intervals where detections were observed, both mixes showed similar results

Dioxins/Furans

- Only Soil #2 was tested for Dioxins/Furans, and detections were observed in both baseline soil totals (8290A) and 1316 leach testing
- While similar results were observed between the two mix designs tested, the Portland Cement & Slag Blend resulted in more intervals with a lower cumulative mass release than the 10% Portland Cement mix.

4.0 SUMMARY

4.1 Bench Scale Findings

The results of the ISS bench scale study identified that an unconfined compressive strength of at least 50 psi and a decreased permeability of at least 1×10^{-6} cm/sec was able to be achieved with a 10% cementitious addition. Soil #1 achieved the required performance criteria with a 3% Portland Cement and 7% Blast Furnace Slag blend, while Soil #2 achieved the performance criteria with a 10% Portland Cement addition, as well as a 3% Portland Cement and 7% Blast Furnace Slag blend. ENTACT recommends the use of a groundwater model to further assess the overall reduction in leachability performance of the recommended mix designs.

To assess the constructability of the recommended mix designs for full-scale implementation, ENTACT recommends that the same soil is used for baseline testing (geotechnical and analytical), as well as for the ISS mix designs. This ensures that the baseline geotechnical results correlate to the results of the tested cylinders. The results of this bench scale study indicate that an ISS application for the targeted soils can be effective in increasing the unconfined compressive strength and decreasing the permeability of in-situ soils.

Based on the results of the study, ENTACT recommends evaluating a mix design with a minimum of 3% Portland Cement and 7% Blast Furnace Slag (10% total cement) by wet weight of soil via grout addition for Soil #1 and Soil #2. For Soil #3, ENTACT recommends evaluating a mix design with a minimum of 15% Portland Cement by wet weight of soil via grout addition for the ISS remedial design. Due to the variability

of different contaminants seen in these soils that can impact an S/S remedy, further investigation would be required to consider the effect of debris, spent carbon, and sawdust.

TABLES

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 1 - BASELINE WATER ANALYTICAL

Analyte	Water #1 Site Ground Water		Water #2 Site Tap Water		Water #3 DI Lab Water	
	6/16/2025		6/16/2025		6/23/2025	
General Chemistry						
Total Dissolved Solids (mg/L)	370		48		NT	
pH	7.4	HF	7.5	HF	5.9	HF
Specific Conductance (umhos/cm)	600		74		<1.0	
Electrical Conductivity (umhos/cm)	600		74		NT	
Dissolved Oxygen (mg/L)	NT		NT		7.5	
Turbidity (NTU)	NT		NT		1.5	
Oxidation Reduction Potential (millivolts)	NT		NT		71.0	
Salinity	<2.0		<2.0		NT	
METALS (6020B) ug/L						
Arsenic	620		<0.68		NT	
Copper	8.9		9.3		NT	
ANIONS, ION CHROMATOGRAPHY (EPA 300.0 R2.1) mg/L						
Sulfate	7.18		2.35		NT	
SEMIVOLATILE ORGANIC COMPOUNDS (8270E LL) ug/L						
Pentachlorophenol	<0.88		<0.92		NT	
DIOXINS & FURANS (8290A) pg/L						
1,2,3,4,6,7,8-HpCDD	<4.6		<4.4		NT	
1,2,3,4,6,7,8-HpCDF	<4.4		<4.3		NT	
1,2,3,4,7,8-HxCDD	<2.5		<2.4		NT	
1,2,3,4,7,8-HxCDF	<2.5		<2.4		NT	
1,2,3,4,7,8,9-HpCDF	<2.5		<2.4		NT	
1,2,3,6,7,8-HxCDD	<2.5		<2.4		NT	
1,2,3,6,7,8-HxCDF	<2.5		<2.4		NT	
1,2,3,7,8-PeCDD	<3.2		<3.1		NT	
1,2,3,7,8-PeCDF	<2.8	*+	<2.7	*+	NT	
1,2,3,7,8,9-HxCDD	<2.5		<2.4		NT	
1,2,3,7,8,9-HxCDF	<3.5		<3.4		NT	
2,3,4,6,7,8-HxCDF	<2.5		<2.4		NT	
2,3,4,7,8-PeCDF	<2.5	*+	<2.4	*+	NT	
2,3,7,8-TCDD	<0.88	*+	<0.85	*+	NT	
2,3,7,8-TCDF	<2.3		<2.2		NT	
OCDD	220		<35		NT	
OCDF	<10		<9.8		NT	

Notes:

Bold indicates sample was detected above the reporting limit.

NT - Not Tested

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 2- COMPOSITE SAMPLE GEOTECHNICAL RESULTS

Sample Name			Soil 1G/2G Composite	Soil 3G Composite	Soil 1A Composite	Soil 2A Composite
Date			5/29/2025	5/29/2025	6/26/2026	6/26/2026
Soil pH		ASTM D4972	6.31	4.09	7.17	6.95
Average Moisture Content (%)		ASTM D2216	18.8%	50.8%	32.4%	29.2%
Particle Size (% Passing)	Coarse Gravel	ASTM D422	100.0%	100.0%	NT	NT
	Fine Gravel		93.33%	99.09%	NT	NT
	Coarse Sand		90.91%	97.43%	NT	NT
	Medium Sand		88.77%	95.08%	NT	NT
	Fine Sand		77.43%	87.66%	NT	NT
	Fines		15.75%	35.43%	NT	NT
Atterberg Limits	LL %	ASTM D4318	NON-PLASTIC	NON-PLASTIC	NT	NT
	PL %					
	PI %					
USCS Description		ASTM D2487	SILTY SAND (SM)	SILTY SAND (SM)	NT	NT
Optimum Moisture Content %		ASTM D698	15.4%	24.8%	NT	NT
Maximum Dry Density			105.6 pcf	92.6 pcf	NT	NT
Organic Content %		ASTM D2974	2.6%	3.5%	6.3%	6.9%

Notes : NT - Not Tested

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 3 - BASELINE SOIL ANALYTICAL RESULTS

Analyte	Soil 1A Composite		Soil 2A Composite	
	5/27/2025		5/27/2025	
ARSENIC & COPPER (6020B) mg/kg				
Arsenic	240		150	
Copper	68		330	
SVOC - PENTACHLOROPHENOL (8270E LL) ug/kg				
Pentachlorophenol	NT		8000	4
DIOXINS & FURANS (8290A) ng/kg				
1,2,3,4,6,7,8-HpCDD	NT		34000	
1,2,3,4,6,7,8-HpCDF	NT		18000	
1,2,3,4,7,8-HxCDD	NT		<1900	
1,2,3,4,7,8-HxCDF	NT		5400	
1,2,3,4,7,8,9-HpCDF	NT		<4900	J
1,2,3,6,7,8-HxCDD	NT		<1900	
1,2,3,6,7,8-HxCDF	NT		<1900	
1,2,3,7,8-PeCDD	NT		<1900	
1,2,3,7,8-PeCDF	NT		<1900	
1,2,3,7,8,9-HxCDD	NT		<1900	
1,2,3,7,8,9-HxCDF	NT		<1900	
2,3,4,6,7,8-HxCDF	NT		<1900	
2,3,4,7,8-PeCDF	NT		<1900	
2,3,7,8-TCDD	NT		<190	
2,3,7,8-TCDF	NT		<580	
OCDD	NT		11000000	
OCDF	NT		110000	
METHOD 1316 LEACH TESTING ARSENIC ug/L				
.5 Liquid-to-Solid Ratio	620		200	
1.0 Liquid-to-Solid Ratio	640		200	
2.0 Liquid-to-Solid Ratio	580		240	
5.0 Liquid-to-Solid Ratio	540		270	
10.0 Liquid-to-Solid Ratio	540		270	
METHOD 1316 LEACH TESTING COPPER ug/L				
.5 Liquid-to-Solid Ratio	41		36	
1.0 Liquid-to-Solid Ratio	45		30	
2.0 Liquid-to-Solid Ratio	32		24	
5.0 Liquid-to-Solid Ratio	24		26	
10.0 Liquid-to-Solid Ratio	12		41	
METHOD 1316 LEACH TESTING PENTACHLOROPHENOL ug/L				
.5 Liquid-to-Solid Ratio	NT		560	H
1.0 Liquid-to-Solid Ratio	NT		6.3	J H
2.0 Liquid-to-Solid Ratio	NT		9.2	H
5.0 Liquid-to-Solid Ratio	NT		11	H
10.0 Liquid-to-Solid Ratio	NT		31	H
GENERAL CHEMISTRY				
Percent Moisture (%)	22%		20.9%	

Notes:

ND - Not Detected

NT - Not Tested

J - Result is less than the reporting limit but greater or equal to the method detection limit and the concentration is an approximate value

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

4 - The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

FL - MS and/or MSD recovery below control limit

Geosyntec - Glacier NW ISS Bench Scale Study																					
TABLE 4 - ISS MIX UCS AND PERM RESULTS																					
Date Mixed	Mix ID	Type I/II or IL PC Dosage	Type V PC Dosage	Slag Dosage	Total Cement Dosage	Water: Cement	Grout pH (API RP 13B-1)	Grout Viscosity (ASTM D6910)	Grout Density (ASTM D4380)	Pocket Penetrometer (ASTM WK27337)			Moisture Content (ASTM D2216)	Volumetric Expansion	Unconfined Compressive Strength (ASTM D2166)				Hydraulic Conductivity (ASTM D5084)		
		%	%	%	%		pH	seconds	g/cm³	tsf (1tsf=13.89psi)			%		psi				cm/sec		
										1 day	3 days	7 days	28 days	28 days	7 days	28 days	28 days Duplicate	56 days	28 days	28 days Duplicate	56 days
				CRITERIA											> 50 psi at 56-days of cure				< 1E-06 cm/sec at 56-days of cure		
5/28/2025	S1-2PC-2BFS	2%	--	2%	4%	1.25	12	30.34	1.42	2.0	4.5	>4.5	NT	16.1%	12.22	15.60	NT	NT	NT	NT	
5/28/2025	S1-6PC	6%	--	--	6%	1.25	12	31.60	1.43	3.0	>4.5	>4.5	NT	17.9%	26.90	33.10	32.05	NT	2.10E-07	NT	NT
5/28/2025	S1-3PC-3BFS	3%	--	3%	6%	1.25	11	30.22	1.42	2.0	>4.5	>4.5	32.8%	16.5%	21.65	25.37	23.24	NT	7.40E-09	NT	NT
5/28/2025	S1-2PC-4BFS	2%	--	4%	6%	1.25	12	30.66	1.42	2.8	>4.5	>4.5	30.6%	11.2%	30.40	26.74	27.22	NT	4.70E-06	2.10E-05	NT
5/28/2025	S1-8PC	8%	--	--	8%	1	12	34.15	1.52	4.0	>4.5	>4.5	30.9%	12.5%	53.25	66.14	NT	NT	2.70E-06	NT	NT
5/28/2025	S1-2PC-6BFS	2%	--	6%	8%	1	12	32.77	1.50	2.5	>4.5	>4.5	32.7%	16.1%	43.58	76.49	79.61	NT	6.90E-06	6.70E-06	NT
5/30/2025	S1-10PC	10%	--	--	10%	0.85	12	41.19	1.59	>4.5	>4.5	>4.5	NT	13.5%	93.84	128.95	NT	144.32	NT	1.50E-06	
5/30/2025	S1-3PC-7BFS	3%	--	7%	10%	0.85	12	40.31	1.58	>4.5	>4.5	>4.5	NT	17.2%	58.95	150.69	NT	197.29	1.60E-06	NT	5.00E-07
5/29/2025	S2-2PC-2BFS	2%	--	2%	4%	1.25	NT	NT	NT	NT	NT	NT	28.8%	NT	NT	55.74	NT	NT	1.80E-08	2.30E-05	NT
5/29/2025	S2-6PC	6%	--	--	6%	1.25	NT	NT	NT	NT	NT	NT	29.4%	NT	NT	113.67	NT	NT	NT	NT	NT
5/29/2025	S2-3PC-3BFS	3%	--	3%	6%	1.25	NT	NT	NT	NT	NT	NT	31.8%	NT	NT	139.39	NT	NT	NT	NT	NT
5/29/2025	S2-2PC-4BFS	2%	--	4%	6%	1.25	NT	NT	NT	NT	NT	NT	31.7%	NT	NT	84.89	NT	NT	2.10E-05	4.90E-06	NT
5/29/2025	S2-8PC	8%	--	--	8%	1	NT	NT	NT	NT	NT	NT	30.2%	NT	NT	148.40	NT	NT	NT	NT	NT
5/29/2025	S2-2PC-6BFS	2%	--	6%	8%	1	NT	NT	NT	NT	NT	NT	31.1%	NT	NT	159.15	NT	NT	NT	NT	NT
5/29/2025	S2-10PC	10%	--	--	10%	0.85	NT	NT	NT	NT	NT	NT	29.6%	NT	NT	233.42	NT	309.02	NT	NT	4.00E-07
5/29/2025	S2-3PC-7BFS	3%	--	7%	10%	0.85	NT	NT	NT	NT	NT	NT	31.0%	NT	NT	239.78	NT	349.09	NT	NT	2.20E-08
5/30/2025	S2-2PC-V-4BFS	--	2%	4%	6%	1.25	NT	NT	NT	NT	NT	NT	NT	14.7%	66.43	97.05	NT	NT	NT	NT	NT
5/30/2025	S2-2PC-V-6BFS	--	2%	6%	8%	1	NT	NT	NT	NT	NT	NT	NT	13.4%	106.35	183.70	NT	NT	NT	NT	NT
5/30/2025	S2-3PC-V-7BFS	--	3%	7%	10%	0.85	NT	NT	NT	NT	NT	NT	NT	14.7%	100.59	303.76	NT	NT	NT	NT	NT
6/23/2025	S3-4.5PC-10.5BFS	4.5%	--	10.5%	15.0%	0.85	NT	NT	NT	NT	NT	NT	NT	32.4%	31.99	61.08	NT	NT	NT	NT	NT
6/23/2025	S3-15PC	15%	--	0%	15%	0.85	NT	NT	NT	NT	NT	NT	NT	34.1%	83.81	109.24	NT	153.93	6.80E-09	NT	NT
6/23/2025	S3-6PC-14BFS	6%	--	14%	20%	0.85	NT	NT	NT	NT	NT	NT	NT	43.0%	99.54	253.95	NT	428.41	6.30E-08	NT	NT

Notes:

NT - Not Tested

TABLE 5 - ISS SWELL ANALYSIS

Swell Potential Report					
Mix ID	Total Reagent Dosage	Mold Height, in.	Starting Height of Soil, in.	Height of Soil with Grout Addition, in.	% Swell
S1-2PC-2BFS	4%	5.9375	0.81	0.94	16.1%
S1-6PC	6%	5.9375	0.88	1.03	17.9%
S1-3PC-3BFS	6%	5.9375	1.00	1.17	16.5%
S1-2PC-4BFS	6%	5.9375	1.00	1.11	11.2%
S1-8PC	8%	5.9375	1.00	1.12	12.5%
S1-2PC-6BFS	8%	5.9375	0.94	1.09	16.1%
S1-10PC	10%	5.9375	0.94	1.06	13.5%
S1-3PC-7BFS	10%	5.9375	0.94	1.10	17.2%
S2-2PC-V-4BFS	6%	5.9375	0.94	1.08	14.7%
S2-2PC-V-6BFS	8%	5.9375	1.00	1.13	13.4%
S2-3PC-V-7BFS	10%	5.9375	1.00	1.15	14.7%
S3-4.5PC-10.5BFS	15%	5.9375	1.44	1.90	32.4%
S3-15PC	15%	5.9375	1.38	1.84	34.1%
S3-6PC-14BFS	20%	5.9375	1.31	1.88	43.0%

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 6 - EPA LEAF 1315 ANALYTICAL RESULTS

Analyte			Trial #1							
	Water #3 - Lab Anaerobic Delonized		S1-10PC		S1-3PC-7BFS		S2-10PC		S2-3PC-7BFS	
METHOD 1315 LEACH TESTING										
Arsenic (6020B) (ug/L)	NT		12		9.8		1.2	J	2.3	
Copper (6020B) (ug/L)	NT		2.3		0.9	J	2.4		1.1	
Oxidation Reduction Potential (mV)	NT		180		170		150		160	
pH	NT		11.1	H H3	10.6	H H3	10.9	H H3	9.9	H H3
Pentachlorophenol (8270E LL) (ug/L)	NT		NT		NT		<0.92		<0.88	
METHOD 1315 LEACH TESTING DIOXINS & FURANS (8290A) pg/L										
1,2,3,4,6,7,8-HpCDD	NT		NT		NT		390		130	
1,2,3,4,6,7,8-HpCDF	NT		NT		NT		250		28	
1,2,3,4,7,8-HxCDD	NT		NT		NT		<2.6		<2.6	
1,2,3,4,7,8-HxCDF	NT		NT		NT		68		6.9	J
1,2,3,4,7,8,9-HpCDF	NT		NT		NT		26		5.4	J I
1,2,3,6,7,8-HxCDD	NT		NT		NT		18	J	4.9	J
1,2,3,6,7,8-HxCDF	NT		NT		NT		8.5	J	<2.6	
1,2,3,7,8-PeCDD	NT		NT		NT		<3.3		<3.3	
1,2,3,7,8-PeCDF	NT		NT		NT		<2.9		<2.8	
1,2,3,7,8,9-HxCDD	NT		NT		NT		<2.6		3.8	J
1,2,3,7,8,9-HxCDF	NT		NT		NT		7.5	J I	<3.6	
2,3,4,6,7,8-HxCDF	NT		NT		NT		12	J	<2.6	
2,3,4,7,8-PeCDF	NT		NT		NT		6.8	J	<2.6	
2,3,7,8-TCDD	NT		NT		NT		<0.90		<0.90	
2,3,7,8-TCDF	NT		NT		NT		<2.4		<2.4	
OCDD	NT		NT		NT		19000		10000	
OCDF	NT		NT		NT		410		110	
GENERAL CHEMISTRY - LAB PROVIDED DEIONIZED WATER										
Specific Conductance (umhos/cm)	1.0									
Electrical Conductivity (umhos/cm)	1.0									
Temperature (C)	20	^2								
Oxygen, Dissolved (mg/L)	3.5	HF								
pH	5.4	HF								
Oxidation Reduction Potential (mV)	220									
Turbidity (NTU)	ND									

Notes and Qualifiers

Bold indicates sample was detected above the reporting limit.

NT - Not Tested

ND - Not Detected at the Reporting Limit

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to the method detection limit and the concentration is an approximate value

I - Value is EMPC (estimated maximum possible concentration)

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

H3 - Sample was recieved and analyzed past holding time.

This does not meet regulatory requirements.

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 6 - EPA LEAF 1315 ANALYTICAL RESULTS

Analyte	Trial #2							
	S1-10PC		S1-3PC-7BFS		S2-10PC		S2-3PC-7BFS	
METHOD 1315 LEACH TESTING								
Arsenic (6020B) (ug/L)	39		51		1.9	J	8.2	
Copper (6020B) (ug/L)	7.5		4.2		5.3		2.3	
Oxidation Reduction Potential (mV)	180		180		140		150	
pH	11.7	H H3	11.3	H H3	11.3	H H3	10.6	H H3
Pentachlorophenol (8270E LL) (ug/L)	NT		NT		<0.85		<0.92	
METHOD 1315 LEACH TESTING DIOXINS & FURANS (8290A) pg/L								
1,2,3,4,6,7,8-HpCDD	NT		NT		59		58	
1,2,3,4,6,7,8-HpCDF	NT		NT		39	I	31	
1,2,3,4,7,8-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,4,7,8-HxCDF	NT		NT		14	J	18	J I
1,2,3,4,7,8,9-HpCDF	NT		NT		5.3	J I	4.1	J I
1,2,3,6,7,8-HxCDD	NT		NT		2.9	J	2.9	J I
1,2,3,6,7,8-HxCDF	NT		NT		<2.5		<2.5	
1,2,3,7,8-PeCDD	NT		NT		<3.2		<3.2	
1,2,3,7,8-PeCDF	NT		NT		<2.8		<2.8	
1,2,3,7,8,9-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,7,8,9-HxCDF	NT		NT		<3.5		4.4	J
2,3,4,6,7,8-HxCDF	NT		NT		3.1	J I	<2.5	
2,3,4,7,8-PeCDF	NT		NT		<2.5		<2.5	
2,3,7,8-TCDD	NT		NT		<0.88		<0.88	
2,3,7,8-TCDF	NT		NT		<2.3		<2.3	
OCDD	NT		NT		5200		7800	
OCDF	NT		NT		70		91	
GENERAL CHEMISTRY - LAB PROVIDED DEIONIZED WATER								
Specific Conductance (umhos/cm)								
Electrical Conductivity (umhos/cm)								
Temperature (C)								
Oxygen, Dissolved (mg/L)								
pH								
Oxidation Reduction Potential (mV)								
Turbidity (NTU)								

Notes and Qualifiers

Bold indicates sample was detected above the reporting limit.

NT - Not Tested

ND - Not Detected at the Reporting Limit

J - Result is less than the reporting limit but greater or equal

to the method detection limit and the concentration is an approximate value

I - Value is EMPC (estimated maximum possible concentration)

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

H3 - Sample was recieved and analyzed past holding time.

This does not meet regulatory requirements.

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 6 - EPA LEAF 1315 ANALYTICAL RESULTS

Analyte	Trial #3							
	S1-10PC		S1-3PC-7BFS		S2-10PC		S2-3PC-7BFS	
METHOD 1315 LEACH TESTING								
Arsenic (6020B) (ug/L)	24		42		2.3		6.5	
Copper (6020B) (ug/L)	5.5		2.1		3.1		1.5	
Oxidation Reduction Potential (mV)	99		84		150		150	
pH	11.6	H H3	11.1	H H3	11	H H3	10.5	H H3
Pentachlorophenol (8270E LL) (ug/L)	NT		NT		<0.81		<0.92	
METHOD 1315 LEACH TESTING DIOXINS & FURANS (8290A) pg/L								
1,2,3,4,6,7,8-HpCDD	NT		NT		110		42	
1,2,3,4,6,7,8-HpCDF	NT		NT		75		18	J
1,2,3,4,7,8-HxCDD	NT		NT		<2.5		<2.4	
1,2,3,4,7,8-HxCDF	NT		NT		26		6.9	J
1,2,3,4,7,8,9-HpCDF	NT		NT		11	J I	3.0	J
1,2,3,6,7,8-HxCDD	NT		NT		6.6	J	<2.4	
1,2,3,6,7,8-HxCDF	NT		NT		3.5	J	<2.4	
1,2,3,7,8-PeCDD	NT		NT		<3.1		<3.1	
1,2,3,7,8-PeCDF	NT		NT		<2.7		<2.7	
1,2,3,7,8,9-HxCDD	NT		NT		<2.5		<2.4	
1,2,3,7,8,9-HxCDF	NT		NT		<3.5		<3.4	
2,3,4,6,7,8-HxCDF	NT		NT		4.2	J	<2.4	
2,3,4,7,8-PeCDF	NT		NT		3.5	J I	<2.4	
2,3,7,8-TCDD	NT		NT		<0.86		<0.85	
2,3,7,8-TCDF	NT		NT		<2.3		<2.2	
OCDD	NT		NT		4700		8500	
OCDF	NT		NT		110		58	
GENERAL CHEMISTRY - LAB PROVIDED DEIONIZED WATER								
Specific Conductance (umhos/cm)								
Electrical Conductivity (umhos/cm)								
Temperature (C)								
Oxygen, Dissolved (mg/L)								
pH								
Oxidation Reduction Potential (mV)								
Turbidity (NTU)								

Notes and Qualifiers

Bold indicates sample was detected above the reporting limit.

NT - Not Tested

ND - Not Detected at the Reporting Limit

J - Result is less than the reporting limit but greater or equal

to the method detection limit and the concentration is an approximate value

I - Value is EMPC (estimated maximum possible concentration)

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

H3 - Sample was recieved and analyzed past holding time.

This does not meet regulatory requirements.

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 6 - EPA LEAF 1315 ANALYTICAL RESULTS

Analyte	Trial #4							
	S1-10PC		S1-3PC-7BFS		S2-10PC		S2-3PC-7BFS	
METHOD 1315 LEACH TESTING								
Arsenic (6020B) (ug/L)	75		130		5.7		13	
Copper (6020B) (ug/L)	25		9.1		8.5		3.7	
Oxidation Reduction Potential (mV)	80		60		160		160	
pH	11.9	H H3	11.6	H H3	11.3	H H3	10.8	H H3
Pentachlorophenol (8270E LL) (ug/L)	NT		NT		<5.4	J	<0.92	
METHOD 1315 LEACH TESTING DIOXINS & FURANS (8290A) pg/L								
1,2,3,4,6,7,8-HpCDD	NT		NT		53		51	
1,2,3,4,6,7,8-HpCDF	NT		NT		35		39	
1,2,3,4,7,8-HxCDD	NT		NT		<2.6		<2.6	
1,2,3,4,7,8-HxCDF	NT		NT		17	J	49	
1,2,3,4,7,8,9-HpCDF	NT		NT		4.2	J	3.6	J I
1,2,3,6,7,8-HxCDD	NT		NT		4.2	J I	<2.6	
1,2,3,6,7,8-HxCDF	NT		NT		<2.6		<2.6	
1,2,3,7,8-PeCDD	NT		NT		<3.2		<3.2	
1,2,3,7,8-PeCDF	NT		NT		<2.8		<2.8	
1,2,3,7,8,9-HxCDD	NT		NT		<2.6		<2.6	
1,2,3,7,8,9-HxCDF	NT		NT		<3.6		16	J
2,3,4,6,7,8-HxCDF	NT		NT		2.8	J	<2.6	
2,3,4,7,8-PeCDF	NT		NT		<2.6		4.8	J
2,3,7,8-TCDD	NT		NT		<0.90		<0.90	
2,3,7,8-TCDF	NT		NT		<2.4		<2.4	
OCDD	NT		NT		1200		1200	
OCDF	NT		NT		41	J	17	J
GENERAL CHEMISTRY - LAB PROVIDED DEIONIZED WATER								
Specific Conductance (umhos/cm)								
Electrical Conductivity (umhos/cm)								
Temperature (C)								
Oxygen, Dissolved (mg/L)								
pH								
Oxidation Reduction Potential (mV)								
Turbidity (NTU)								

Notes and Qualifiers

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NT - Not Tested

ND - Not Detected at the Reporting Limit

J - Result is less than the reporting limit but greater or equal

to the method detection limit and the concentration is an approximate value

I - Value is EMPC (estimated maximum possible concentration)

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

H3 - Sample was recieved and analyzed past holding time.

This does not meet regulatory requirements.

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 6 - EPA LEAF 1315 ANALYTICAL RESULTS

Analyte	Trial #5							
	S1-10PC		S1-3PC-7BFS		S2-10PC		S2-3PC-7BFS	
METHOD 1315 LEACH TESTING								
Arsenic (6020B) (ug/L)	38		110		5.8		11	
Copper (6020B) (ug/L)	21		16		8.1		3.7	
Oxidation Reduction Potential (mV)	90		81		120		120	
pH	11.9	H H3	11.6	H H3	11.4	H H3	10.9	H H3
Pentachlorophenol (8270E LL) (ug/L)	NT		NT		<0.92		<0.88	
METHOD 1315 LEACH TESTING DIOXINS & FURANS (8290A) pg/L								
1,2,3,4,6,7,8-HpCDD	NT		NT		62		64	
1,2,3,4,6,7,8-HpCDF	NT		NT		36		44	
1,2,3,4,7,8-HxCDD	NT		NT		<2.4		<2.5	
1,2,3,4,7,8-HxCDF	NT		NT		20	J I	49	I
1,2,3,4,7,8,9-HpCDF	NT		NT		15	J	3.8	J I
1,2,3,6,7,8-HxCDD	NT		NT		4.2	J	3.4	J I
1,2,3,6,7,8-HxCDF	NT		NT		<2.4		<2.5	
1,2,3,7,8-PeCDD	NT		NT		<3.1		<3.2	
1,2,3,7,8-PeCDF	NT		NT		<2.7		<2.8	
1,2,3,7,8,9-HxCDD	NT		NT		<2.4		2.7	J
1,2,3,7,8,9-HxCDF	NT		NT		32		16	J I
2,3,4,6,7,8-HxCDF	NT		NT		<2.4		3.3	J I
2,3,4,7,8-PeCDF	NT		NT		8.2	J I	5.7	J I
2,3,7,8-TCDD	NT		NT		<0.85		<0.88	
2,3,7,8-TCDF	NT		NT		<2.2		<2.3	
OCDD	NT		NT		1300		2100	
OCDF	NT		NT		41	J I	37	J
GENERAL CHEMISTRY - LAB PROVIDED DEIONIZED WATER								
Specific Conductance (umhos/cm)								
Electrical Conductivity (umhos/cm)								
Temperature (C)								
Oxygen, Dissolved (mg/L)								
pH								
Oxidation Reduction Potential (mV)								
Turbidity (NTU)								

Notes and Qualifiers

Bold indicates sample was detected above the reporting limit.

NT - Not Tested

ND - Not Detected at the Reporting Limit

J - Result is less than the reporting limit but greater or equal

to the method detection limit and the concentration is an approximate value

I - Value is EMPC (estimated maximum possible concentration)

H - Sample was prepped or analyzed beyond the specified

holding time. This does not meet regulatory requirements.

H3 - Sample was recieved and analyzed past holding time.

This does not meet regulatory requirements.

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 6 - EPA LEAF 1315 ANALYTICAL RESULTS

Analyte	Trial #6							
	S1-10PC		S1-3PC-7BFS		S2-10PC		S2-3PC-7BFS	
METHOD 1315 LEACH TESTING								
Arsenic (6020B) (ug/L)	31		120		7.7		14	
Copper (6020B) (ug/L)	33		25		12		6.1	
Oxidation Reduction Potential (mV)	78		62		92	H	110	H
pH	12.1	H H3	11.7	H H3	11.4	H H3	11	H H3
Pentachlorophenol (8270E LL) (ug/L)	NT		NT		<5.2	J	<5.2	J
METHOD 1315 LEACH TESTING DIOXINS & FURANS (8290A) pg/L								
1,2,3,4,6,7,8-HpCDD	NT		NT		58		170	
1,2,3,4,6,7,8-HpCDF	NT		NT		39		84	
1,2,3,4,7,8-HxCDD	NT		NT		<2.6		<2.6	
1,2,3,4,7,8-HxCDF	NT		NT		37		110	
1,2,3,4,7,8,9-HpCDF	NT		NT		2.8	J I	4.2	J I
1,2,3,6,7,8-HxCDD	NT		NT		3.6	J	5.5	J I
1,2,3,6,7,8-HxCDF	NT		NT		<2.6		<2.6	
1,2,3,7,8-PeCDD	NT		NT		<3.3		<3.3	
1,2,3,7,8-PeCDF	NT		NT		<2.9		<2.9	
1,2,3,7,8,9-HxCDD	NT		NT		<2.6		<2.6	
1,2,3,7,8,9-HxCDF	NT		NT		8.8	J	33	
2,3,4,6,7,8-HxCDF	NT		NT		<2.6		3.7	J I
2,3,4,7,8-PeCDF	NT		NT		4.4	J	6.0	J
2,3,7,8-TCDD	NT		NT		<0.91		<0.91	
2,3,7,8-TCDF	NT		NT		<2.4		<2.4	
OCDD	NT		NT		1400		5500	
OCDF	NT		NT		31	J	58	
GENERAL CHEMISTRY - LAB PROVIDED DEIONIZED WATER								
Specific Conductance (umhos/cm)								
Electrical Conductivity (umhos/cm)								
Temperature (C)								
Oxygen, Dissolved (mg/L)								
pH								
Oxidation Reduction Potential (mV)								
Turbidity (NTU)								

Notes and Qualifiers

Bold indicates sample was detected above the reporting limit.

NT - Not Tested

ND - Not Detected at the Reporting Limit

J - Result is less than the reporting limit but greater or equal

to the method detection limit and the concentration is an approximate value

I - Value is EMPC (estimated maximum possible concentration)

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

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Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 6 - EPA LEAF 1315 ANALYTICAL RESULTS

Analyte	Trial #7							
	S1-10PC		S1-3PC-7BFS		S2-10PC		S2-3PC-7BFS	
METHOD 1315 LEACH TESTING								
Arsenic (6020B) (ug/L)	25		100		7.5		10	
Copper (6020B) (ug/L)	30		27		8.3		4.3	
Oxidation Reduction Potential (mV)	32		42	H	91		120	
pH	12	H H3	11.7	H H3	11.3	H H3	10.9	H H3
Pentachlorophenol (8270E LL) (ug/L)	NT		NT		<0.92		<0.92	
METHOD 1315 LEACH TESTING DIOXINS & FURANS (8290A) pg/L								
1,2,3,4,6,7,8-HpCDD	NT		NT		44		140	
1,2,3,4,6,7,8-HpCDF	NT		NT		31		77	
1,2,3,4,7,8-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,4,7,8-HxCDF	NT		NT		28		69	
1,2,3,4,7,8,9-HpCDF	NT		NT		<2.5		6.7	J
1,2,3,6,7,8-HxCDD	NT		NT		<2.5		5.3	J
1,2,3,6,7,8-HxCDF	NT		NT		<2.5		<2.5	
1,2,3,7,8-PeCDD	NT		NT		<3.1		<3.2	
1,2,3,7,8-PeCDF	NT		NT		<2.7		<2.8	
1,2,3,7,8,9-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,7,8,9-HxCDF	NT		NT		7.6	J	18	J
2,3,4,6,7,8-HxCDF	NT		NT		<2.5		3.2	J
2,3,4,7,8-PeCDF	NT		NT		3.2	J	5.7	J
2,3,7,8-TCDD	NT		NT		<0.86		<0.88	
2,3,7,8-TCDF	NT		NT		<2.3		<2.3	
OCDD	NT		NT		860		24000	
OCDF	NT		NT		19	J	180	
GENERAL CHEMISTRY - LAB PROVIDED DEIONIZED WATER								
Specific Conductance (umhos/cm)								
Electrical Conductivity (umhos/cm)								
Temperature (C)								
Oxygen, Dissolved (mg/L)								
pH								
Oxidation Reduction Potential (mV)								
Turbidity (NTU)								

Notes and Qualifiers

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ND - Not Detected at the Reporting Limit

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to the method detection limit and the concentration is an approximate value

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Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 6 - EPA LEAF 1315 ANALYTICAL RESULTS

Analyte	Trial #8							
	S1-10PC		S1-3PC-7BFS		S2-10PC		S2-3PC-7BFS	
METHOD 1315 LEACH TESTING								
Arsenic (6020B) (ug/L)	17		67		5.4		6	
Copper (6020B) (ug/L)	14		10		4		2.1	
Oxidation Reduction Potential (mV)	48		58		130		150	
pH	11.8	H H3	11.5	H H3	11.1	H H3	10.6	H H3
Pentachlorophenol (8270E LL) (ug/L)	NT		NT		7.5		<5.2	
METHOD 1315 LEACH TESTING DIOXINS & FURANS (8290A) pg/L								
1,2,3,4,6,7,8-HpCDD	NT		NT		21	J	39	
1,2,3,4,6,7,8-HpCDF	NT		NT		13	J	23	J
1,2,3,4,7,8-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,4,7,8-HxCDF	NT		NT		6.9	J	16	J
1,2,3,4,7,8,9-HpCDF	NT		NT		<2.5		<2.5	
1,2,3,6,7,8-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,6,7,8-HxCDF	NT		NT		<2.5		<2.5	
1,2,3,7,8-PeCDD	NT		NT		<3.1		<3.1	
1,2,3,7,8-PeCDF	NT		NT		<2.8		<2.7	
1,2,3,7,8,9-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,7,8,9-HxCDF	NT		NT		<3.5		4.3	J I
2,3,4,6,7,8-HxCDF	NT		NT		<2.5		<2.5	
2,3,4,7,8-PeCDF	NT		NT		<2.5		<2.5	
2,3,7,8-TCDD	NT		NT		<0.87		<0.86	
2,3,7,8-TCDF	NT		NT		<2.3		<2.3	
OCDD	NT		NT		850		3300	
OCDF	NT		NT		19	J	40	J
GENERAL CHEMISTRY - LAB PROVIDED DEIONIZED WATER								
Specific Conductance (umhos/cm)								
Electrical Conductivity (umhos/cm)								
Temperature (C)								
Oxygen, Dissolved (mg/L)								
pH								
Oxidation Reduction Potential (mV)								
Turbidity (NTU)								

Notes and Qualifiers

Bold indicates sample was detected above the reporting limit.

NT - Not Tested

ND - Not Detected at the Reporting Limit

J - Result is less than the reporting limit but greater or equal

to the method detection limit and the concentration is an approximate value

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holding time. This does not meet regulatory requirements.

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This does not meet regulatory requirements.

Geosyntec - Glacier NW ISS Bench Scale Study

TABLE 6 - EPA LEAF 1315 ANALYTICAL RESULTS

Analyte	Trial #9							
	S1-10PC		S1-3PC-7BFS		S2-10PC		S2-3PC-7BFS	
METHOD 1315 LEACH TESTING								
Arsenic (6020B) (ug/L)	18		84		7.7		10	
Copper (6020B) (ug/L)	16		16		6.2		3.3	
Oxidation Reduction Potential (mV)	70		80		120		130	
pH	11.8	H H3	11.5	H H3	11.2	H H3	10.9	H H3
Pentachlorophenol (8270E LL) (ug/L)	NT		NT		5.8		11	
METHOD 1315 LEACH TESTING DIOXINS & FURANS (8290A) pg/L								
1,2,3,4,6,7,8-HpCDD	NT		NT		27		38	
1,2,3,4,6,7,8-HpCDF	NT		NT		14	J	19	J
1,2,3,4,7,8-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,4,7,8-HxCDF	NT		NT		6.7	J	12	J
1,2,3,4,7,8,9-HpCDF	NT		NT		<2.5		2.7	J I
1,2,3,6,7,8-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,6,7,8-HxCDF	NT		NT		<2.5		<2.5	
1,2,3,7,8-PeCDD	NT		NT		<3.2		<3.2	
1,2,3,7,8-PeCDF	NT		NT		<2.8		<2.8	
1,2,3,7,8,9-HxCDD	NT		NT		<2.5		<2.5	
1,2,3,7,8,9-HxCDF	NT		NT		<3.6		3.9	J I
2,3,4,6,7,8-HxCDF	NT		NT		<2.5		<2.5	
2,3,4,7,8-PeCDF	NT		NT		<2.5		2.7	J
2,3,7,8-TCDD	NT		NT		<0.89		<0.89	
2,3,7,8-TCDF	NT		NT		<2.3		<2.3	
OCDD	NT		NT		4800		4300	
OCDF	NT		NT		39	J	47	J
GENERAL CHEMISTRY - LAB PROVIDED DEIONIZED WATER								
Specific Conductance (umhos/cm)								
Electrical Conductivity (umhos/cm)								
Temperature (C)								
Oxygen, Dissolved (mg/L)								
pH								
Oxidation Reduction Potential (mV)								
Turbidity (NTU)								
Notes and Qualifiers								
Bold indicates sample was detected above the reporting limit.								
NT - Not Tested								
ND - Not Detected at the Reporting Limit								
J - Result is less than the reporting limit but greater or equal to the method detection limit and the concentration is an approximate value								
I - Value is EMPC (estimated maximum possible concentration)								
H - Sample was prepped or analyzed beyod the specified holding time. This does not meet regulatory requirements.								
H3 - Sample was recieved and analyzed past holding time. This does not meet regulatory requirements.								

ATTACHMENTS

ATTACHMENT 1

COMPOSITE SAMPLES GEOTECHNICAL REPORTS



June 2, 2025

Project No. 2025-330-001

Jule Carr
ENTACT, LLC
999 Oakmont Plaza Drive, Suite 300
Westmont, IL 60559

Transmittal
Laboratory Test Results
Glacier NW Site E9447

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was transmitted to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens that were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectfully submitted,
Geotechnics, Inc.

Nathan Melaro
Director of Operations

***We understand that you have a choice in your laboratory services
and we thank you for choosing Geotechnics.***

MOISTURE - DENSITY RELATIONSHIP

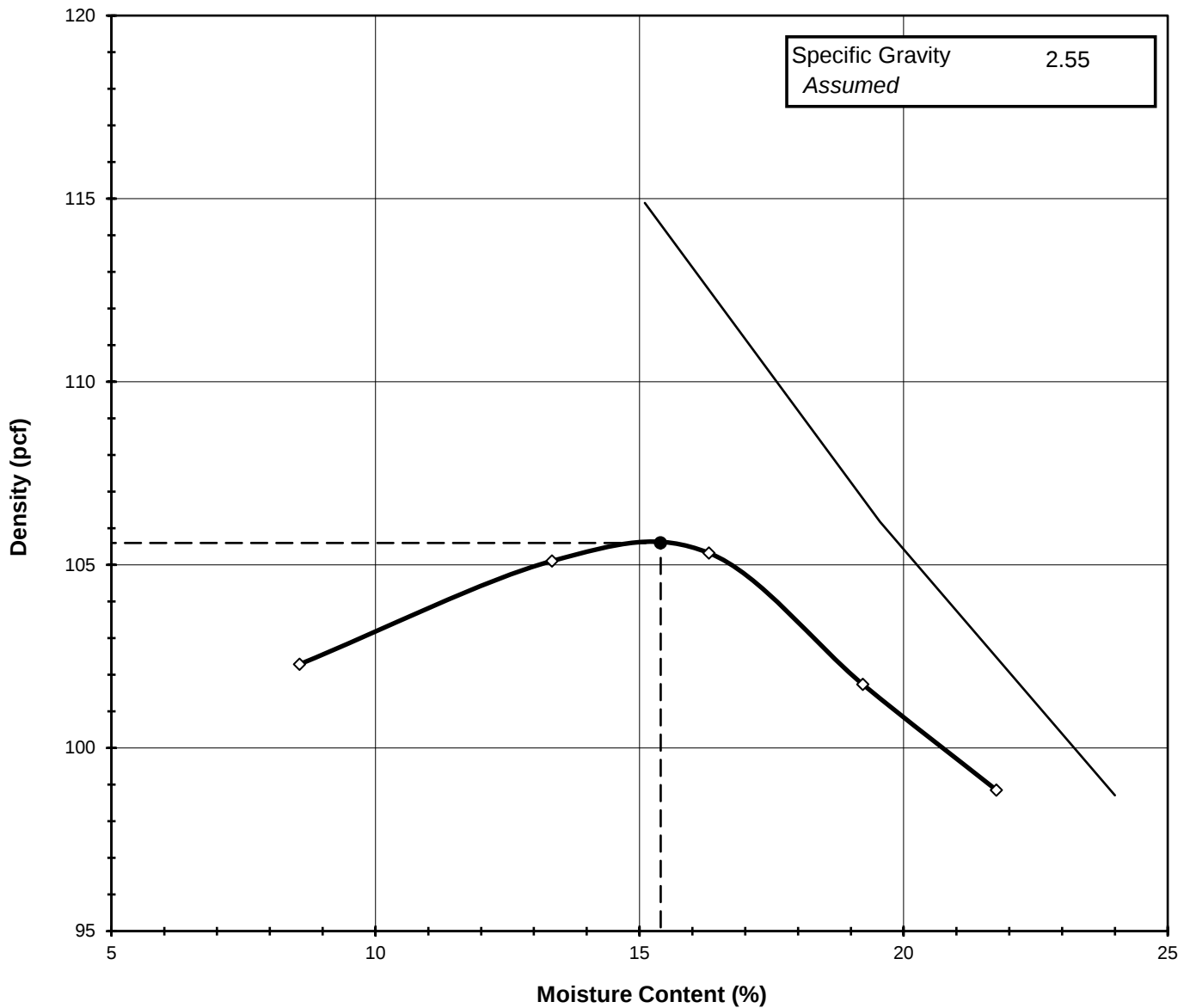
ASTM D698-12

Client: ENTACT, LLC
 Client Reference: Glacier NW Site E9447
 Project No.: 2025-330-001
 Lab ID: 2025-330-001-001

Boring No.: 5/22/25
 Depth (ft): Shallow/Dredge Fill
 Sample No.: Glacier 1G/2G
 Test Method: **STANDARD**

Visual Description: Black Sand with Rocks

Optimum Moisture Content (%): 15.4
Maximum Dry Density (pcf): 105.6



Tested By MLF Date 5/28/2025 Checked By JLK Date 5/30/25

page 1 of 2 DCN:CT-S12 DATE: 4/21/23 REVISION: 17

MOISTURE - DENSITY RELATIONSHIP

ASTM D698-12

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001
Lab ID: 2025-330-001-001

Boring No.: 5/22/25
Depth (ft): Shallow/Dredge Fill
Sample No.: Glacier 1G/2G

Visual Description: Black Sand with Rocks

Total Weight of the Sample (g):	NA
As Received Water Content (%):	NA
Assumed Specific Gravity:	2.55
Percent Retained on 3/4":	NA
Percent Retained on 3/8":	NA
Percent Retained on #4:	NA
Oversize Material:	Not included
Procedure Used:	C

Test Type:	STANDARD
Rammer Weight (lb):	5.5
Rammer Drop (in):	12
Rammer Type:	MECHANICAL
Machine ID:	G441
Mold ID:	G3348
Mold diameter:	6"
Weight of the Mold (g):	5725
Volume of the Mold (cm ³):	2123

Mold / Specimen

Point No.	1	2	3	4	5
Weight of Mold & Wet Sample (g):	9503	9778	9893	9852	9820
Weight of Mold (g):	5725	5725	5725	5725	5725
Weight of Wet Sample (g):	3778	4053	4168	4127	4095
Mold Volume (cm ³):	2123	2123	2123	2123	2123

Moisture Content / Density

Tare Number:	455	464	416	491	424
Weight of Tare & Wet Sample (g):	455.45	454.94	456.47	451.40	454.83
Weight of Tare & Dry Sample (g):	426.73	412.13	406.23	393.42	389.87
Weight of Tare (g):	91.25	91.20	98.25	91.83	91.27
Weight of Water (g):	28.72	42.81	50.24	57.98	64.96
Weight of Dry Sample (g):	335.48	320.93	307.98	301.59	298.60

Wet Density (g/cm ³):	1.78	1.91	1.96	1.94	1.93
Wet Density (pcf):	111.0	119.1	122.5	121.3	120.4
Moisture Content (%):	8.6	13.3	16.3	19.2	21.8
Dry Density (pcf):	102.3	105.1	105.3	101.7	98.9

Zero Air Voids

Moisture Content (%):	15.1	19.6	24.0
Dry Unit Weight (pcf):	114.9	106.2	98.7

Tested By MLF Date 5/28/25 Checked By JLK Date 5/30/25

MOISTURE - DENSITY RELATIONSHIP

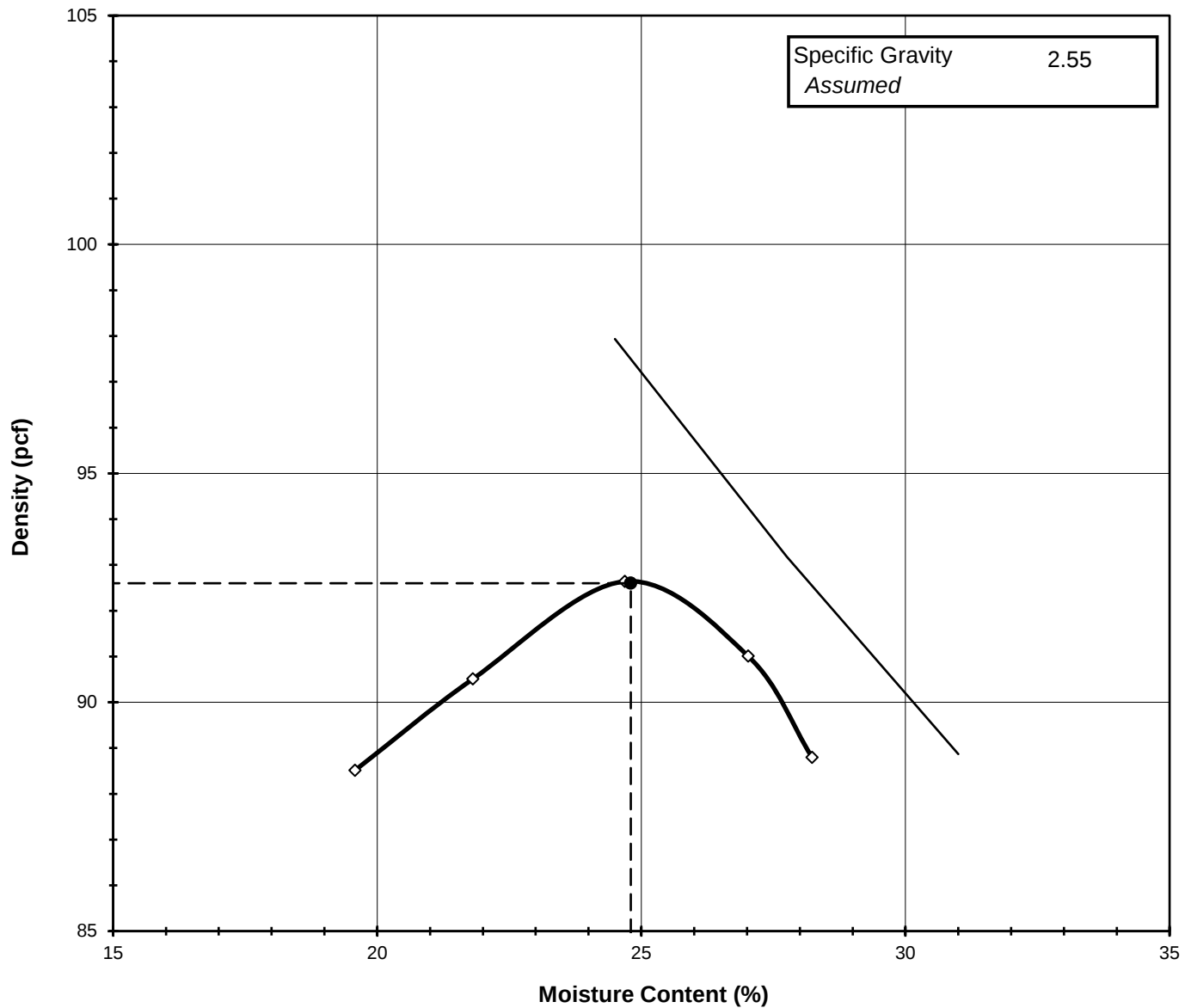
ASTM D698-12

Client: ENTACT, LLC
 Client Reference: Glacier NW Site E9447
 Project No.: 2025-330-001
 Lab ID: 2025-330-001-002

Boring No.: 5/22/25
 Depth (ft): Bank Fill/Aquitard
 Sample No.: Glacier 3G
 Test Method: **STANDARD**

Visual Description: Black Clayey Sand with Rock

Optimum Moisture Content (%): 24.8
Maximum Dry Density (pcf): 92.6



Tested By MLF Date 5/29/2025 Checked By JLK Date 5/30/25

page 1 of 2 DCN:CT-S12 DATE: 4/21/23 REVISION: 17

MOISTURE - DENSITY RELATIONSHIP

ASTM D698-12

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001
Lab ID: 2025-330-001-002

Boring No.: 5/22/25
Depth (ft): Bank Fill/Aquitard
Sample No.: Glacier 3G

Visual Description: Black Clayey Sand with Rock

Total Weight of the Sample (g):	NA
As Received Water Content (%):	NA
Assumed Specific Gravity:	2.55
Percent Retained on 3/4":	NA
Percent Retained on 3/8":	NA
Percent Retained on #4:	NA
Oversize Material:	Not included
Procedure Used:	C

Test Type:	STANDARD
Rammer Weight (lb):	5.5
Rammer Drop (in):	12
Rammer Type:	MECHANICAL
Machine ID:	G441
Mold ID:	G3348
Mold diameter:	6"
Weight of the Mold (g):	5724
Volume of the Mold (cm ³):	2123

Mold / Specimen

Point No.	1	2	3	4	5
Weight of Mold & Wet Sample (g):	9325	9475	9654	9657	9598
Weight of Mold (g):	5724	5724	5724	5724	5724
Weight of Wet Sample (g):	3601	3751	3930	3933	3874
Mold Volume (cm ³):	2123	2123	2123	2123	2123

Moisture Content / Density

Tare Number:	486	416	465	405	426
Weight of Tare & Wet Sample (g):	456.19	456.49	455.84	455.41	456.59
Weight of Tare & Dry Sample (g):	397.44	392.37	383.52	379.31	376.28
Weight of Tare (g):	97.36	98.39	90.59	97.66	91.82
Weight of Water (g):	58.75	64.12	72.32	76.10	80.31
Weight of Dry Sample (g):	300.08	293.98	292.93	281.65	284.46

Wet Density (g/cm ³):	1.70	1.77	1.85	1.85	1.82
Wet Density (pcf):	105.8	110.3	115.5	115.6	113.9
Moisture Content (%) :	19.6	21.8	24.7	27.0	28.2
Dry Density (pcf) :	88.5	90.5	92.6	91.0	88.8

Zero Air Voids

Moisture Content (%) :	24.5	27.8	31.0
Dry Unit Weight (pcf) :	97.9	93.2	88.9

Tested By MLF Date 5/29/25 Checked By JLK Date 5/30/25

MOISTURE CONTENT

ASTM D 2216-19

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001

Lab ID:	001	002
Boring No.:	5/22/25	5/22/25
Depth (ft):	Shallow/Dredge Fill	Bank Fill/Aquitard
Sample No.:	Glacier 1G/2G	Clacier 3G
Tare Number	2672	3396
Wt. of Tare & Wet Sample (g)	283.38	288.18
Wt. of Tare & Dry Sample (g)	239.81	193.87
Weight of Tare (g)	8.21	8.06
Weight of Water (g)	43.57	94.31
Weight of Dry Sample (g)	231.60	185.81
Water Content (%)	18.8	50.8

Notes :

Tested By	JW	Date	5/23/25	Checked By	EG	Date	5/27/25
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page 1 of 1 DCN: CT-S1 DATE: 3/18/13 REVISION: 4

SIEVE ANALYSIS

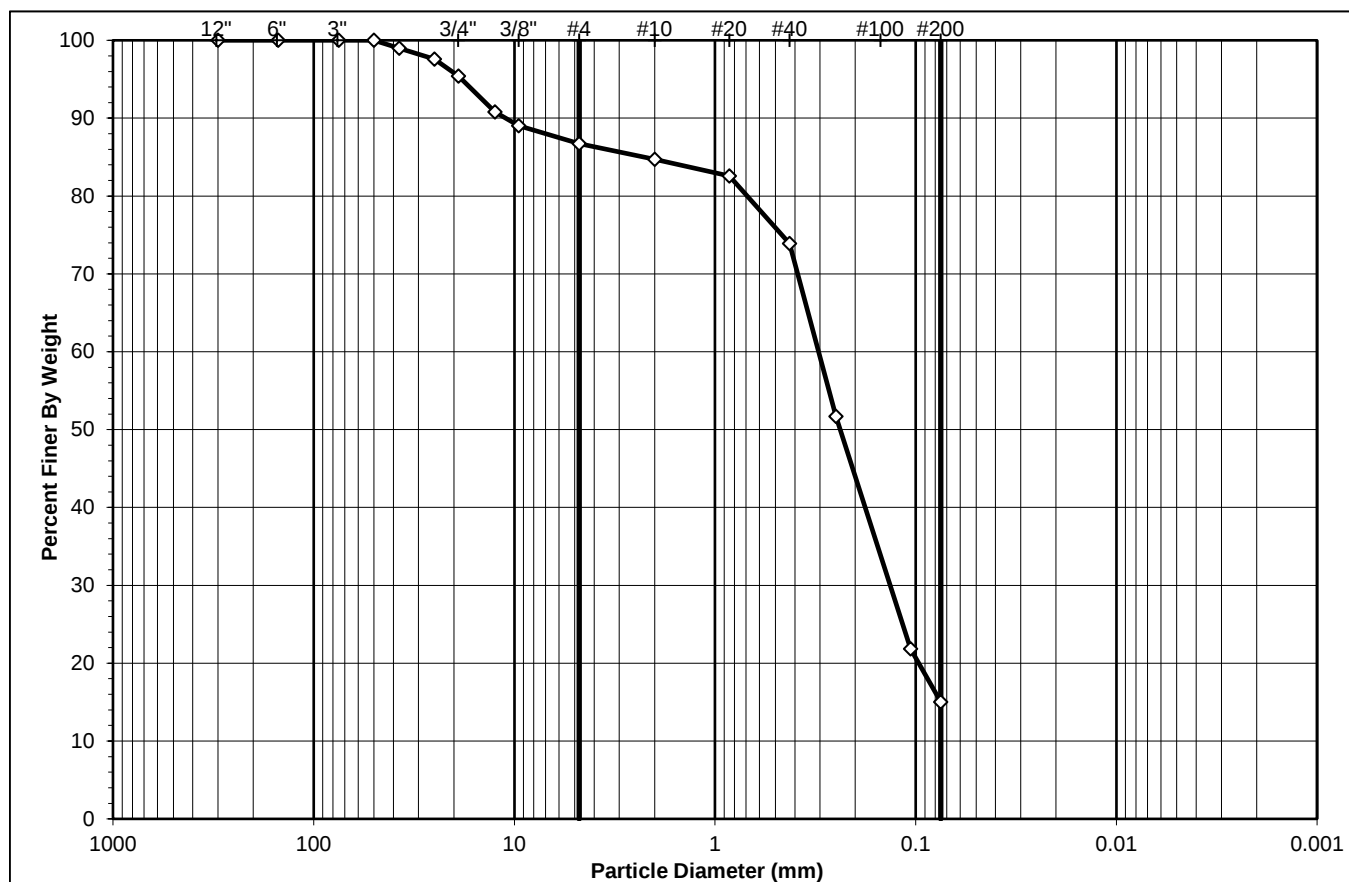
ASTM D 422-63 (2007)



Client: ENTACT, LLC
 Client Reference: Glacier NW Site E9447
 Project No.: 2025-330-001
 Lab ID: 2025-330-001-001

Boring No.: 5/22/25
 Depth (ft): Shallow/Dredge Fill
 Sample No.: Glacier 1G/2G
 Soil Color: Black

USCS USDA	SIEVE ANALYSIS			HYDROMETER	
	cobbles	gravel	sand	silt and clay fraction	
	cobbles	gravel	sand	silt	clay



USCS Summary		
Sieve Size (mm)		Percentage (%)
Greater Than #4	Gravel	13.26
#4 to #200	Sand	71.71
Finer Than #200	Silt & Clay	15.03
USCS Symbol: <i>SM, TESTED</i>		
USCS Classification: <i>SILTY SAND</i> <i>(NON-PLASTIC FINES)</i>		

WASH SIEVE ANALYSIS
ASTM D 422-63 (2007), AASHTO T88

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001
Lab ID: 2025-330-001-001

Boring No.: 5/22/25
Depth (ft): Shallow/Dredge Fill
Sample No.: Glacier 1G/2G
Soil Color: Black

Moisture Content of Passing 3/4" Material		Moisture Content of Retained 3/4" Material	
Tare No.:	1540	Tare No.:	3205
Wt. of Tare & Wet Sample (g):	992.21	Weight of Tare & Wet Sample (g):	429.12
Wt. of Tare & Dry Sample (g):	859.43	Weight of Tare & Dry Sample (g):	398.98
Weight of Tare (g):	146.77	Weight of Tare (g):	7.02
Weight of Water (g):	132.78	Weight of Water (g):	30.14
Weight of Dry Soil (g):	712.66	Weight of Dry Soil (g):	391.96
Moisture Content (%):	18.6	Moisture Content (%):	7.7

Wet Weight of -3/4" Sample (g):	23513.00	Weight of the Dry Sample (g):	712.66
Dry Weight of - 3/4" Sample (g):	19820.18	Weight of minus #200 Material (g):	112.23
Wet Weight of +3/4" Sample (g):	1025.00	Weight of plus #200 Material (g):	600.43
Dry Weight of +3/4" Sample (g):	951.81		
Total Dry Weight of Sample (g):	20771.99	J - Factor (Percent Finer than 3/4")	95.42%

Sieve Size	Sieve Opening (mm)	Weight of Soil Retained (g)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	0.00	0.00	0.00	100.00	100.00
2"	50	0.00	(*)	0.00	100.00	100.00
1 1/2"	37.5	224.00	1.00	1.00	99.00	99.00
1"	25	320.00	1.43	2.43	97.57	97.57
3/4"	19	481.00	2.15	4.58	95.42	95.42
1/2"	12.5	34.41	4.83	4.83	95.17	90.81
3/8"	9.5	13.13	1.84	6.67	93.33	89.05
#4	4.75	17.27	2.42	9.09	90.91	86.74
#10	2	15.25	2.14	11.23	88.77	84.70
#20	0.85	15.72	(**)	13.44	86.56	82.59
#40	0.425	65.07	9.13	22.57	77.43	73.88
#60	0.25	165.66	23.25	45.82	54.18	51.70
#140	0.106	222.98	31.29	77.10	22.90	21.85
#200	0.075	50.94	7.15	84.25	15.75	15.03
Pan	-	112.23	15.75	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Sample

Tested By DF Date 5/28/25 Checked By EG Date 5/30/25

ATTERBERG LIMITS

ASTM D 4318-17

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001
Lab ID: 2025-330-001-001

Boring No.: 5/22/25
Depth (ft): Shallow/Dredge Fill
Sample No.: Glacier 1G/2G
Color: Black
(Minus No. 40 sieve material)

As Received Water Content

Tare Number	2672
Wt. of Tare & Wet Sample (g)	283.38
Wt. of Tare & Dry Sample (g)	239.81
Weight of Tare (g)	8.21
Weight of Water (g)	43.57
Weight of Dry Sample (g)	231.60

Water Content (%)	18.8
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NON - PLASTIC MATERIAL

Tested By FS Date 5/26/25 Checked By EG Date 5/28/25

page 1 of 1 DCN: CT-S4C, DATE: 4/27/17, REVISION : 4e

Moisture, Ash, and Organic Matter (Loss on Ignition)

ASTM D 2974-20e1

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001

Method B (To 0.1%)

Moisture Content

ASTM D2216

Lab ID: 001
Boring No.: 5/22/25
Depth (ft): Shallow/Dredge Fill
Sample No.: Glacier 1G/2G

Tare Number EE
Weight of Tare & Wet Sample (g) 384.97
Weight of Tare & Dry Sample (g) 341.04
Weight of Tare (g) 126.87
Weight of Water (g) 43.93
Weight of Dry Sample (g) 214.17

Moisture Content 20.5%

Method A **Ash Content, Organic Matter**

Furnace Temperature (°C) 440

Weight of Tare & Ash (g) 335.48
Weight of Volatiles (g) 5.56
Weight of Ash (g) 208.61

Ash Content (%) 97.4%

Organic Matter (%) 2.6%

Tested By JW Date 5/23/25 Checked By EG Date 5/28/25

page 1 of 1 DCN: CT-S8 DATE: 4/18/17 REVISION: 4e

pH OF SOILS
AASHTO T 289-91 (2013)

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001

Lab ID: 001
Boring No.: 5/15/25
Depth (ft): Shallow/Dredge Fill
Sample No.: Glacier 1G/2G

Drying Tare No.: 3513
Testing Tare No.: A

Temperature (°C): 23.4

pH of Sample: 6.31

Meter Calibration (as used each day)		
Buffer pH	Meter Reading	Meter Model
4.00 7.00 10.00	4.01 7.02 10.02	ORION 720A

Tested By JAM Date 5/29/25 Checked By EG Date 5/30/25

page 1 of 1 DCN: CT-S36B DATE 6/5/14 REVISION: 1

SIEVE ANALYSIS

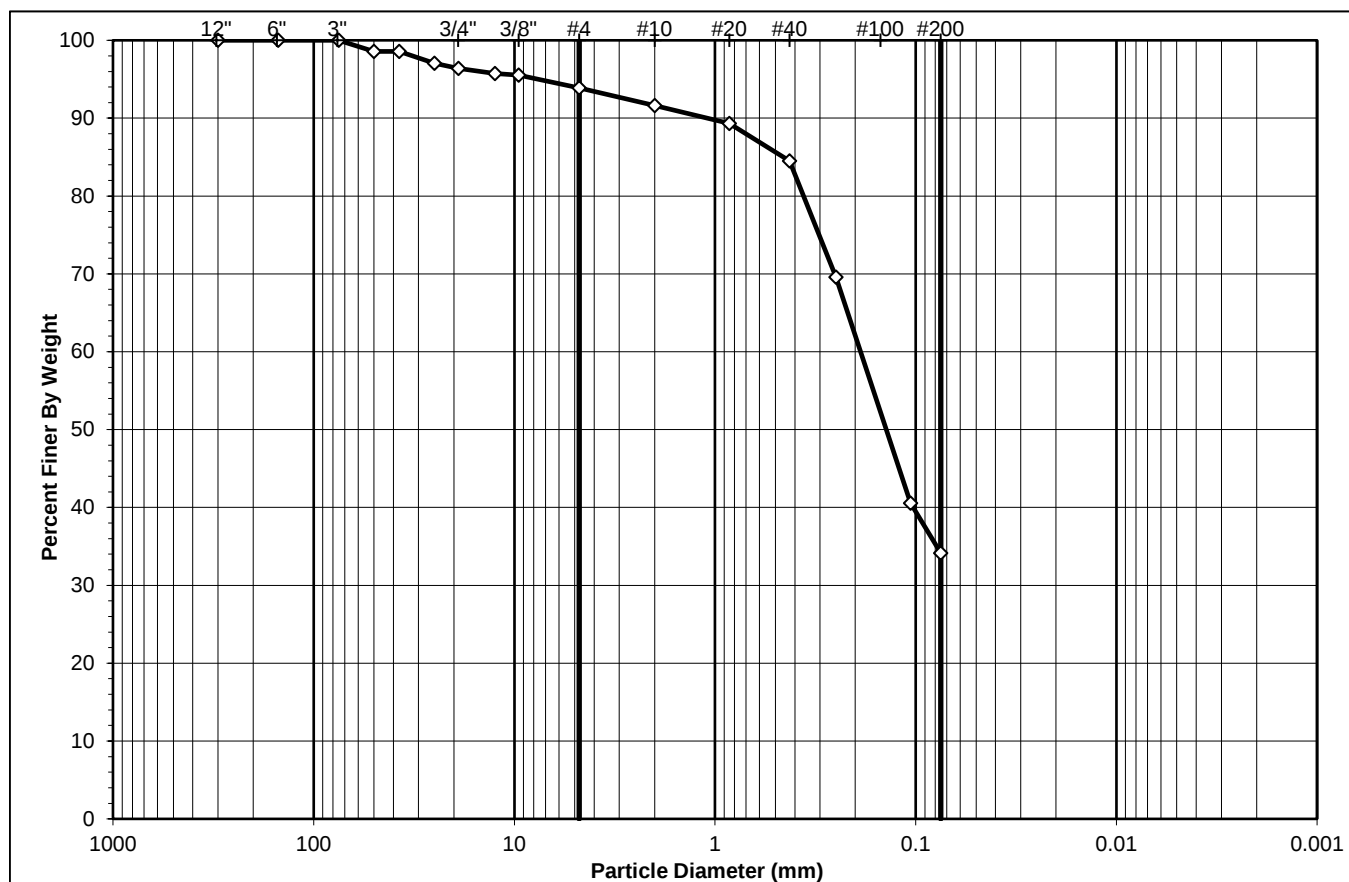
ASTM D 422-63 (2007)



Client: ENTACT, LLC
 Client Reference: Glacier NW Site E9447
 Project No.: 2025-330-001
 Lab ID: 2025-330-001-002

Boring No.: 5/22/25
 Depth (ft): Bank/Fill Aquitard
 Sample No.: Glacier 3G
 Soil Color: Black

USCS USDA	SIEVE ANALYSIS			HYDROMETER	
	cobbles	gravel	sand	silt and clay fraction	
	cobbles	gravel	sand	silt	clay



USCS Summary		
Sieve Size (mm)		Percentage (%)
Greater Than #4	Gravel	6.10
#4 to #200	Sand	59.76
Finer Than #200	Silt & Clay	34.15
USCS Symbol: <i>SM, TESTED</i>		
USCS Classification: <i>SILTY SAND</i> <i>(NON-PLASTIC FINES)</i>		

WASH SIEVE ANALYSIS
ASTM D 422-63 (2007), AASHTO T88

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001
Lab ID: 2025-330-001-002

Boring No.: 5/22/25
Depth (ft): Bank/Fill Aquitard
Sample No.: Glacier 3G
Soil Color: Black

Moisture Content of Passing 3/4" Material		Moisture Content of Retained 3/4" Material	
Tare No.:	1490	Tare No.:	3046
Wt. of Tare & Wet Sample (g):	1023.66	Weight of Tare & Wet Sample (g):	421.62
Wt. of Tare & Dry Sample (g):	741.83	Weight of Tare & Dry Sample (g):	399.83
Weight of Tare (g):	179.43	Weight of Tare (g):	7.19
Weight of Water (g):	281.83	Weight of Water (g):	21.79
Weight of Dry Soil (g):	562.40	Weight of Dry Soil (g):	392.64
Moisture Content (%):	50.1	Moisture Content (%):	5.5

Wet Weight of -3/4" Sample (g):	25711.00	Weight of the Dry Sample (g):	562.40
Dry Weight of - 3/4" Sample (g):	17127.88	Weight of minus #200 Material (g):	199.24
Wet Weight of +3/4" Sample (g):	678.00	Weight of plus #200 Material (g):	363.16
Dry Weight of +3/4" Sample (g):	642.35		
Total Dry Weight of Sample (g):	17770.23	J - Factor (Percent Finer than 3/4")	96.39%

Sieve Size	Sieve Opening (mm)	Weight of Soil Retained (g)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	0.00	0.00	0.00	100.00	100.00
2"	50	266.00	(*) 1.42	1.42	98.58	98.58
1 1/2"	37.5	0.00	0.00	1.42	98.58	98.58
1"	25	285.00	1.52	2.94	97.06	97.06
3/4"	19	127.00	0.68	3.61	96.39	96.39
1/2"	12.5	3.76	0.67	0.67	99.33	95.74
3/8"	9.5	1.33	0.24	0.91	99.09	95.51
#4	4.75	9.39	1.67	2.57	97.43	93.90
#10	2	13.20	2.35	4.92	95.08	91.64
#20	0.85	13.55	(**) 2.41	7.33	92.67	89.32
#40	0.425	28.16	5.01	12.34	87.66	84.49
#60	0.25	87.00	15.47	27.81	72.19	69.58
#140	0.106	169.30	30.10	57.91	42.09	40.57
#200	0.075	37.47	6.66	64.57	35.43	34.15
Pan	-	199.24	35.43	100.00	-	-

Notes : (*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample
(**) The - 3/4" sieve analysis is based on the Weight of the Dry Sample

Tested By DF Date 5/28/25 Checked By EG Date 5/30/25

ATTERBERG LIMITS

ASTM D 4318-17

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001
Lab ID: 2025-330-001-002

Boring No.: 5/22/25
Depth (ft): Bank Fill/Aquitard
Sample No.: Glacier 3G
Color: Black
(Minus No. 40 sieve material)

As Received Water Content

Tare Number	3396
Wt. of Tare & Wet Sample (g)	288.18
Wt. of Tare & Dry Sample (g)	193.87
Weight of Tare (g)	8.06
Weight of Water (g)	94.31
Weight of Dry Sample (g)	185.81

Water Content (%)	50.8
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NON - PLASTIC MATERIAL

Tested By FS *Date* 5/26/25 *Checked By* EG *Date* 5/28/25

page 1 of 1 DCN: CT-S4C, DATE: 4/27/17, REVISION : 4e

Moisture, Ash, and Organic Matter (Loss on Ignition)

ASTM D 2974-20e1

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001

Method B (To 0.1%)

Moisture Content

ASTM D2216

Lab ID: 002
Boring No.: 5/22/25
Depth (ft): Bank Fill/Aquitard
Sample No.: Glacier 3G

Tare Number FF
Weight of Tare & Wet Sample (g) 412.93
Weight of Tare & Dry Sample (g) 313.52
Weight of Tare (g) 115.50
Weight of Water (g) 99.41
Weight of Dry Sample (g) 198.02

Moisture Content 50.2%

Method A **Ash Content, Organic Matter**

Furnace Temperature (°C) 440

Weight of Tare & Ash (g) 306.57
Weight of Volatiles (g) 6.95
Weight of Ash (g) 191.07

Ash Content (%) 96.5%

Organic Matter (%) 3.5%

Tested By JW Date 5/23/25 Checked By EG Date 5/28/25

page 1 of 1 DCN: CT-S8 DATE: 4/18/17 REVISION: 4e

pH OF SOILS
AASHTO T 289-91 (2013)

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001

Lab ID: 002
Boring No.: 5/15/25
Depth (ft): Bank Fill/Aquitard
Sample No.: Glacier 3G

Drying Tare No.: 3354
Testing Tare No.: M

Temperature (°C): 23.4

pH of Sample: 4.09

Meter Calibration (as used each day)		
Buffer pH	Meter Reading	Meter Model
4.00 7.00 10.00	4.01 7.02 10.02	ORION 720A

Tested By JAM Date 5/29/25 Checked By EG Date 5/30/25

page 1 of 1 DCN: CT-S36B DATE 6/5/14 REVISION: 1

Moisture, Ash, and Organic Matter (Loss on Ignition)

ASTM D 2974-20e1

Client: ENTACT, LLC
Client Reference: Glacier NW Site E9447
Project No.: 2025-330-001

Method B (To 0.1%)

Moisture Content

ASTM D2216

Lab ID: 003
Boring No.: 5/15/25
Depth (ft): CCR Material
Sample No.: Lower Sluiced Ash

Tare Number BB
Weight of Tare & Wet Sample (g) 391.40
Weight of Tare & Dry Sample (g) 318.23
Weight of Tare (g) 123.81
Weight of Water (g) 73.17
Weight of Dry Sample (g) 194.42

Moisture Content 37.6%

Method A Ash Content, Organic Matter

Furnace Temperature (°C) 440

Weight of Tare & Ash (g) 310.77
Weight of Volatiles (g) 7.46
Weight of Ash (g) 186.96

Ash Content (%) 96.2%

Organic Matter (%) 3.8%

Tested By JW Date 5/23/25 Checked By EG Date 5/28/25

page 1 of 1 DCN: CT-S8 DATE: 4/18/17 REVISION: 4e

ATTACHMENT 2

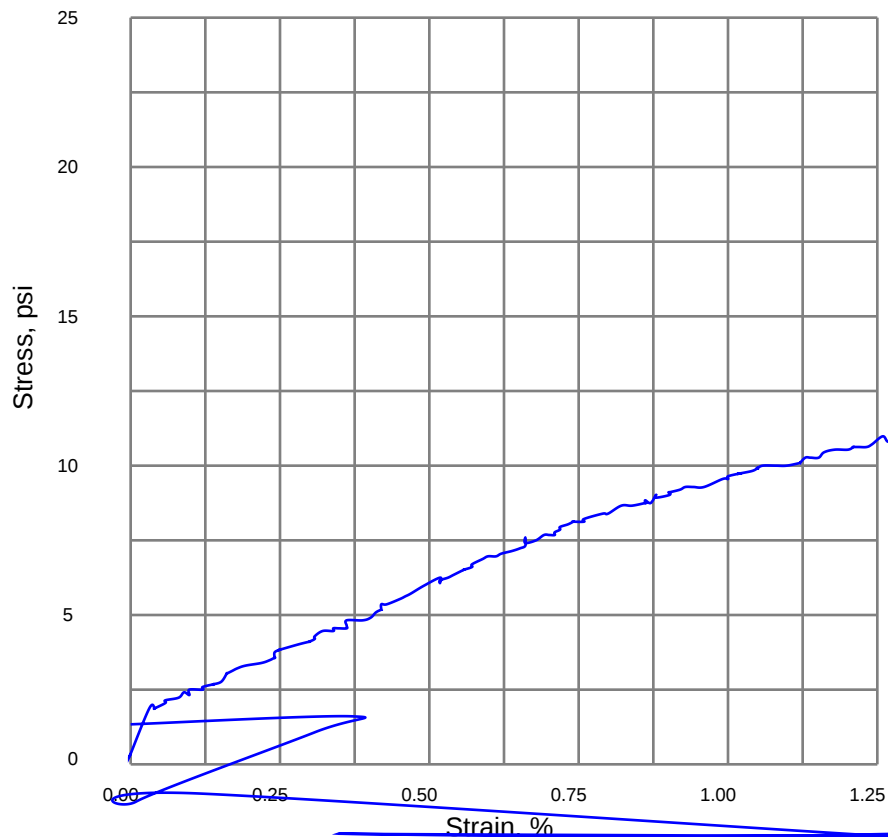
ISS MIX UCS REPORTS

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-2PC-2BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/4/2025	Sample Moisture, %:	
Stress @ Failure, psi:	12.22	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.96	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.0
		Max. Load lbf:	38.4
		at Displacement, in:	0.0783

Soil Type: 2%PC 2%BFS



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

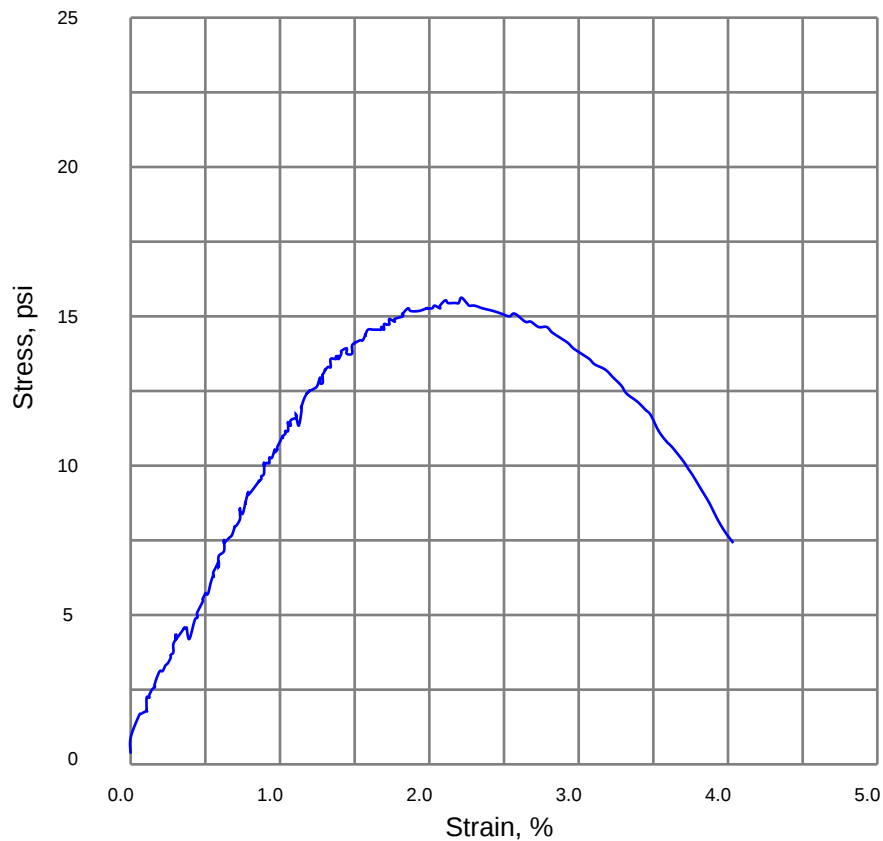
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-2PC-2BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/25/2025	Sample Moisture, %:	
Stress @ Failure, psi:	15.60	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.21	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.6
		Max. Load lbf:	49.0
		at Displacement, in:	0.0884

Soil Type: 2%PC 2%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

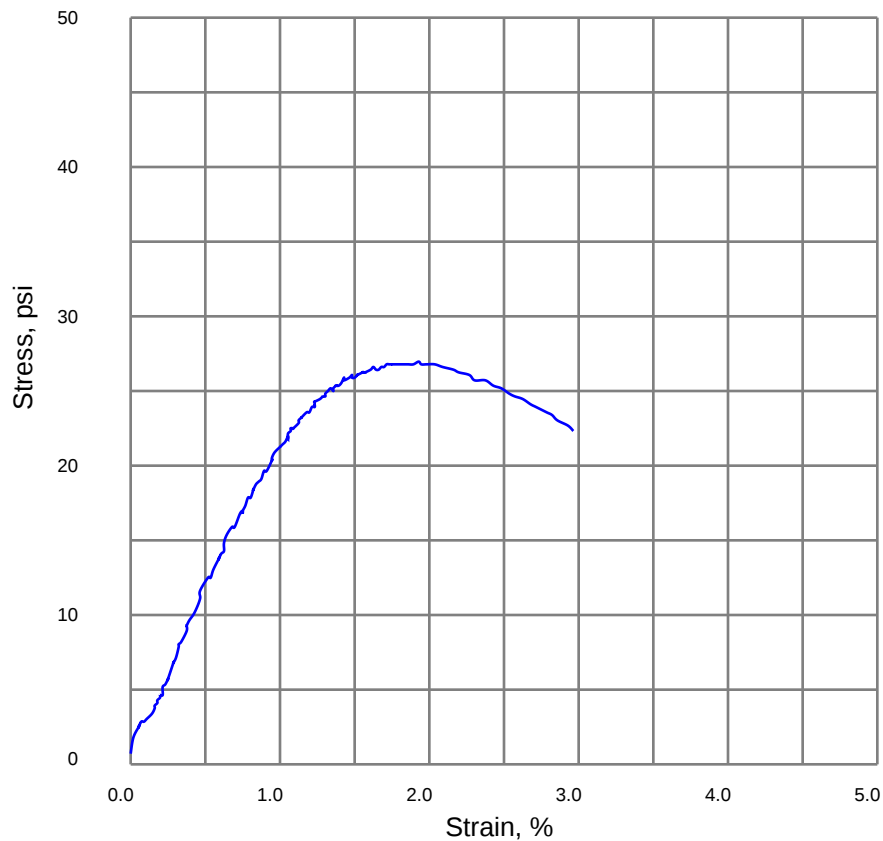
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-6PC 7Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	3.9
Date Tested:	6/4/2025	Sample Moisture, %:	
Stress @ Failure, psi:	26.90	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.92	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.6
		Max. Load lbf:	84.5
		at Displacement, in:	0.0750

Soil Type: 6%PC



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

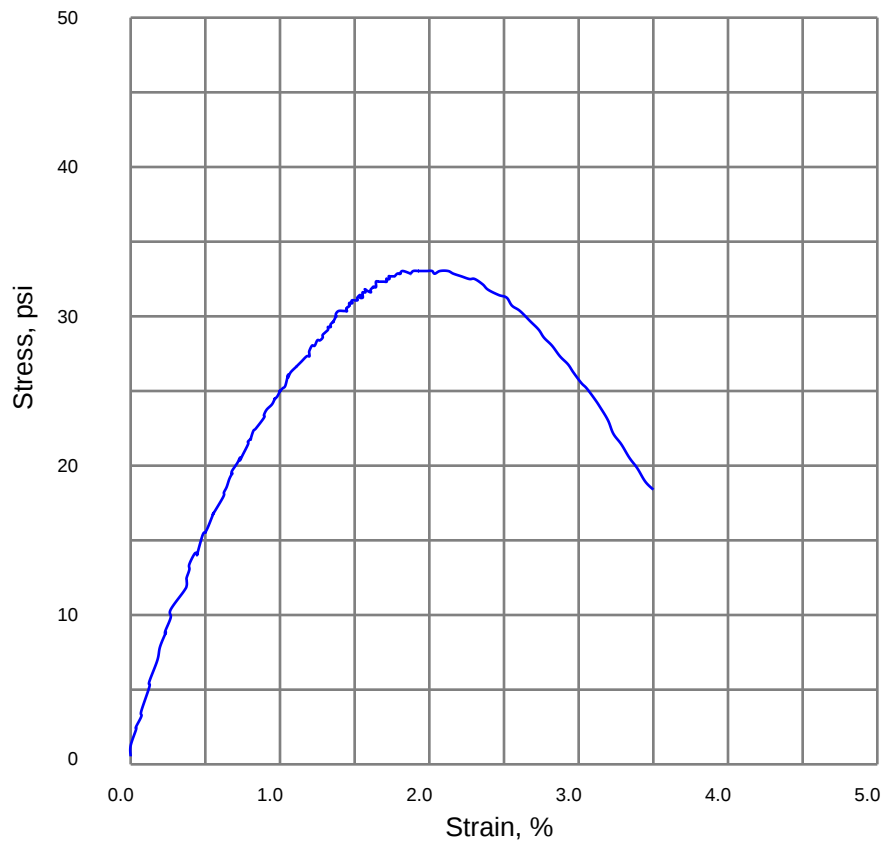
Client:

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-6PC 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/25/2025	Sample Moisture, %:	
Stress @ Failure, psi:	33.10	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.93	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.6
		Max. Load lbf:	104.0
		at Displacement, in:	0.0773

Soil Type: 6%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

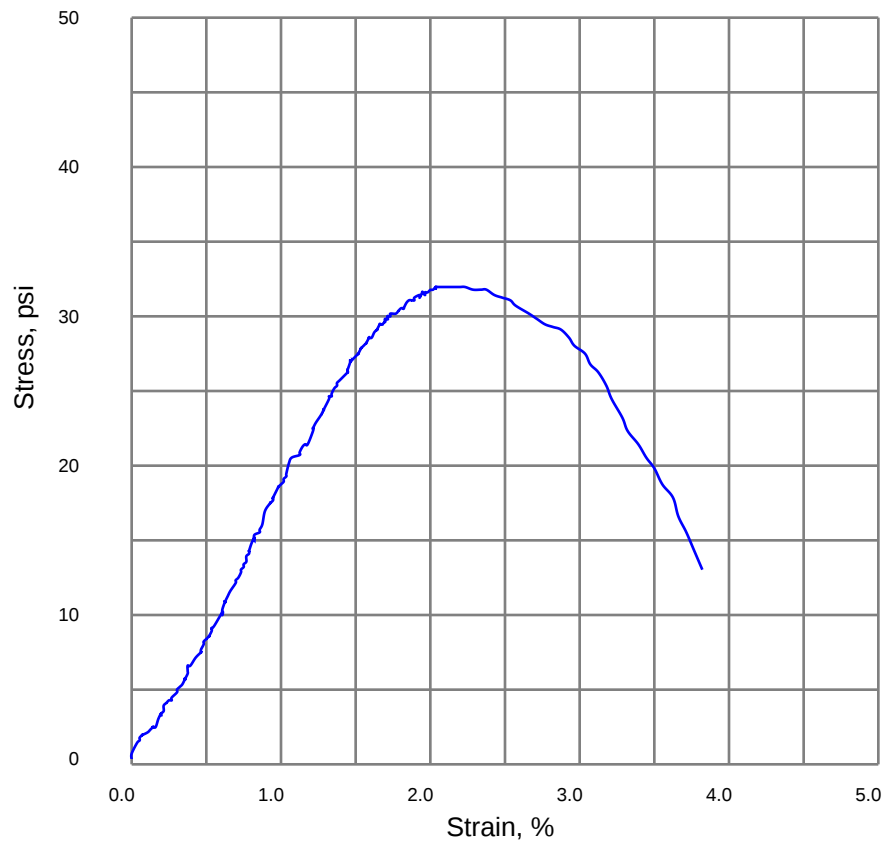
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

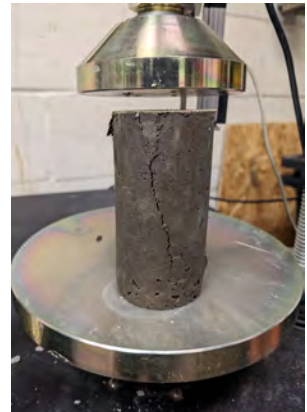
ASTM D-2166

Boring No:	S1-6PC 28Day (2)	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	32.05	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.09	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.5
		Max. Load lbf:	100.7
		at Displacement, in:	0.0837

Soil Type: 6%PC (2)



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

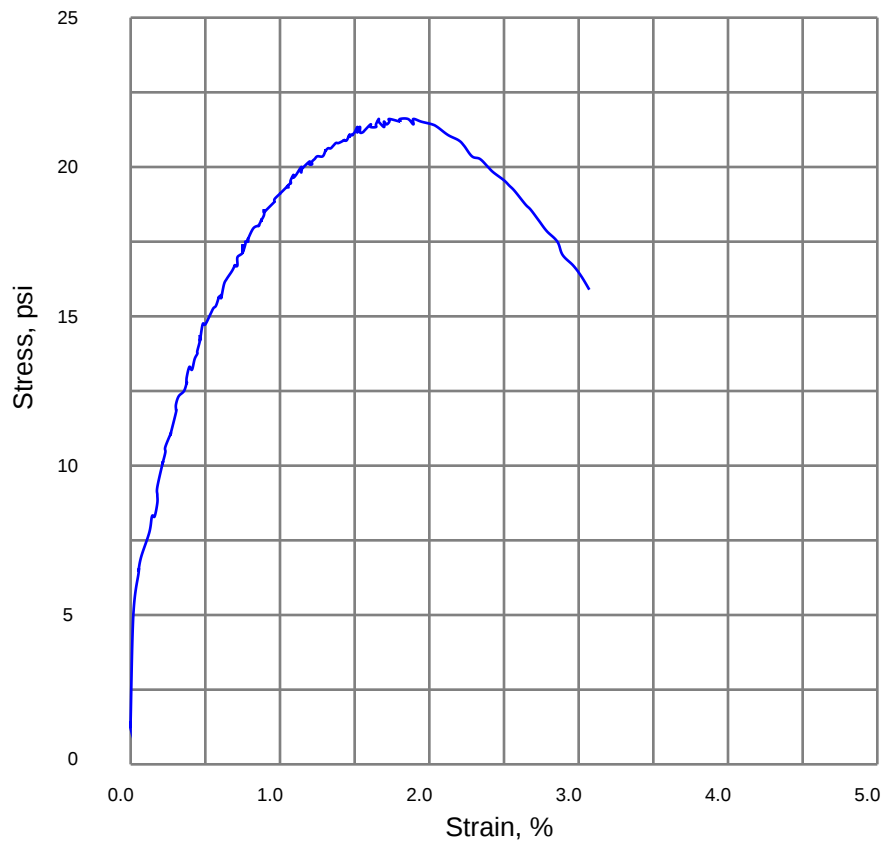
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-3PC-3BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	3.9
Date Tested:	6/4/2025	Sample Moisture, %:	
Stress @ Failure, psi:	21.65	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.85	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.6
		Max. Load lbf:	68.0
		at Displacement, in:	0.0721

Soil Type: 3%PC 3%BFS



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

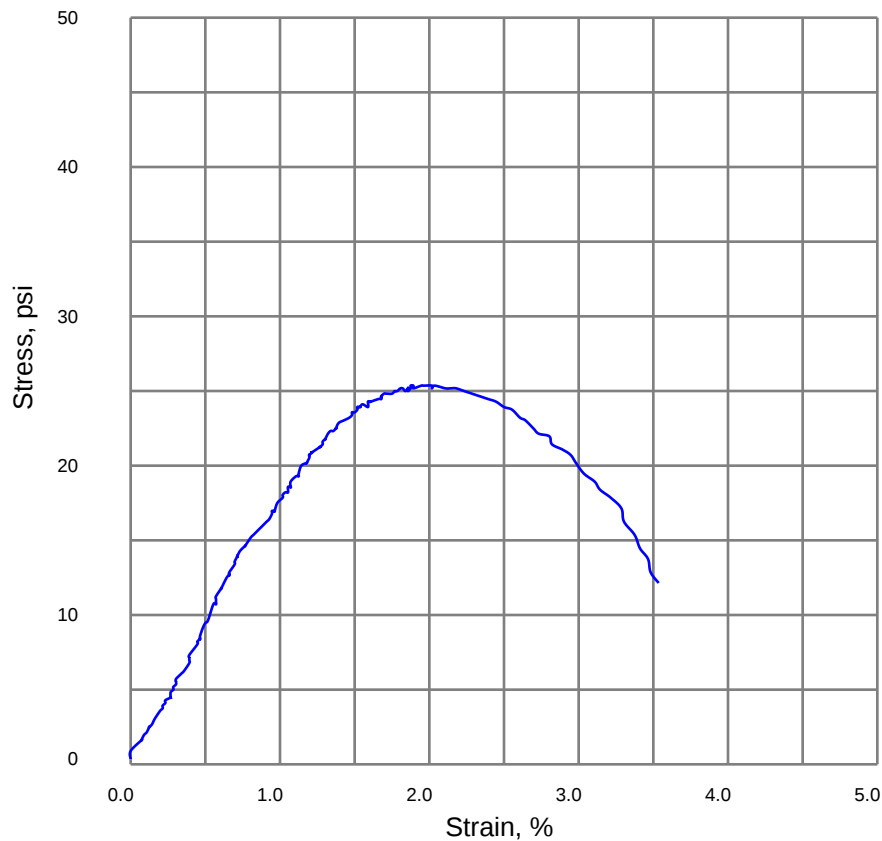
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

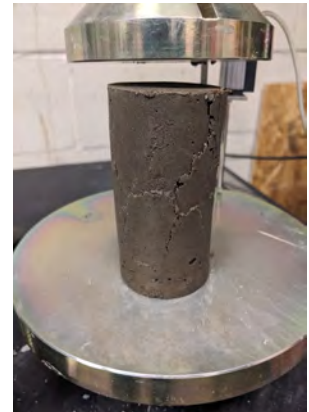
ASTM D-2166

Boring No:	S1-3PC-3BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/25/2025	Sample Moisture, %:	
Stress @ Failure, psi:	25.37	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.94	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.6
		Max. Load lbf:	79.7
		at Displacement, in:	0.0774

Soil Type: 3%PC 3%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

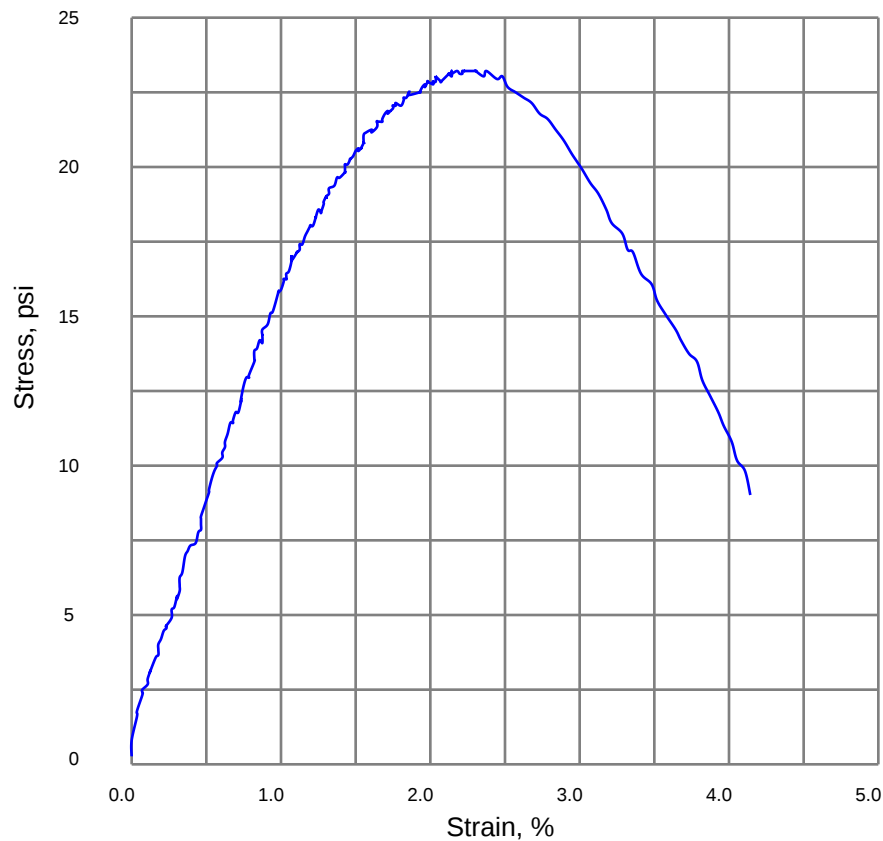
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-3PC-3BFS 28Day (2)	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	23.24	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.31	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.6
		Max. Load lbf:	73.0
		at Displacement, in:	0.0923

Soil Type: 3%PC 3%BFS (2)



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

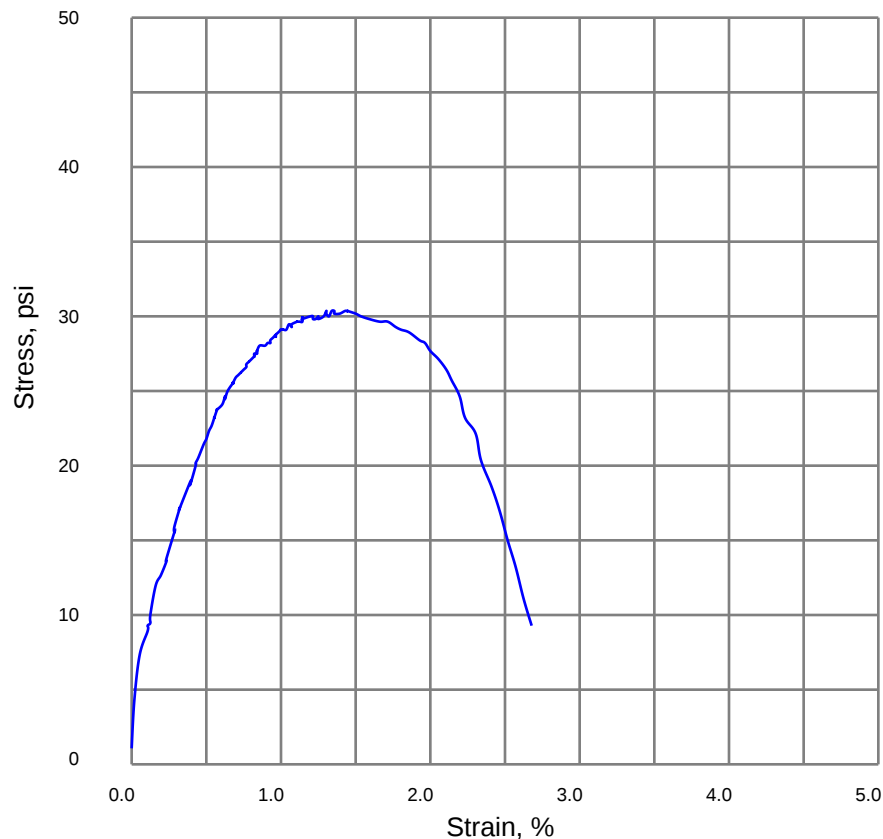
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-2PC-4BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/4/2025	Sample Moisture, %:	
Stress @ Failure, psi:	30.40	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.44	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.7
		Max. Load lbf:	95.5
		at Displacement, in:	0.0577

Soil Type: 3%PC 3%BFS



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

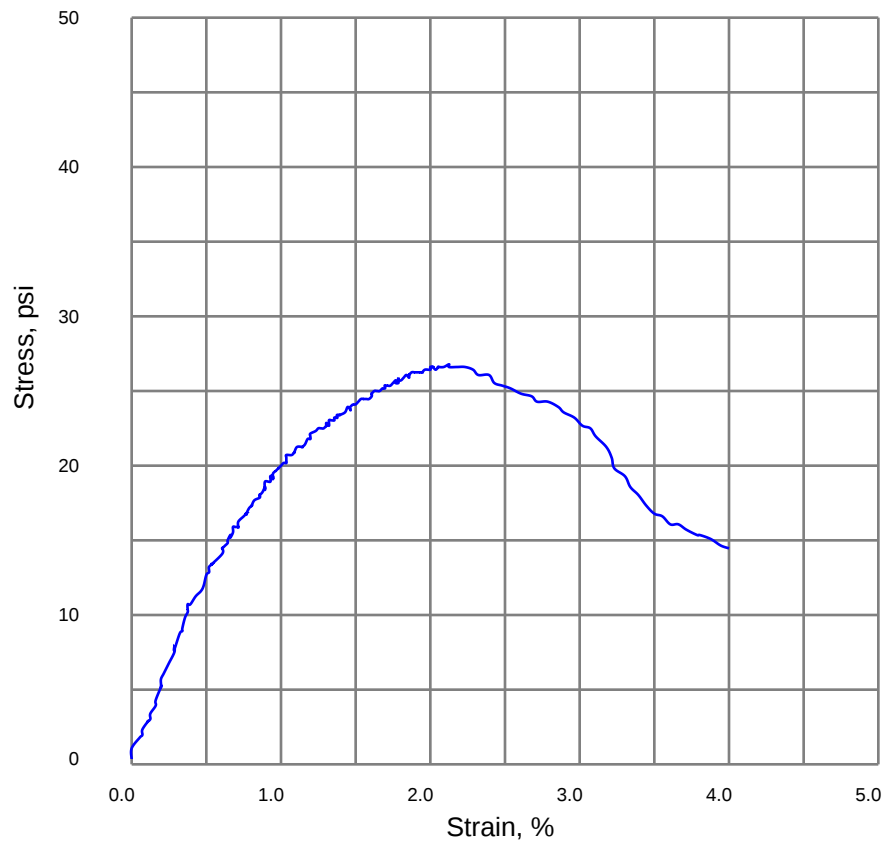
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-2PC-4BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/25/2025	Sample Moisture, %:	
Stress @ Failure, psi:	26.74	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.12	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.6
		Max. Load lbf:	84.0
		at Displacement, in:	0.0850

Soil Type: 2%PC 4%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

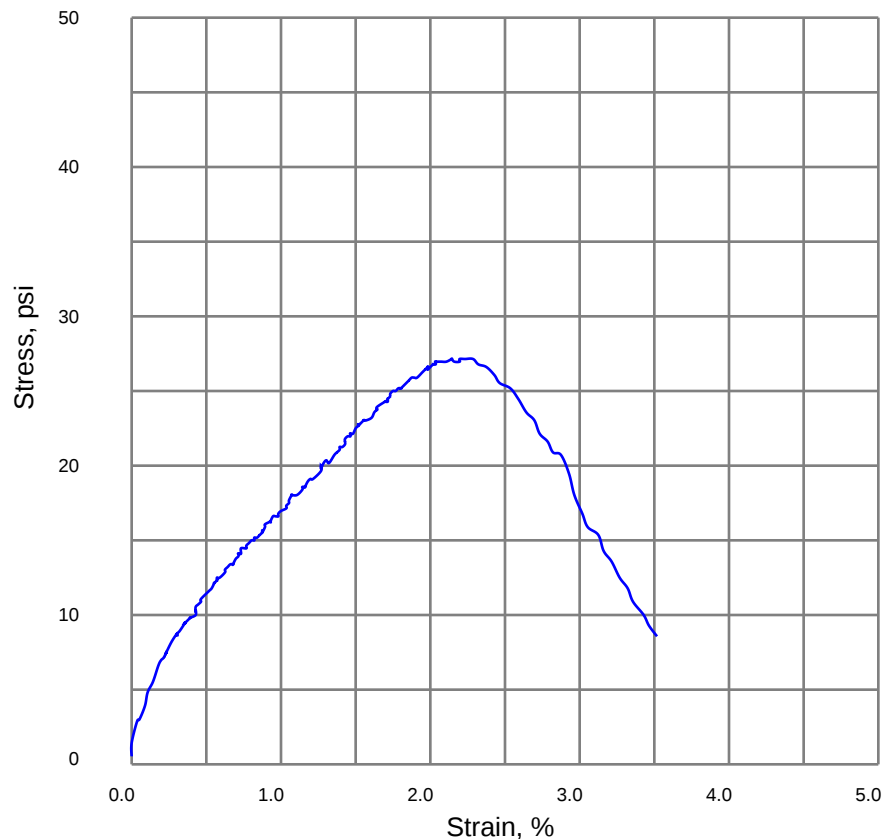
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-2PC-4BFS 28Day (2)	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	27.22	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.29	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.6
		Max. Load lbf:	85.5
		at Displacement, in:	0.0917

Soil Type: 2%PC 4%BFS (2)



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

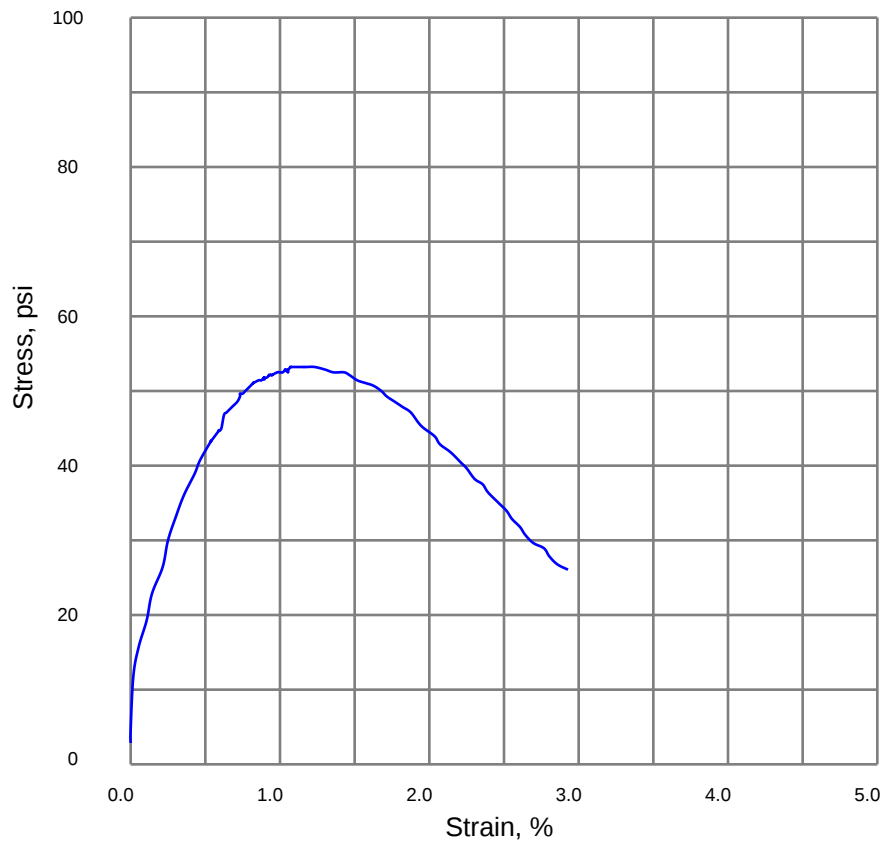
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-8PC 7Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/4/2025	Sample Moisture, %:	
Stress @ Failure, psi:	53.25	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.16	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	167.3
		at Displacement, in:	0.0463

Soil Type: 3%PC 3%BFS



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

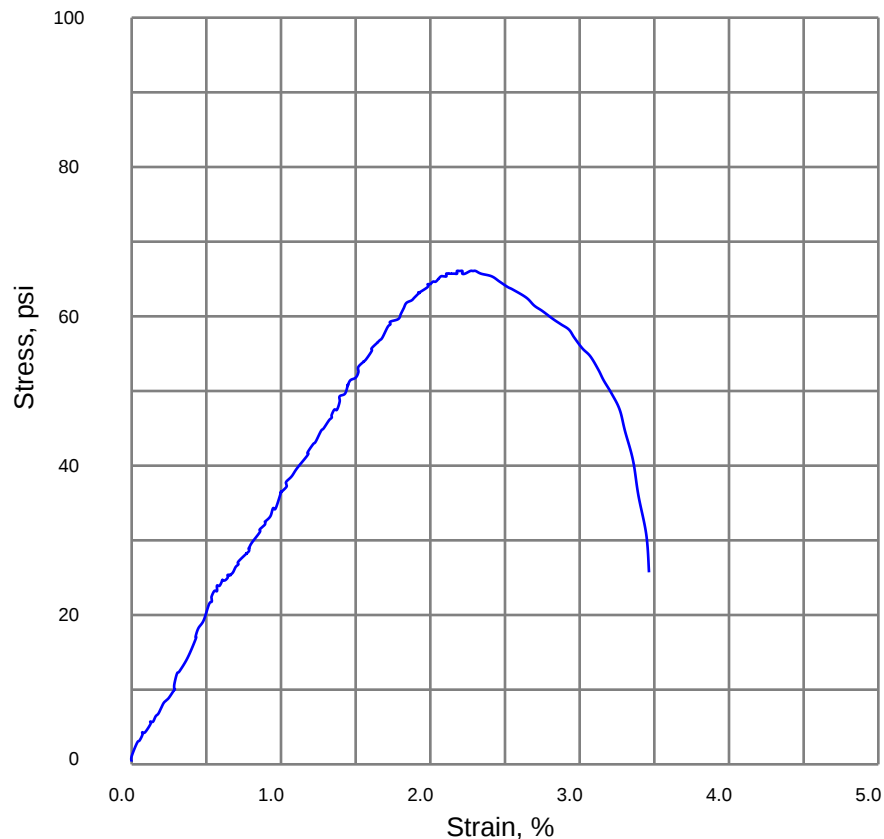
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-8PC 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/25/2025	Sample Moisture, %:	
Stress @ Failure, psi:	66.14	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.28	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.7
		Max. Load lbf:	207.8
		at Displacement, in:	0.0912

Soil Type: 8%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

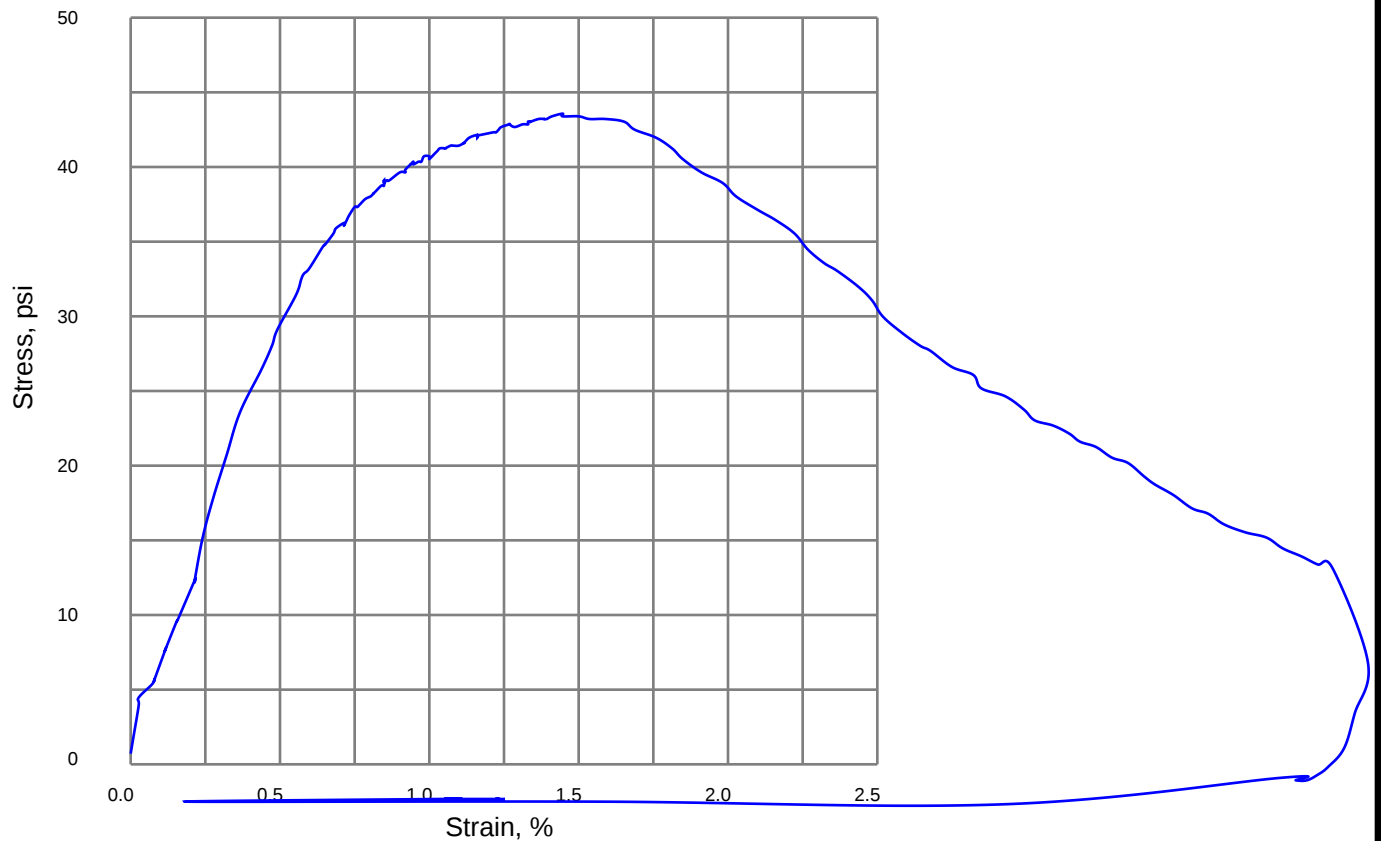
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-2PC-6BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	3.9
Date Tested:	6/4/2025	Sample Moisture, %:	
Stress @ Failure, psi:	43.58	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.45	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.1
		Max. Load lbf:	136.9
		at Displacement, in:	0.0564

Soil Type: 2%PC 6%BFS



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

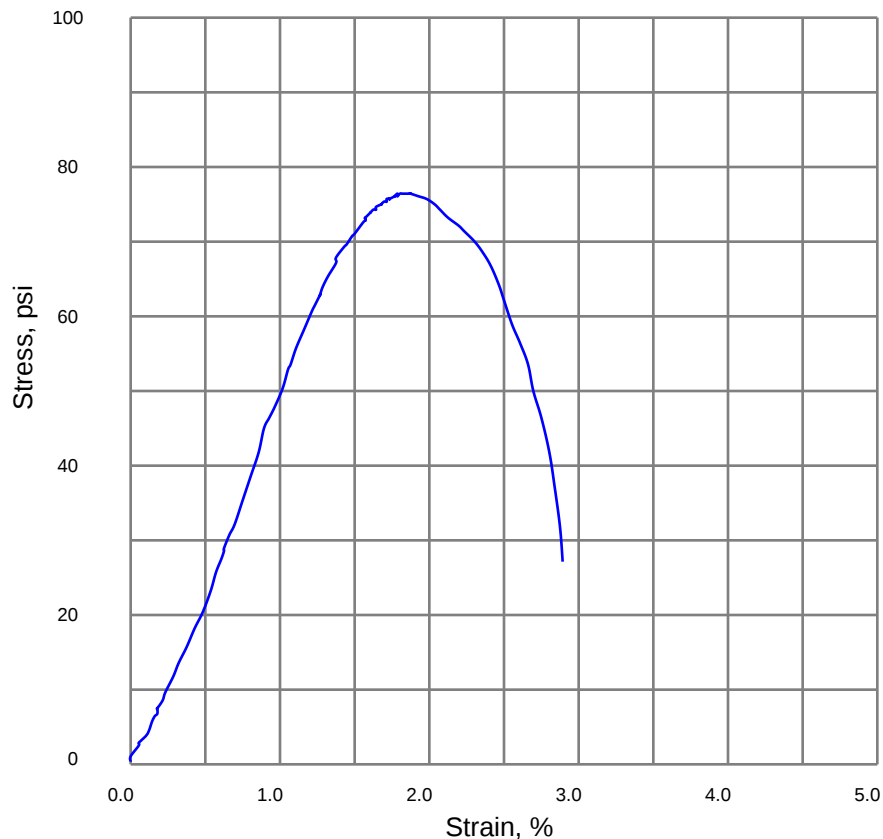
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-2PC-6BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/25/2025	Sample Moisture, %:	
Stress @ Failure, psi:	76.49	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.88	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.9
		Max. Load lbf:	240.3
		at Displacement, in:	0.0750

Soil Type: 2%PC 6%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

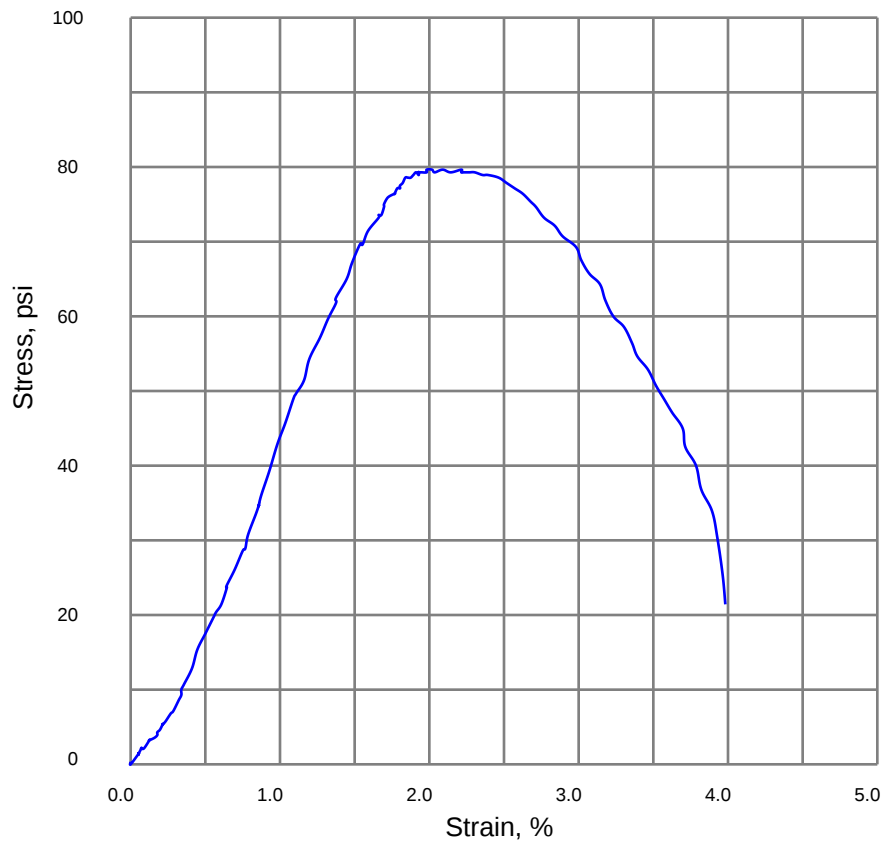
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-2PC-6BFS 28Day (2)	Sample Diameter, in:	2
Boring Depth, ft:	052825	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	79.61	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.09	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	250.1
		at Displacement, in:	0.0837

Soil Type: 2%PC 6%BFS (2)



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

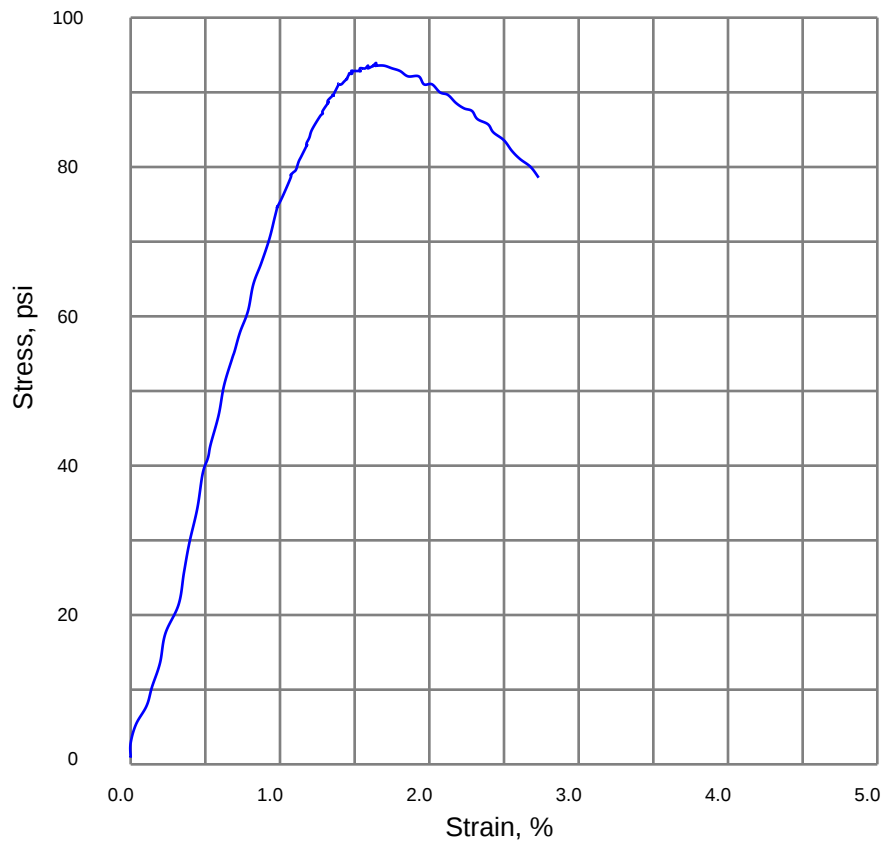
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-10PC 7Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	3.9
Date Tested:	6/6/2025	Sample Moisture, %:	
Stress @ Failure, psi:	93.84	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.64	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.9
		Max. Load lbf:	294.8
		at Displacement, in:	0.0639

Soil Type: 10%PC 0.0%BFS



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

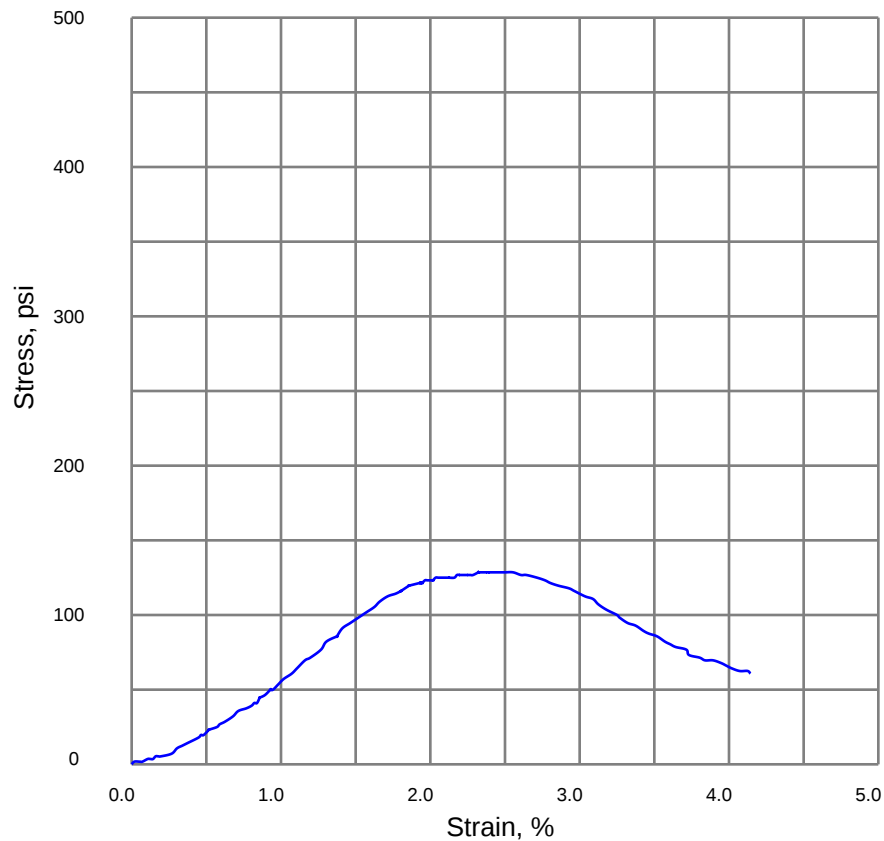
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-10PC 28Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	6/27/2025	Sample Moisture, %:	
Stress @ Failure, psi:	128.95	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.42	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	405.1
		at Displacement, in:	0.0967

Soil Type: 10%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

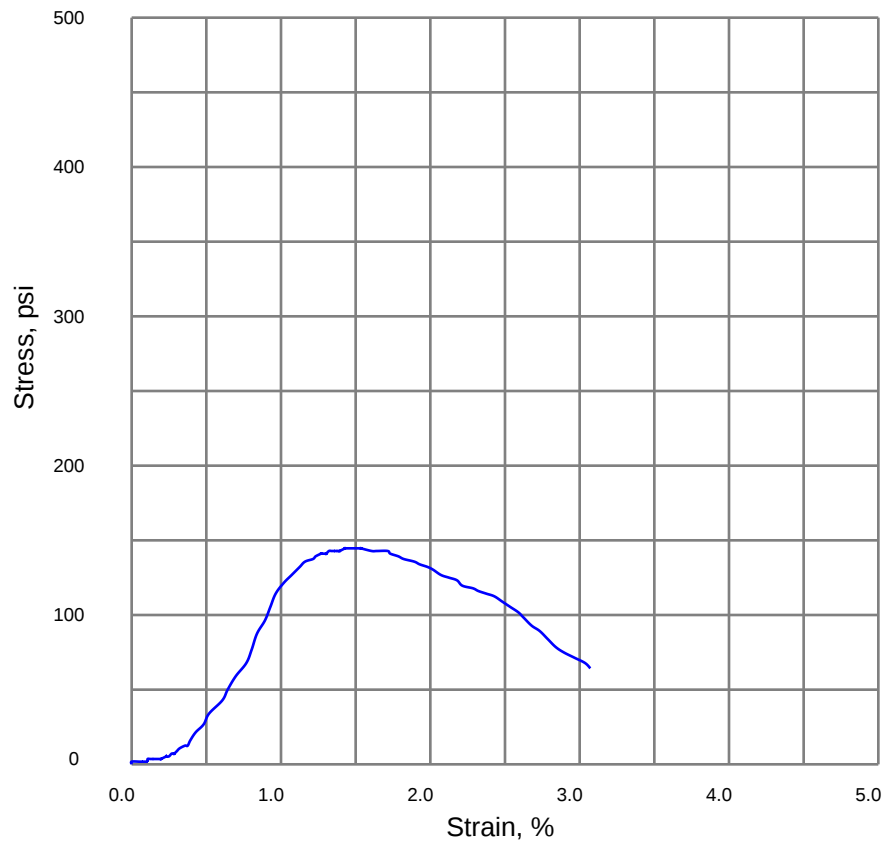
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-10PC 56Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	7/25/2025	Sample Moisture, %:	
Stress @ Failure, psi:	144.32	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.54	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	453.4
		at Displacement, in:	0.0618

Soil Type: 10%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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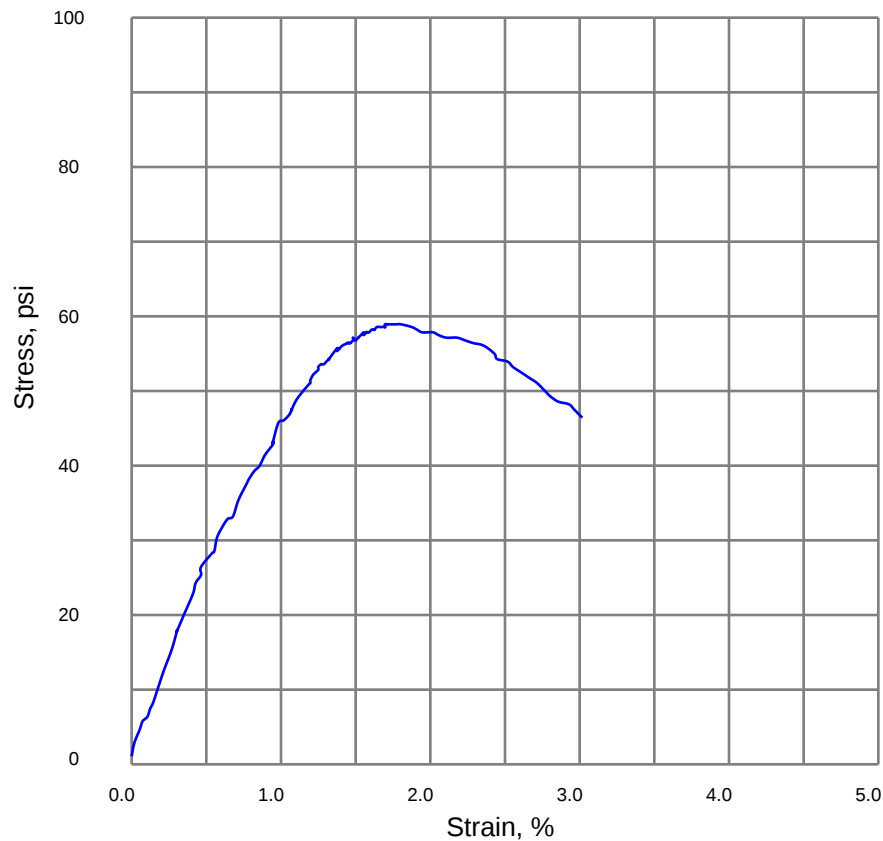
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-3PC-7BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	3.9
Date Tested:	6/6/2025	Sample Moisture, %:	
Stress @ Failure, psi:	58.95	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.74	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.8
		Max. Load lbf:	185.2
		at Displacement, in:	0.0678

Soil Type: 3%PC 7%BFS



Equipment: KW HM-398/6572 Readout

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Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

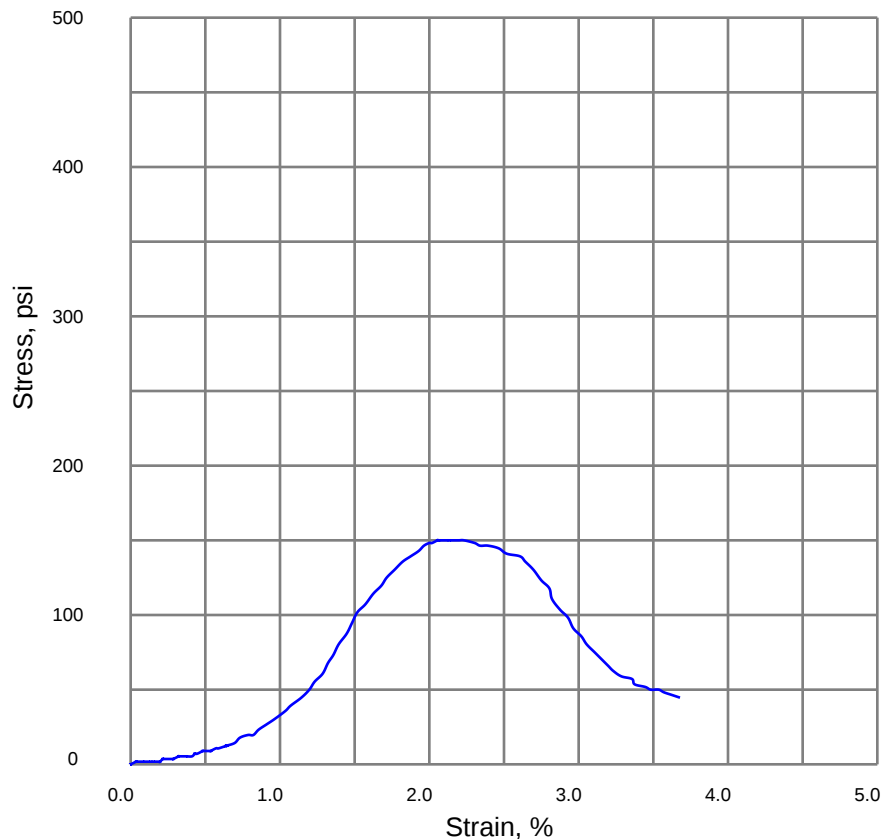
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-3PC-7BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	6/27/2025	Sample Moisture, %:	
Stress @ Failure, psi:	150.69	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.15	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	473.4
		at Displacement, in:	0.0860

Soil Type: 3%PC 7%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

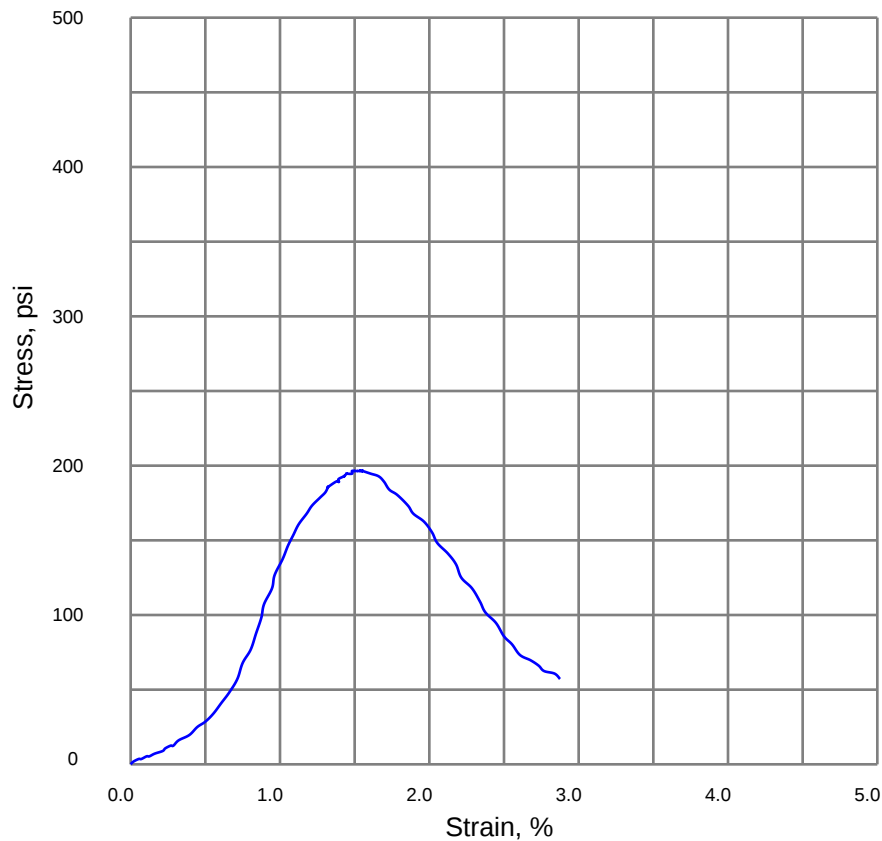
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S1-3PC-7BFS 56Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	7/25/2025	Sample Moisture, %:	
Stress @ Failure, psi:	197.29	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.56	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.1
		Max. Load lbf:	619.8
		at Displacement, in:	0.0622

Soil Type: 3%PC 7% BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

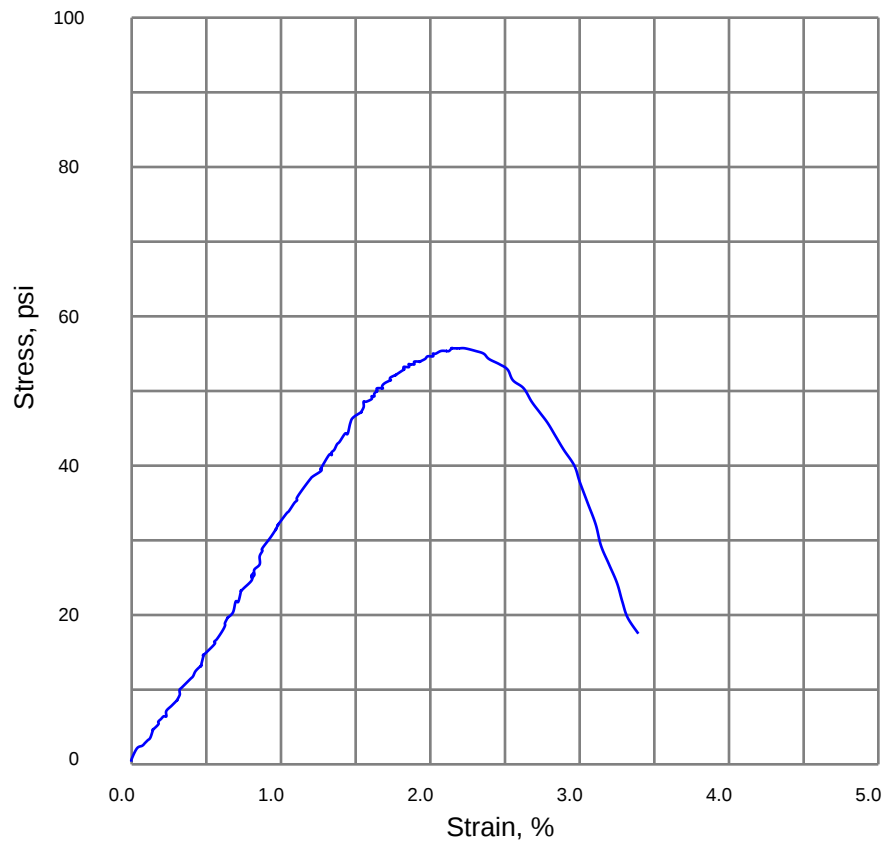
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-2PC-2BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	55.74	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.20	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.7
		Max. Load lbf:	175.1
		at Displacement, in:	0.0881

Soil Type: 2%PC 2%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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Gibsonia, PA 15044

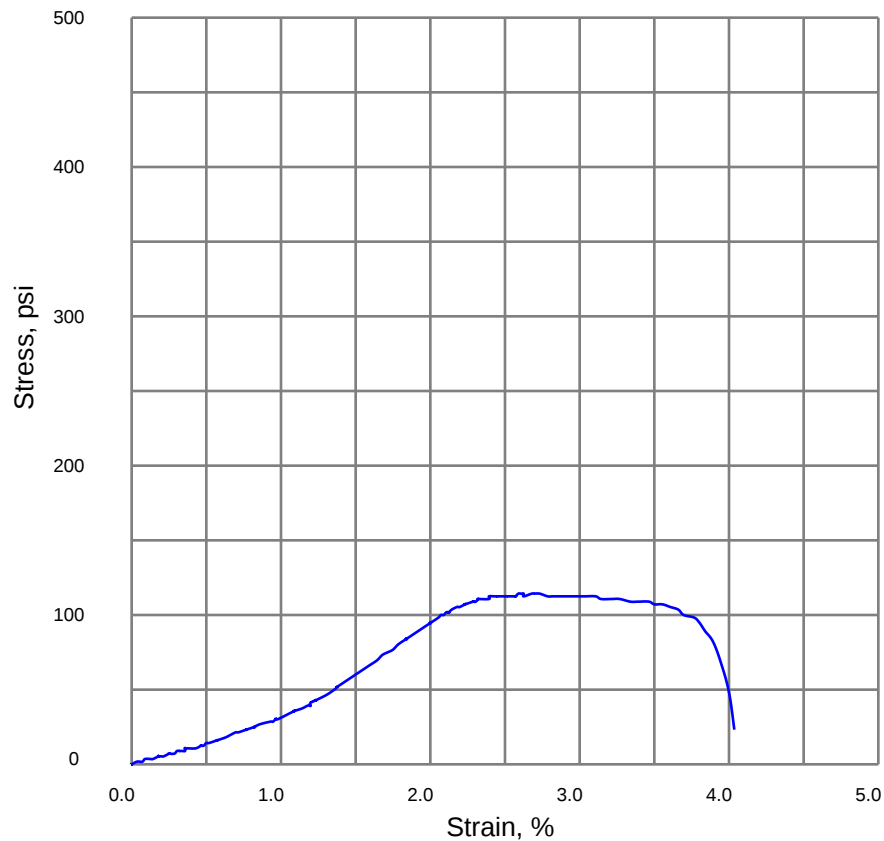
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-6PC 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	113.67	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.70	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.9
		Max. Load lbf:	357.1
		at Displacement, in:	0.1080

Soil Type: 6%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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Gibsonia, PA 15044

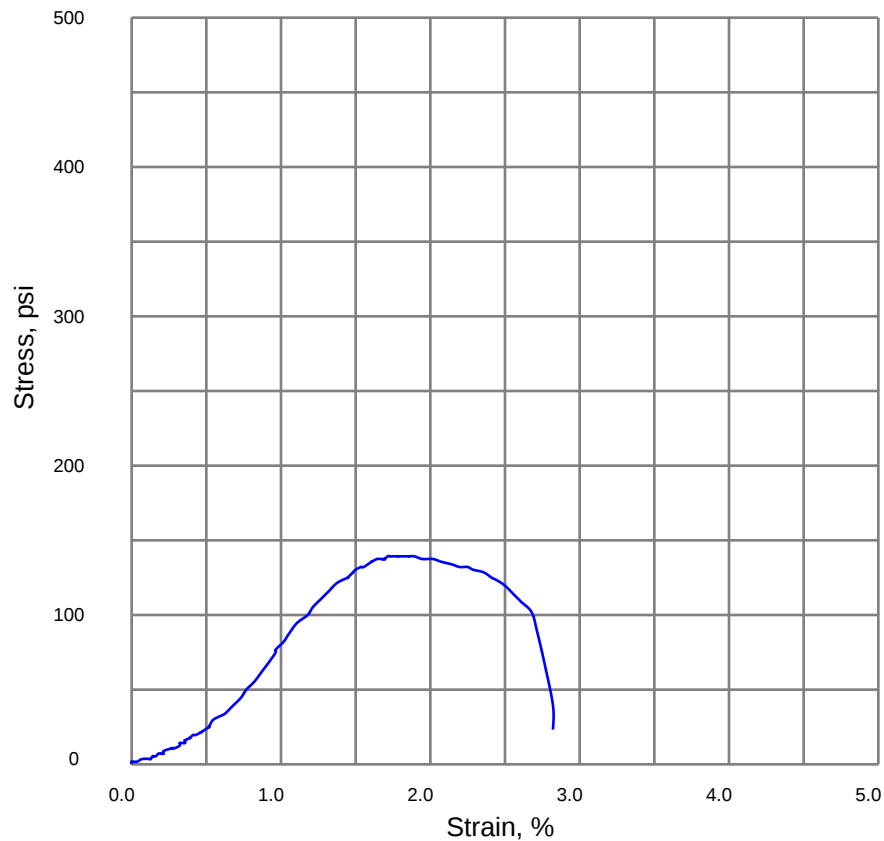
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-3PC-3BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	139.39	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.86	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.9
		Max. Load lbf:	437.9
		at Displacement, in:	0.0744

Soil Type: 3%PC 3%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

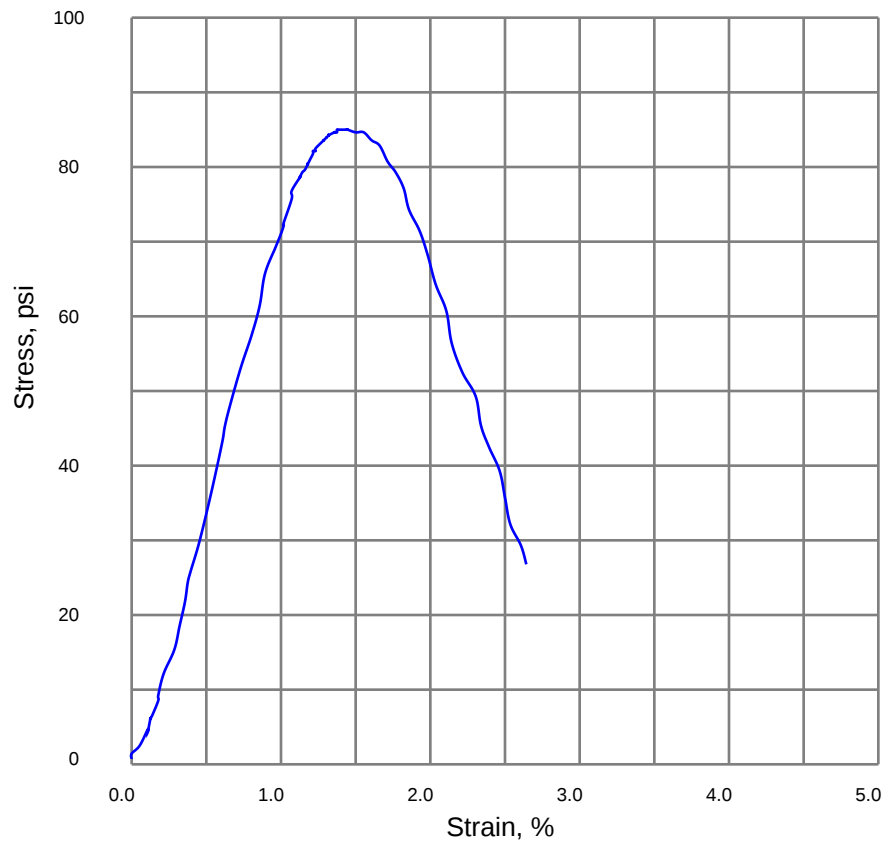
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-2PC-4BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	84.89	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.45	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	266.7
		at Displacement, in:	0.0580

Soil Type: 2%PC 4%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

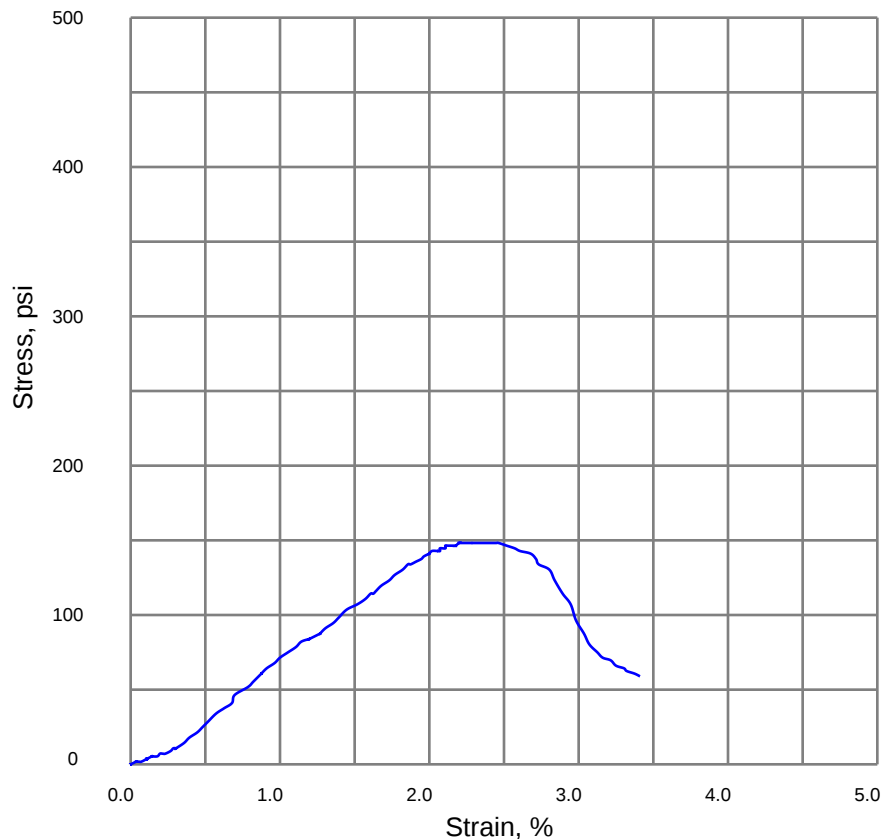
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-8PC 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	148.40	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.45	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.9
		Max. Load lbf:	466.2
		at Displacement, in:	0.0979

Soil Type: 8%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

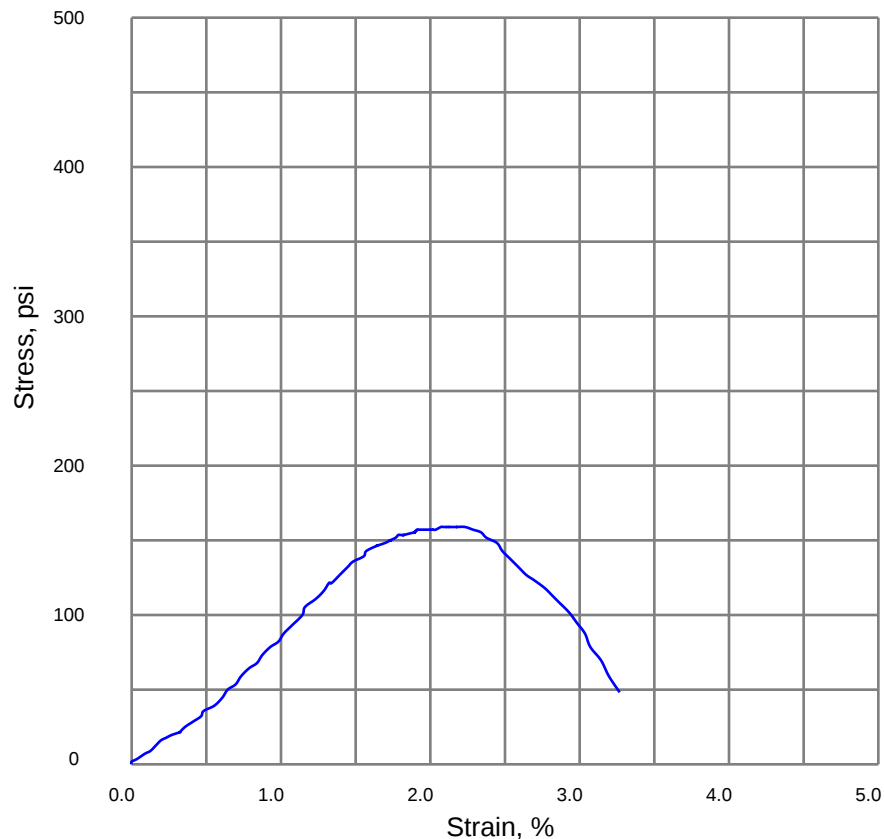
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-2PC-6BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	159.15	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.16	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.1
		Max. Load lbf:	500.0
		at Displacement, in:	0.0862

Soil Type: 2%PC 6%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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Gibsonia, PA 15044

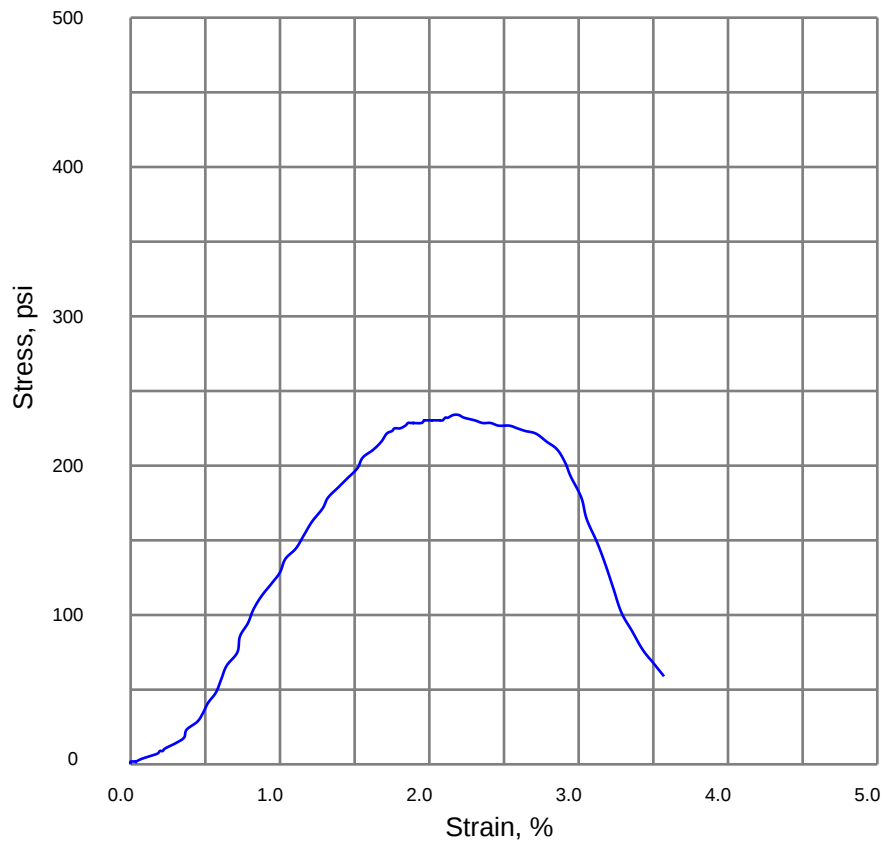
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-10PC 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	233.42	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.16	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.3
		Max. Load lbf:	733.3
		at Displacement, in:	0.0864

Soil Type: 10%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

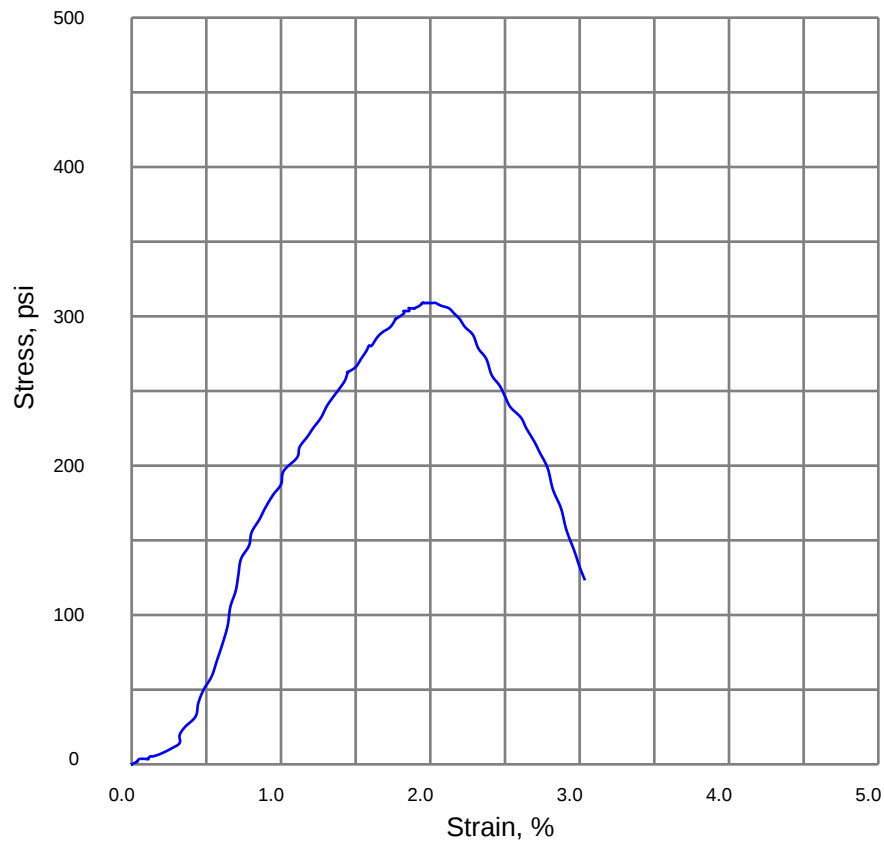
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-10PC 56Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	7/24/2025	Sample Moisture, %:	
Stress @ Failure, psi:	309.02	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.03	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	970.8
		at Displacement, in:	0.0812

Soil Type: 10%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

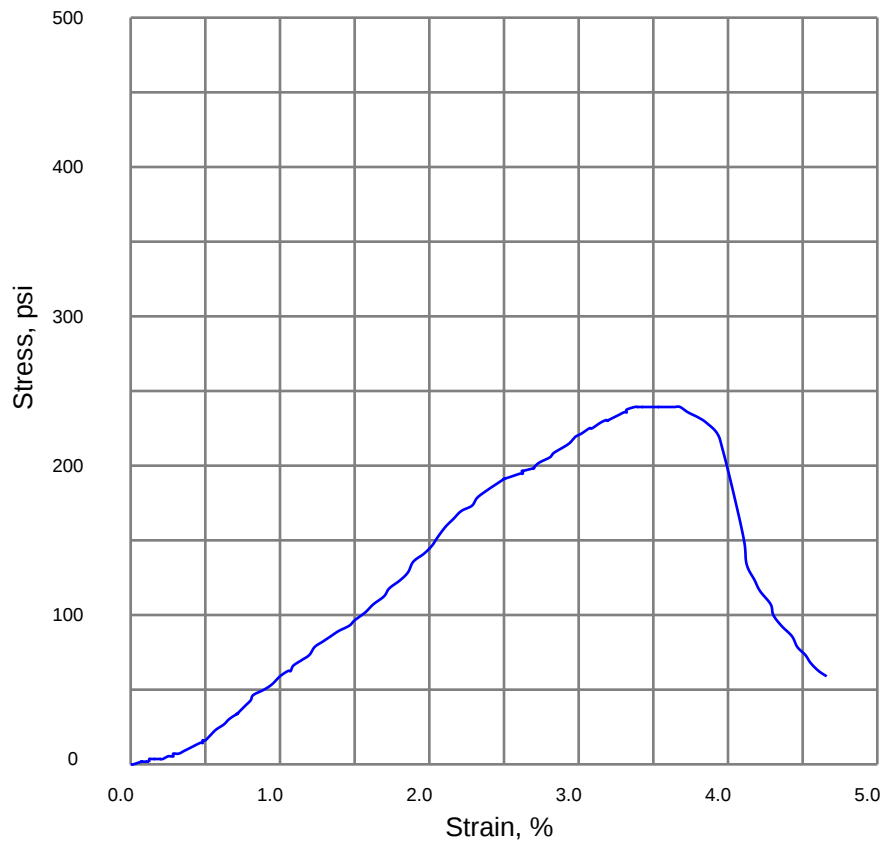
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

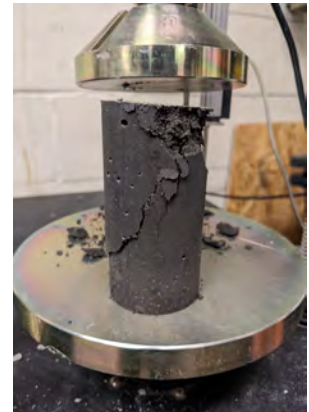
ASTM D-2166

Boring No:	S2-3PC-7BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	6/26/2025	Sample Moisture, %:	
Stress @ Failure, psi:	239.78	Sample Dry Density, pcf:	
Strain @ Failure, %:	3.64	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.1
		Max. Load lbf:	753.3
		at Displacement, in:	0.1454

Soil Type: 3%PC 7%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

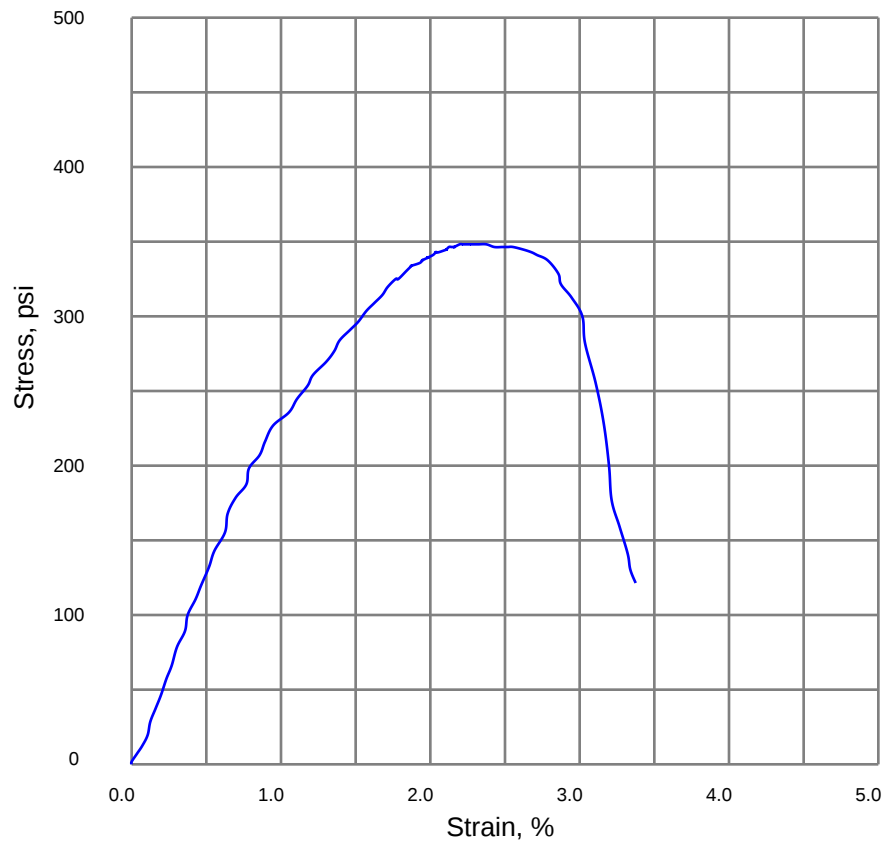
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

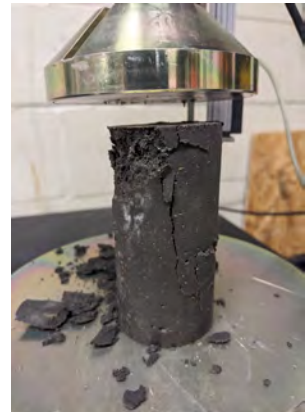
ASTM D-2166

Boring No:	S2-3PC-7BFS 56Day	Sample Diameter, in:	2
Boring Depth, ft:	052925	Sample Height, in:	4
Date Tested:	7/24/2025	Sample Moisture, %:	
Stress @ Failure, psi:	349.09	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.27	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.1
		Max. Load lbf:	1096.7
		at Displacement, in:	0.0909

Soil Type: 3%PC 7%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

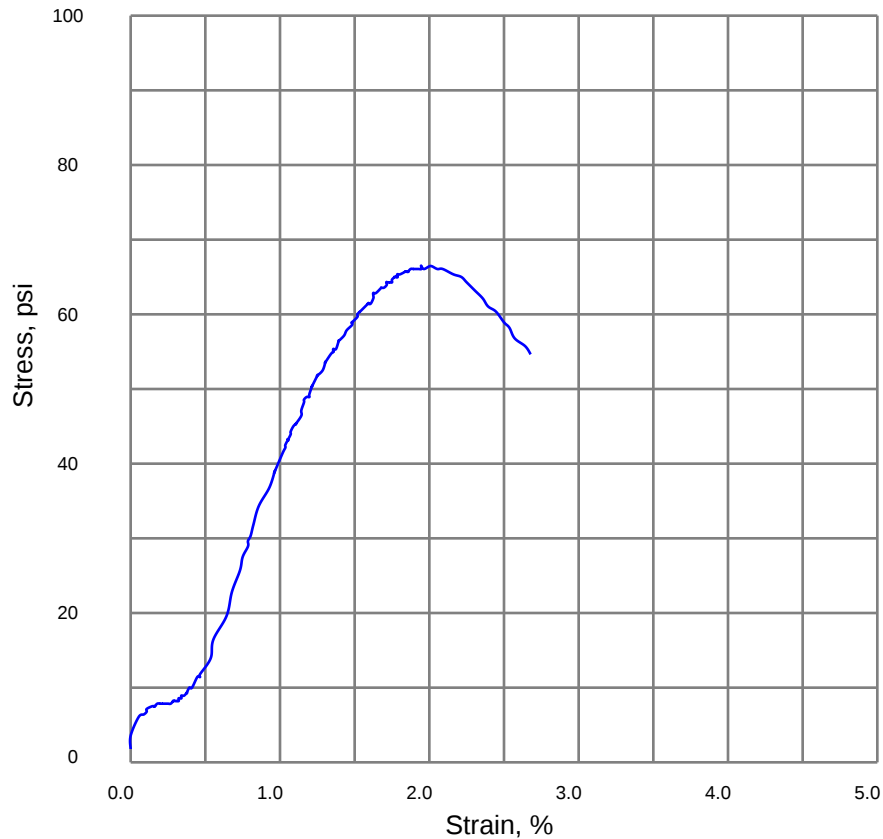
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-2PC-V-4BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	6/6/2025	Sample Moisture, %:	
Stress @ Failure, psi:	66.43	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.01	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.6
		Max. Load lbf:	208.7
		at Displacement, in:	0.0803

Soil Type: 2%PC 4%BFS



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

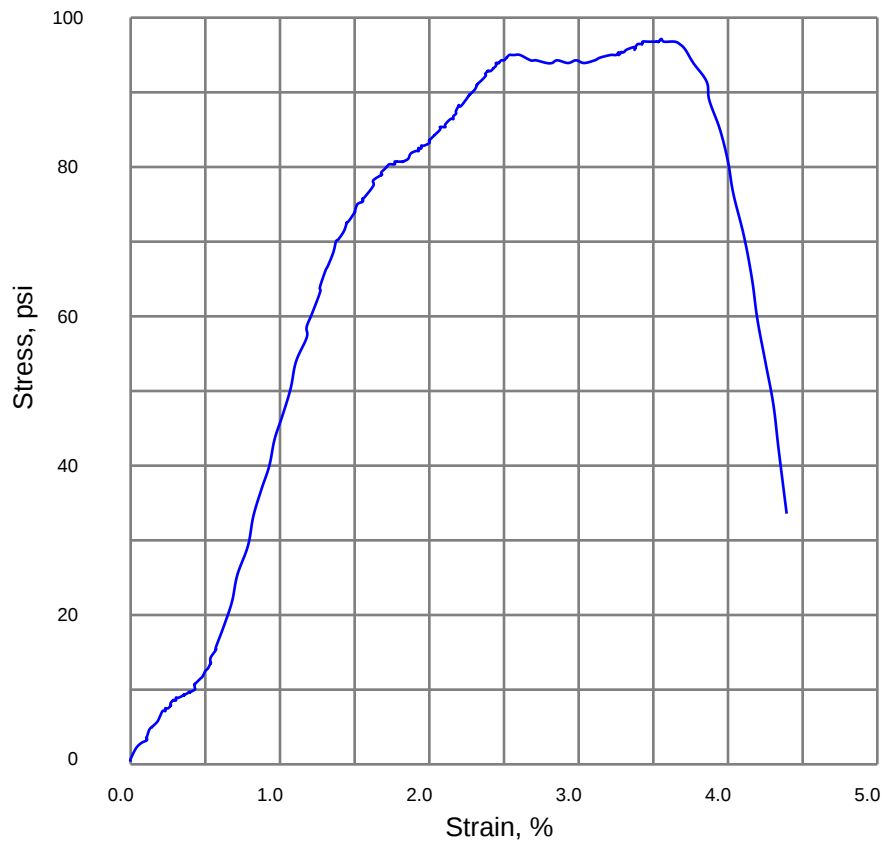
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-2PC-V-4BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	6/27/2025	Sample Moisture, %:	
Stress @ Failure, psi:	97.05	Sample Dry Density, pcf:	
Strain @ Failure, %:	3.56	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.7
		Max. Load lbf:	304.9
		at Displacement, in:	0.1424

Soil Type: 2% Type V PC 4%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

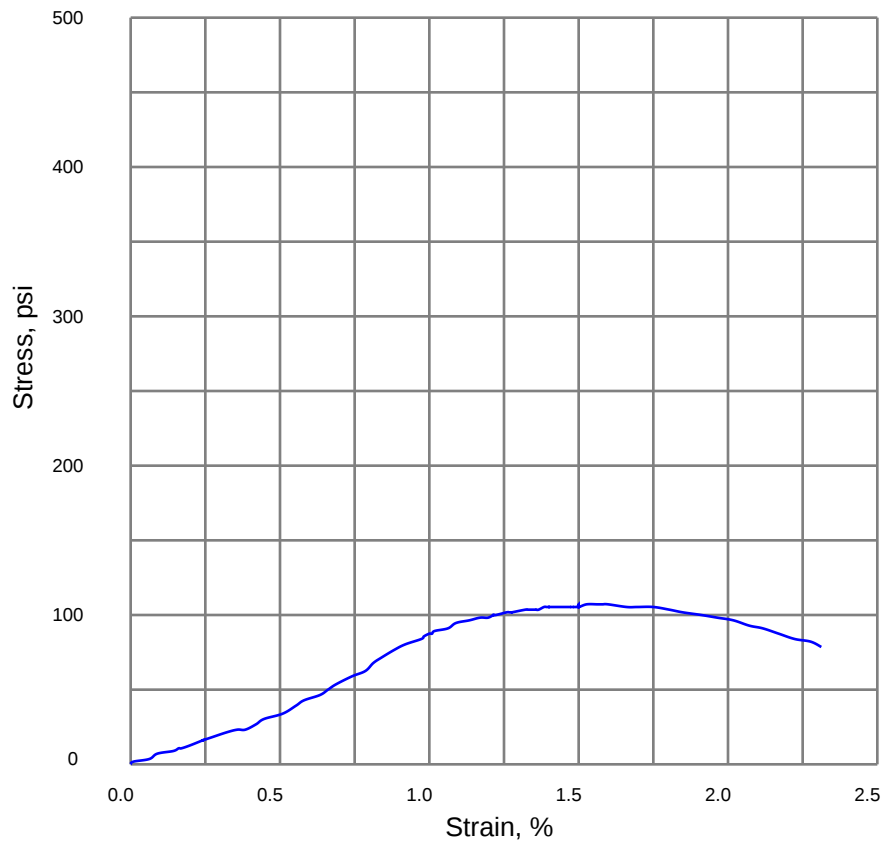
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-2PC-V-6BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	6/6/2025	Sample Moisture, %:	
Stress @ Failure, psi:	106.35	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.60	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.8
		Max. Load lbf:	334.1
		at Displacement, in:	0.0642

Soil Type: 2%PC 6%BFS



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

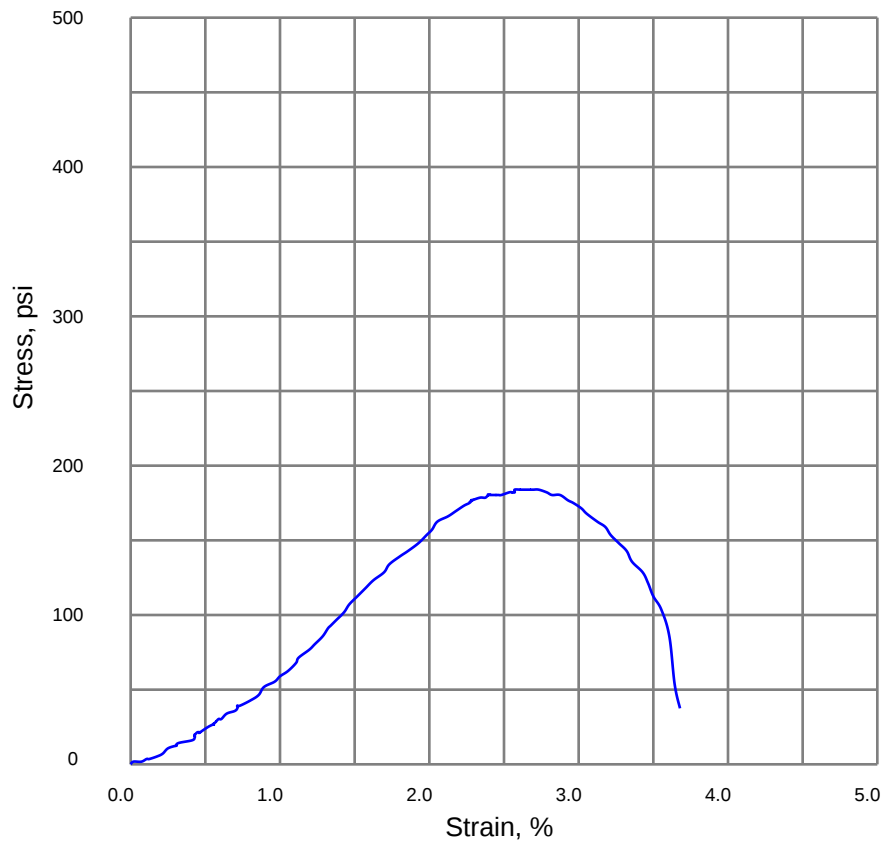
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-2PC-V-6BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	6/27/2025	Sample Moisture, %:	
Stress @ Failure, psi:	183.70	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.69	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	577.1
		at Displacement, in:	0.1076

Soil Type: 2% Type V PC 6%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

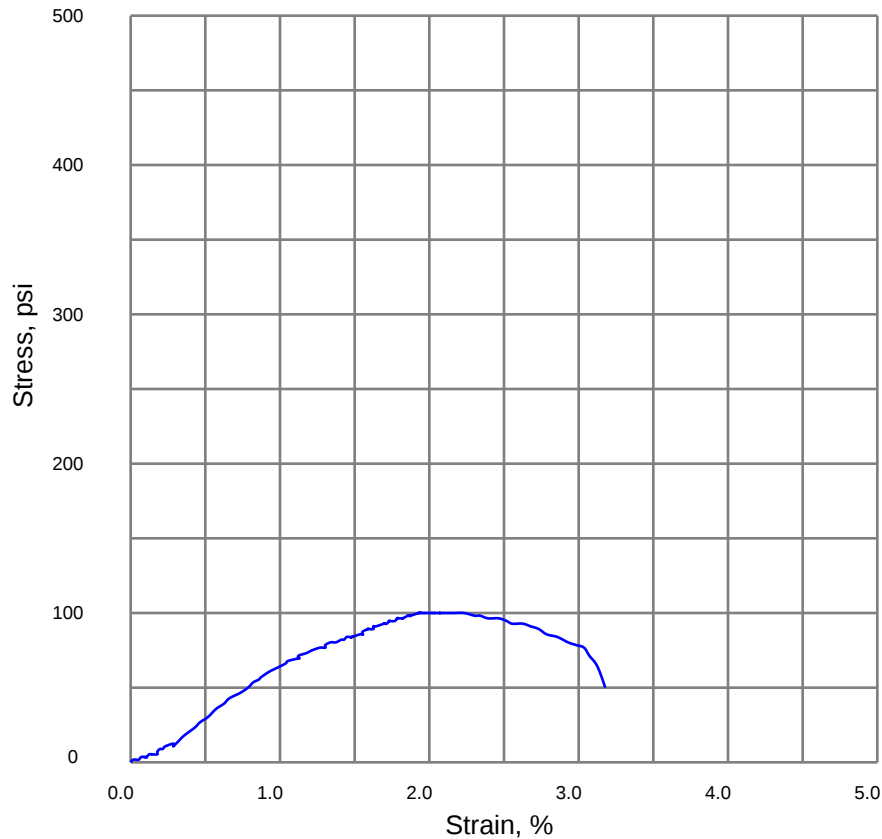
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-3PC-V-7BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	6/6/2025	Sample Moisture, %:	
Stress @ Failure, psi:	100.59	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.13	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.9
		Max. Load lbf:	316.0
		at Displacement, in:	0.0851

Soil Type: 3%PC 7%BFS



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier Aspect-ISS-Bench Scale

Project ID: E9447

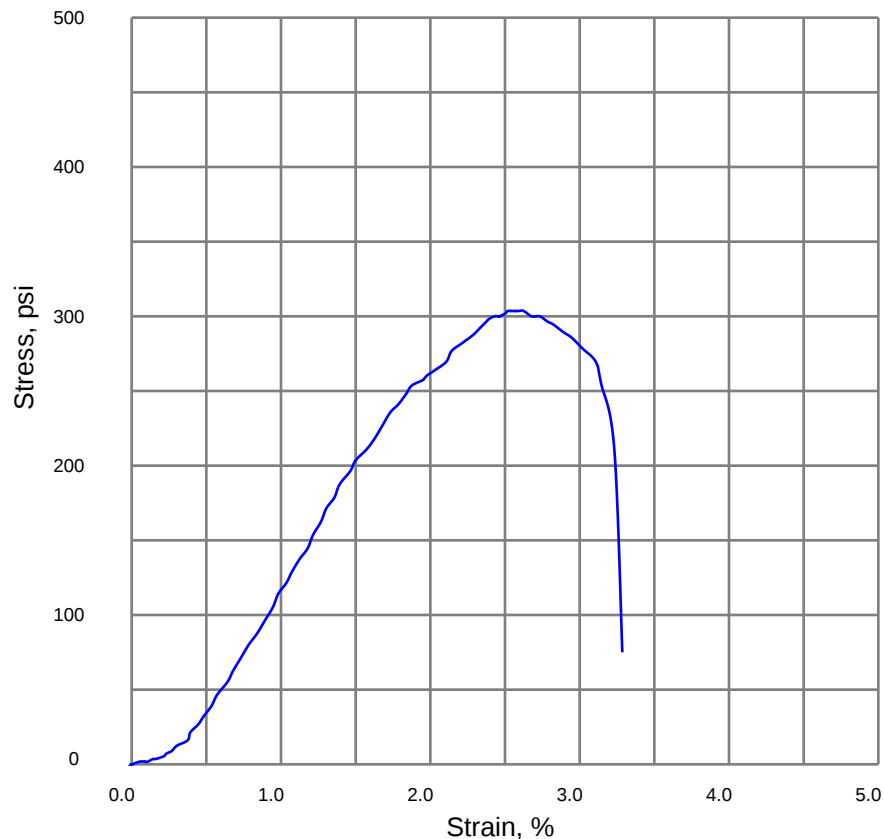
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S2-3PC-V-7BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	053025	Sample Height, in:	4
Date Tested:	6/27/2025	Sample Moisture, %:	
Stress @ Failure, psi:	303.76	Sample Dry Density, pcf:	
Strain @ Failure, %:	2.58	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.2
		Max. Load lbf:	954.3
		at Displacement, in:	0.1033

Soil Type: 3% Type V PC 7%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

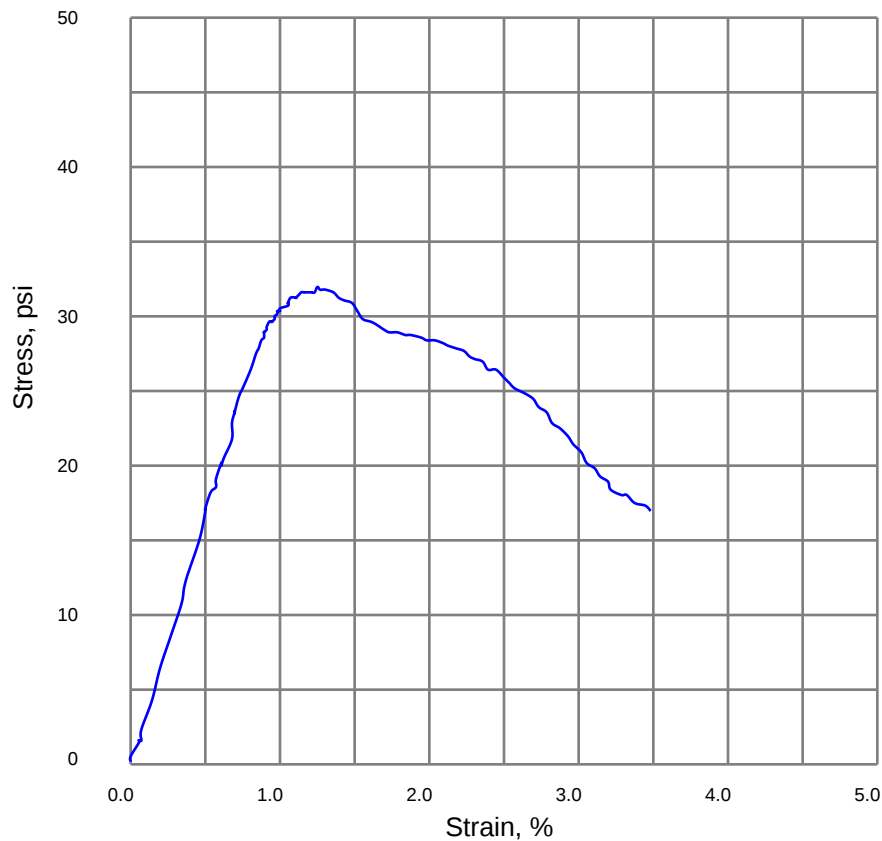
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S3-4.5PC-10.5BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	06232025	Sample Height, in:	4
Date Tested:	6/30/2025	Sample Moisture, %:	
Stress @ Failure, psi:	31.99	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.25	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	0.9
		Max. Load lbf:	100.5
		at Displacement, in:	0.0500

Soil Type: 4.5%PC 10.5%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

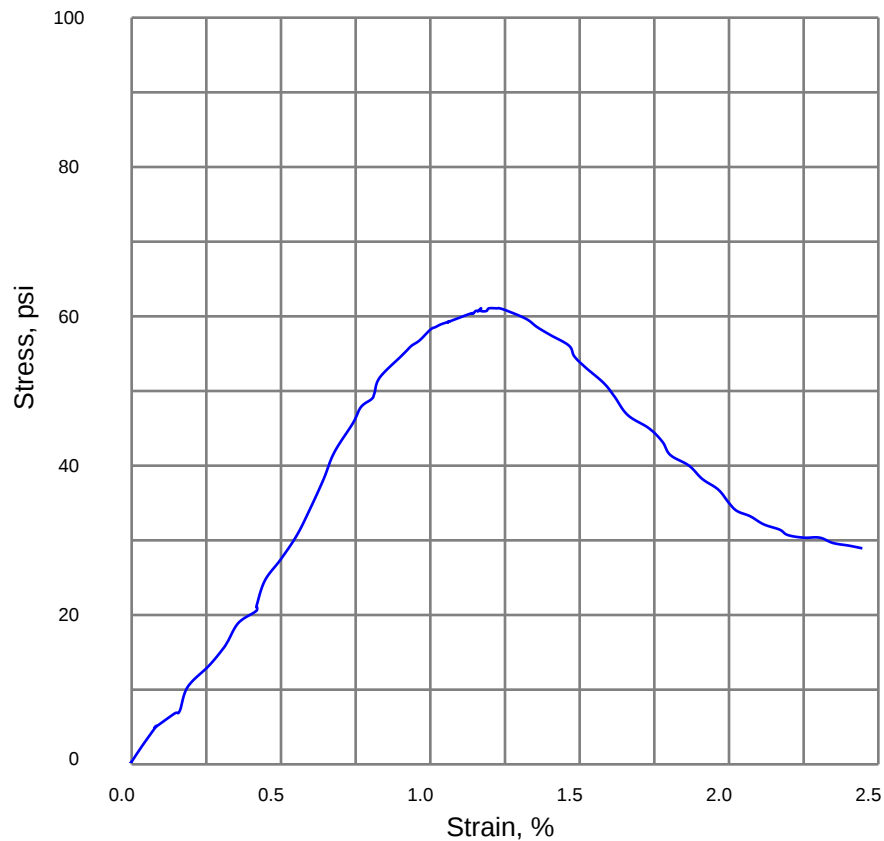
Project: Glacier Aspect-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S3-4.5PC-10.5BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	06232025	Sample Height, in:	4
Date Tested:	7/21/2025	Sample Moisture, %:	
Stress @ Failure, psi:	61.08	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.22	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	191.9
		at Displacement, in:	0.0490

Soil Type: 4.5%PC 10.5%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

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2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

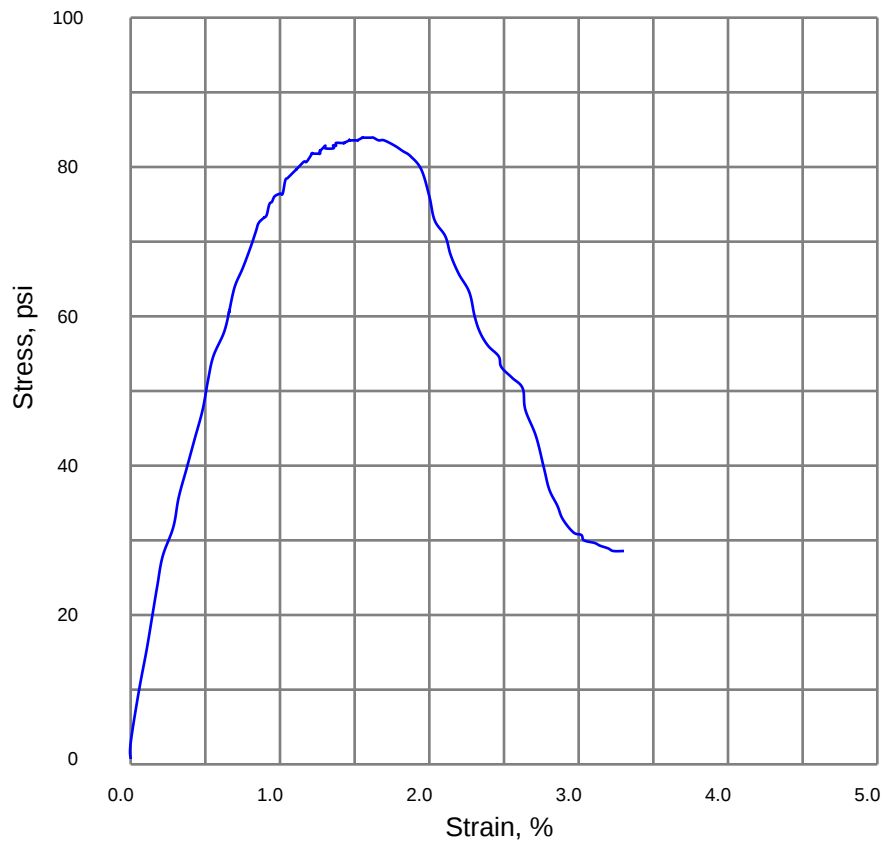
Project: Glacier NW-ISS-Bench Scale
Project ID: E9447
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

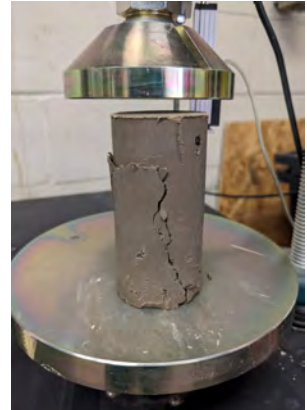
ASTM D-2166

Boring No:	S3-15PC 7Day	Sample Diameter, in:	2
Boring Depth, ft:	06232025	Sample Height, in:	4
Date Tested:	6/30/2025	Sample Moisture, %:	
Stress @ Failure, psi:	83.81	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.63	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.0
		Max. Load lbf:	263.3
		at Displacement, in:	0.0651

Soil Type: 15%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier NW-ISS-Bench Scale

Project ID: E9447

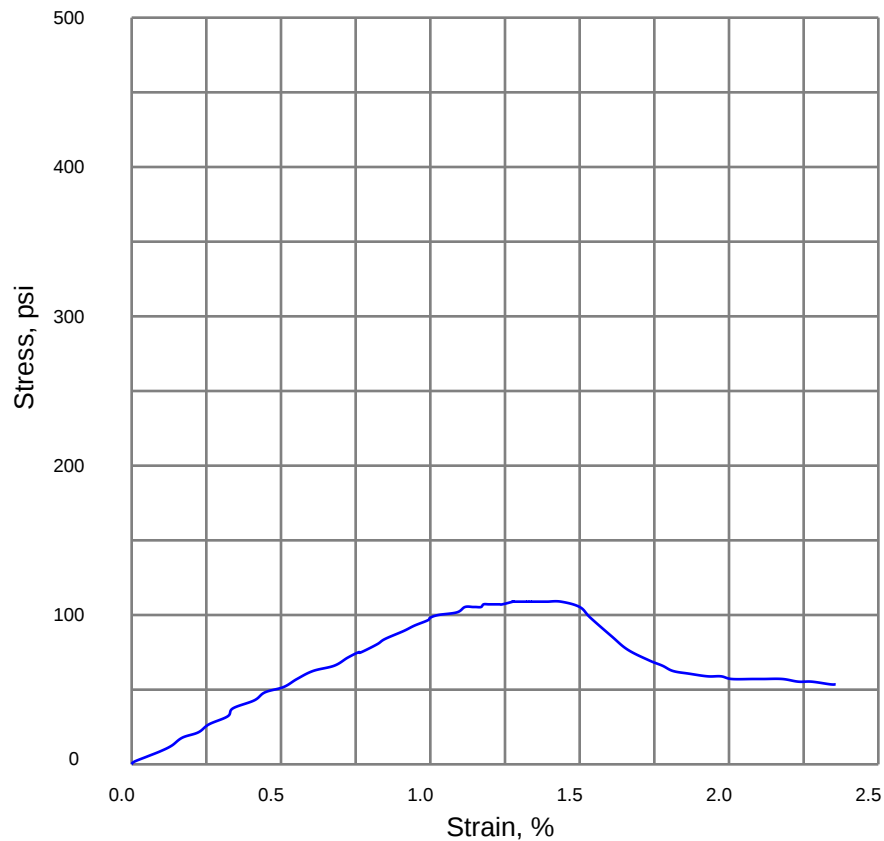
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S3-15PC 28Day (2)	Sample Diameter, in:	2
Boring Depth, ft:	06232025	Sample Height, in:	4
Date Tested:	7/21/2025	Sample Moisture, %:	
Stress @ Failure, psi:	109.24	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.38	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.1
		Max. Load lbf:	343.2
		at Displacement, in:	0.0552

Soil Type: 15% PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier NW-ISS-Bench Scale

Project ID: E9447

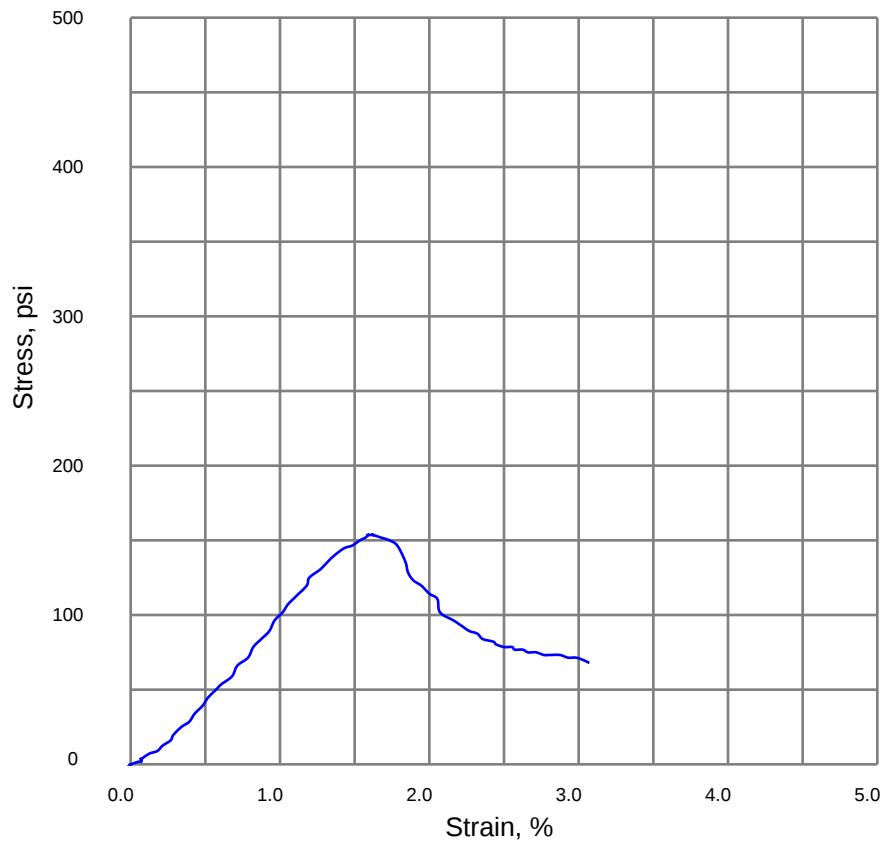
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S3-15PC 65Day	Sample Diameter, in:	2
Boring Depth, ft:	06232025	Sample Height, in:	4
Date Tested:	8/27/2025	Sample Moisture, %:	
Stress @ Failure, psi:	153.93	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.62	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.3
		Max. Load lbf:	483.6
		at Displacement, in:	0.0647

Soil Type: 15%PC



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier NW-ISS-Bench Scale

Project ID: E9447

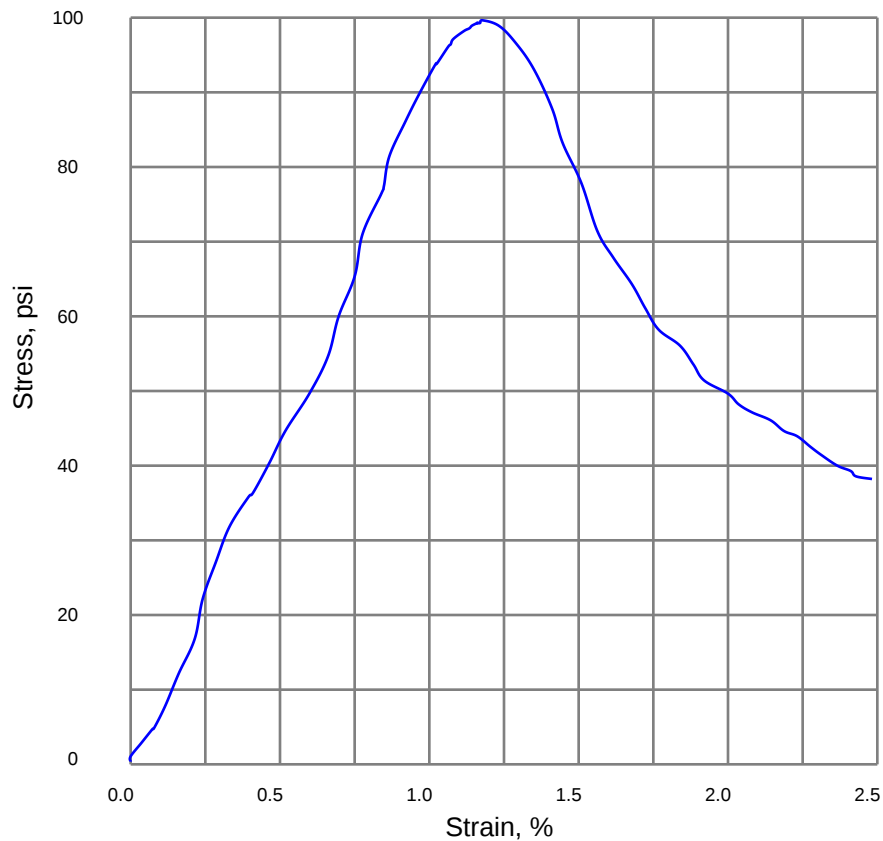
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S3-6PC-14BFS 7Day	Sample Diameter, in:	2
Boring Depth, ft:	06232025	Sample Height, in:	4
Date Tested:	6/30/2025	Sample Moisture, %:	
Stress @ Failure, psi:	99.54	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.18	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.2
		Max. Load lbf:	312.7
		at Displacement, in:	0.0473

Soil Type: 6%PC 14%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier NW-ISS-Bench Scale

Project ID: E9447

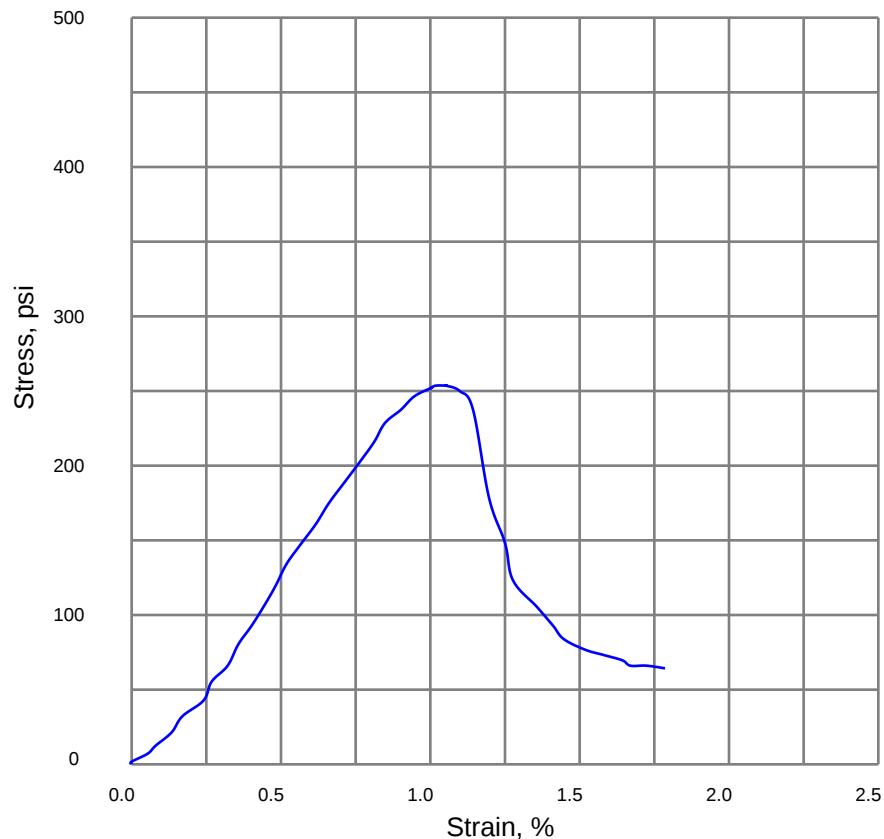
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S3-6PC-14BFS 28Day	Sample Diameter, in:	2
Boring Depth, ft:	06232025	Sample Height, in:	4
Date Tested:	7/21/2025	Sample Moisture, %:	
Stress @ Failure, psi:	253.95	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.05	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.3
		Max. Load lbf:	797.8
		at Displacement, in:	0.0419

Soil Type: 6%PC 14%BFS



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier NW-ISS-Bench Scale

Project ID: E9447

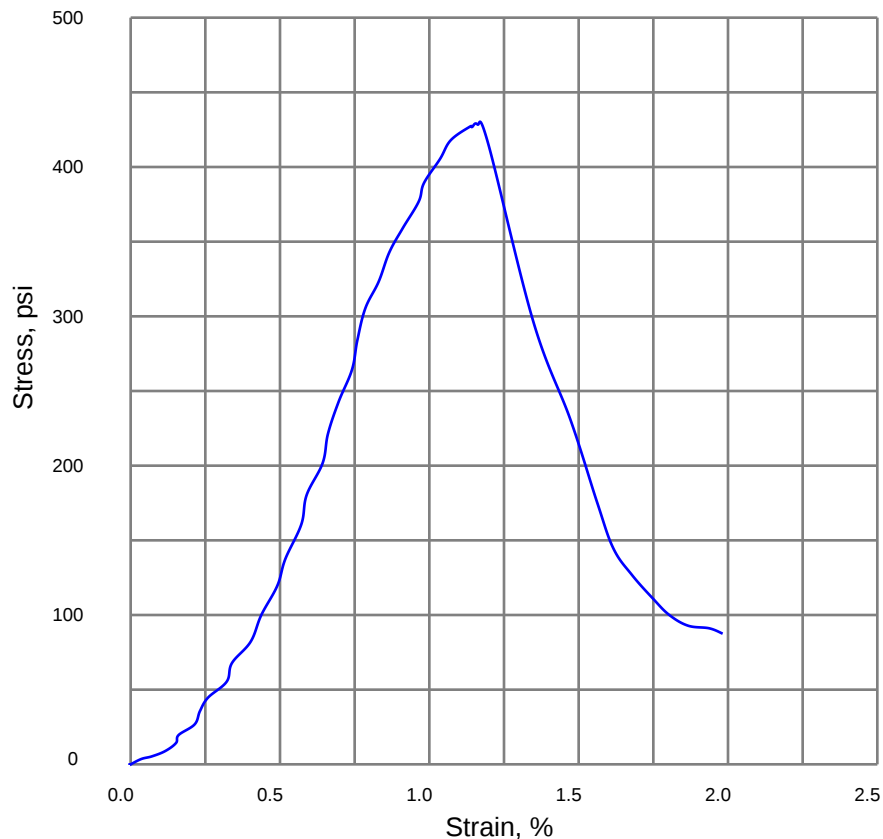
Client: Geosyntec

Unconfined Compressive Strength of Cohesive Soil

ASTM D-2166

Boring No:	S3-6PC-14BFS 65Day	Sample Diameter, in:	2
Boring Depth, ft:	06232025	Sample Height, in:	4
Date Tested:	8/27/2025	Sample Moisture, %:	
Stress @ Failure, psi:	428.41	Sample Dry Density, pcf:	
Strain @ Failure, %:	1.16	Height/Diameter Ratio:	2.0
		Strain Rate, %/min:	1.4
		Max. Load lbf:	1345.9
		at Displacement, in:	0.0462

Soil Type: 6%PC 14%Slag



Sketch of Specimen
After Failure



Equipment: KW HM-398/6572 Readout

ENTACT

2873 West Hardies Rd Ste 300
Gibsonia, PA 15044

Project: Glacier NW-ISS-Bench Scale

Project ID: E9447

Client: Geosyntec

ATTACHMENT 3

ISS MIX PERMEABILITY REPORTS

PERMEABILITY TEST

ASTM D 5084-16a Method C

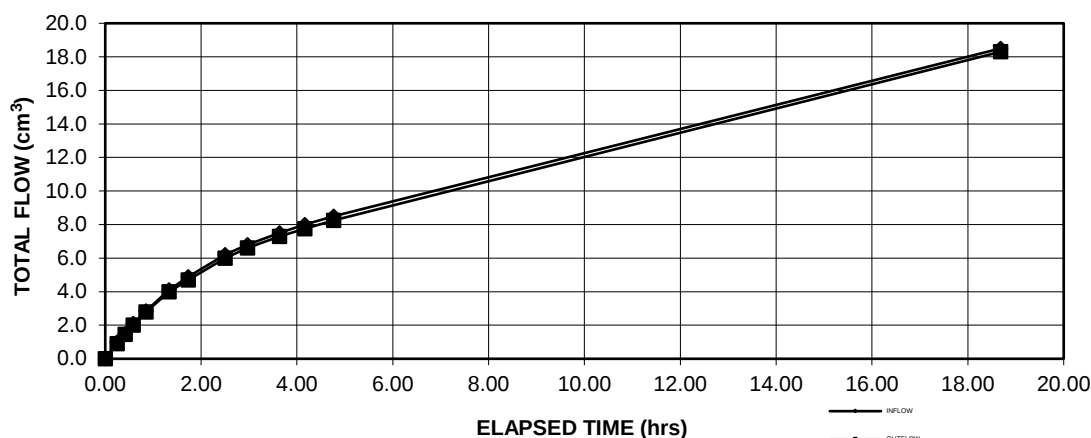


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-003

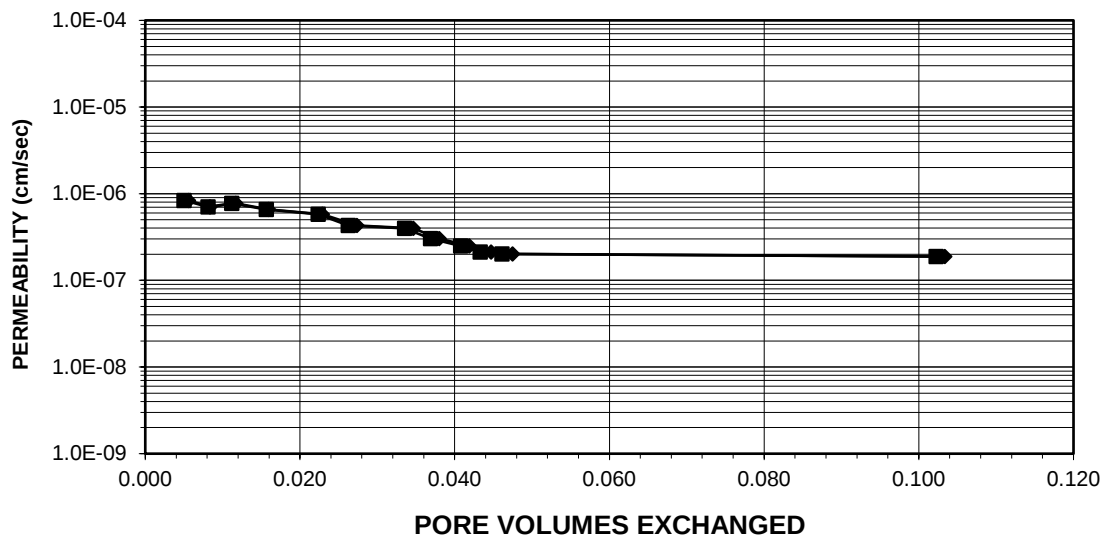
Boring No.: 5/28/25
Depth (ft): S1-6PC
Sample No.: 33 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $2.1\text{E-}07$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $2.1\text{E-}09$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: WT

Date: 6/30/25

Checked By:

JLK

Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-003

Boring No.: 5/28/25
Depth (ft): S1-6PC
Sample No.: 33 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Dark Gray Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	901	910
Weight of Tare & Wet Sample (g)	455.14	726.86
Weight of Tare & Dry Sample (g)	367.43	566.14
Weight of Tare (g)	110.04	109.85
Weight of Water (g)	87.71	160.72
Weight of Dry Sample (g)	257.39	456.29
Moisture Content (%)	34.1	35.2

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	608.23	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	608.23	613.43
Length 1 (in)	2.979	2.983
Length 2 (in)	2.986	2.974
Length 3 (in)	2.991	2.972
Top Diameter (in)	3.016	3.020
Middle Diameter (in)	3.006	3.008
Bottom Diameter (in)	2.998	3.001
Average Length (in)	2.99	2.98
Average Area (in ²)	7.10	7.11
Sample Volume (cm ³)	347.34	346.98
Unit Wet Weight (g/cm ³)	1.75	1.77
Unit Wet Weight (pcf)	109.3	110.4
Unit Dry Weight (pcf)	81.5	81.6
Unit Dry Weight (g/cm ³)	1.31	1.31
Void Ratio, e	1.07	1.07
Porosity, n	0.52	0.52
Pore Volume (cm ³)	179.3	179.0
Total Weight of Sample After Test (g)		617.39

Tested By: WT Date: 6/30/25 Checked By: JLK Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-003

Boring No.: 5/28/25
Depth (ft): S1-6PC
Sample No.: 33 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	87.5
Bottom Cap (psi)	90.0
Cell (psi)	95.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	23.25

Final Sample Dimensions

Sample Length (cm), L	7.56
Sample Diameter (cm)	7.64
Sample Area (cm ²), A	45.90
Inflow Burette Area (cm ²), a-in	1.036
Outflow Burette Area (cm ²), a-out	0.853

AVERAGE PERMEABILITY = 2.1E-07 cm/sec @ 20°C
AVERAGE PERMEABILITY = 2.1E-09 m/sec @ 20°C

DATE	TIME	ELAPSED TIME	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD	FLOW	TEMP.	INCREMENTAL PERMEABILITY
(mm/dd/yy)	(hr)	(min)	t	(cm ³)	(cm ³)	h	(0 flow) (1 stop)	@ 20°C
			(hr)			(cm)	(°C)	(cm/sec)
7/1/2025	12	50	0.000	0.0	0.0	199.0	0	NA
7/1/2025	13	5	0.250	1.0	0.9	197.0	0	8.4E-07
7/1/2025	13	15	0.417	1.5	1.5	195.9	0	7.1E-07
7/1/2025	13	25	0.583	2.1	2.0	194.6	0	7.7E-07
7/1/2025	13	41	0.850	2.9	2.8	193.0	0	6.6E-07
7/1/2025	14	10	1.333	4.1	4.0	190.4	0	5.8E-07
7/1/2025	14	34	1.733	4.9	4.7	188.8	0	4.3E-07
7/1/2025	15	20	2.500	6.2	6.0	186.0	0	4.0E-07
7/1/2025	15	48	2.967	6.8	6.6	184.7	0	3.0E-07
7/1/2025	16	28	3.633	7.5	7.3	183.2	0	2.5E-07
7/1/2025	17	0	4.167	8.0	7.8	182.2	0	2.1E-07
7/1/2025	17	36	4.767	8.5	8.3	181.1	0	2.0E-07
7/2/2025	7	31	18.683	18.5	18.3	159.7	1	1.9E-07

Tested By: WT

Date: 6/30/25

Checked By: JLK

Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

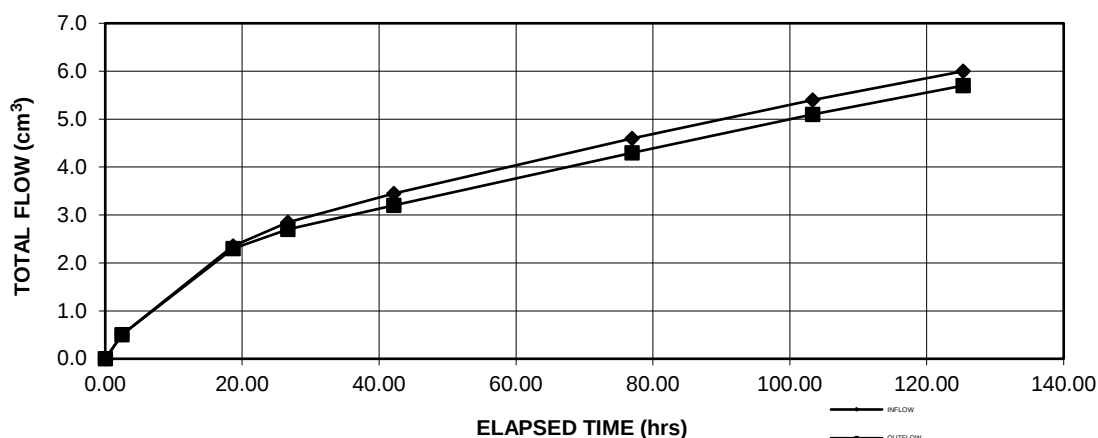


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-004

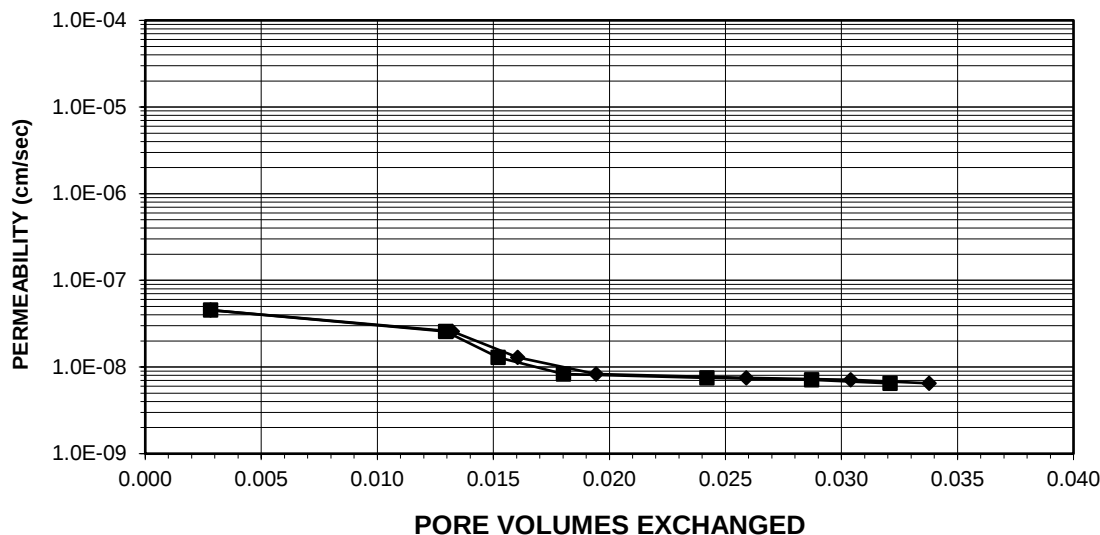
Boring No.: 5/28/25
Depth (ft): S1-3PC-3BFS
Sample No.: 33 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $7.4\text{E-}09$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $7.4\text{E-}11$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: WT

Date: 6/30/25

Checked By:

JLK

Date: 7/8/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-004

Boring No.: 5/28/25
Depth (ft): S1-3PC-3BFS
Sample No.: 33 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Dark Gray Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	1722	623
Weight of Tare & Wet Sample (g)	439.10	697.62
Weight of Tare & Dry Sample (g)	347.46	532.83
Weight of Tare (g)	81.15	82.90
Weight of Water (g)	91.64	164.79
Weight of Dry Sample (g)	266.31	449.93
Moisture Content (%)	34.4	36.6

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	607.22	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	607.22	617.23
Length 1 (in)	2.981	2.975
Length 2 (in)	2.977	2.979
Length 3 (in)	2.980	2.978
Top Diameter (in)	3.014	3.010
Middle Diameter (in)	3.005	2.999
Bottom Diameter (in)	2.995	2.992
Average Length (in)	2.98	2.98
Average Area (in ²)	7.09	7.07
Sample Volume (cm ³)	346.18	344.95
Unit Wet Weight (g/cm ³)	1.75	1.79
Unit Wet Weight (pcf)	109.5	111.7
Unit Dry Weight (pcf)	81.5	81.8
Unit Dry Weight (g/cm ³)	1.30	1.31
Void Ratio, e	1.07	1.06
Porosity, n	0.52	0.51
Pore Volume (cm ³)	178.9	177.6
Total Weight of Sample After Test (g)		616.48

Tested By: WT Date: 6/30/25 Checked By: JLK Date: 7/8/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-004

Boring No.: 5/28/25
Depth (ft): S1-3PC-3BFS
Sample No.: 33 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	23.24

Final Sample Dimensions

Sample Length (cm), L	7.56
Sample Diameter (cm)	7.62
Sample Area (cm ²), A	45.61
Inflow Burette Area (cm ²), a-in	0.861
Outflow Burette Area (cm ²), a-out	0.967

AVERAGE PERMEABILITY = 7.4E-09 cm/sec @ 20°C
AVERAGE PERMEABILITY = 7.4E-11 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/1/2025	12	51	0.000	0.0	0.0	198.7	0	21.8	NA
7/1/2025	15	18	2.450	0.5	0.5	197.6	0	21.8	4.5E-08
7/2/2025	7	31	18.667	2.4	2.3	193.6	0	21.2	2.6E-08
7/2/2025	15	31	26.667	2.9	2.7	192.6	0	21.9	1.3E-08
7/3/2025	6	59	42.133	3.5	3.2	191.4	0	21.2	8.3E-09
7/4/2025	17	48	76.950	4.6	4.3	188.9	0	21.6	7.5E-09
7/5/2025	20	11	103.333	5.4	5.1	187.1	0	21.5	7.2E-09
7/6/2025	18	11	125.333	6.0	5.7	185.8	1	21.5	6.5E-09

Tested By: WT

Date: 6/30/25

Checked By: JLK

Date: 7/8/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

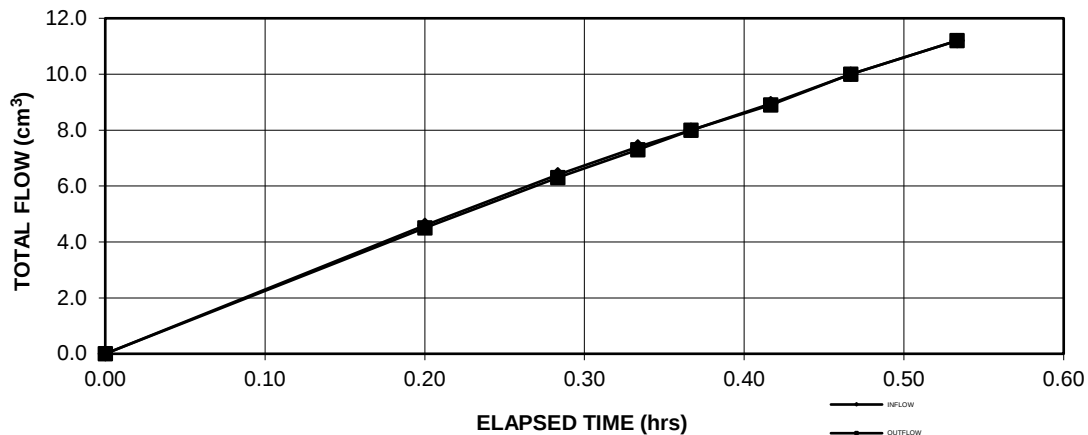


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-005

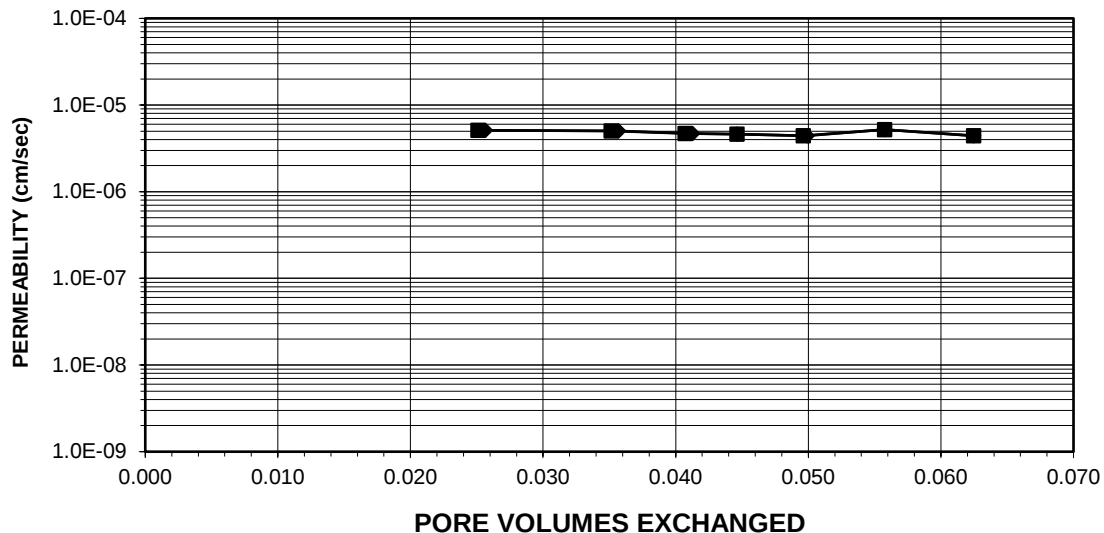
Boring No.: 5/28/25
Depth (ft): S1-2PC-4BFS
Sample No.: 33 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $4.7\text{E-}06$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $4.7\text{E-}08$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: WT

Date: 6/30/25

Checked By:

JLK

Date: 7/2/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-005

Boring No.: 5/28/25
Depth (ft): S1-2PC-4BFS
Sample No.: 33 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Dark Gray Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	1723	580
Weight of Tare & Wet Sample (g)	450.91	704.45
Weight of Tare & Dry Sample (g)	357.55	541.05
Weight of Tare (g)	82.69	83.91
Weight of Water (g)	93.36	163.40
Weight of Dry Sample (g)	274.86	457.14
Moisture Content (%)	34.0	35.7

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	611.94	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	611.94	620.06
Length 1 (in)	2.997	2.994
Length 2 (in)	3.005	2.996
Length 3 (in)	2.999	2.998
Top Diameter (in)	3.016	3.000
Middle Diameter (in)	3.007	3.007
Bottom Diameter (in)	2.996	3.012
Average Length (in)	3.00	3.00
Average Area (in ²)	7.10	7.10
Sample Volume (cm ³)	349.01	348.50
Unit Wet Weight (g/cm ³)	1.75	1.78
Unit Wet Weight (pcf)	109.4	111.1
Unit Dry Weight (pcf)	81.7	81.8
Unit Dry Weight (g/cm ³)	1.31	1.31
Void Ratio, e	1.06	1.06
Porosity, n	0.52	0.51
Pore Volume (cm ³)	179.8	179.3
Total Weight of Sample After Test (g)		621.04

Tested By: WT Date: 6/30/25 Checked By: JLK Date: 7/2/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-005

Boring No.: 5/28/25
Depth (ft): S1-2PC-4BFS
Sample No.: 33 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	87.5
Bottom Cap (psi)	90.0
Cell (psi)	95.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	23.10

Final Sample Dimensions

Sample Length (cm), L	7.61
Sample Diameter (cm)	7.64
Sample Area (cm ²), A	45.80
Inflow Burette Area (cm ²), a-in	0.963
Outflow Burette Area (cm ²), a-out	0.957

AVERAGE PERMEABILITY = 4.7E-06 cm/sec @ 20°C
AVERAGE PERMEABILITY = 4.7E-08 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/1/2025	14	11	0.000	0.0	0.0	198.7	0	21.8	NA
7/1/2025	14	23	0.200	4.6	4.5	189.4	0	21.8	5.1E-06
7/1/2025	14	28	0.283	6.4	6.3	185.7	0	21.8	5.0E-06
7/1/2025	14	31	0.333	7.4	7.3	183.7	0	21.8	4.7E-06
7/1/2025	14	33	0.367	8.0	8.0	182.3	0	21.8	4.6E-06
7/1/2025	14	36	0.417	9.0	8.9	180.4	0	21.8	4.4E-06
7/1/2025	14	39	0.467	10.0	10.0	178.2	0	21.8	5.2E-06
7/1/2025	14	43	0.533	11.2	11.2	175.8	1	21.8	4.4E-06

Tested By: WT

Date: 6/30/25

Checked By: JLK

Date: 7/2/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

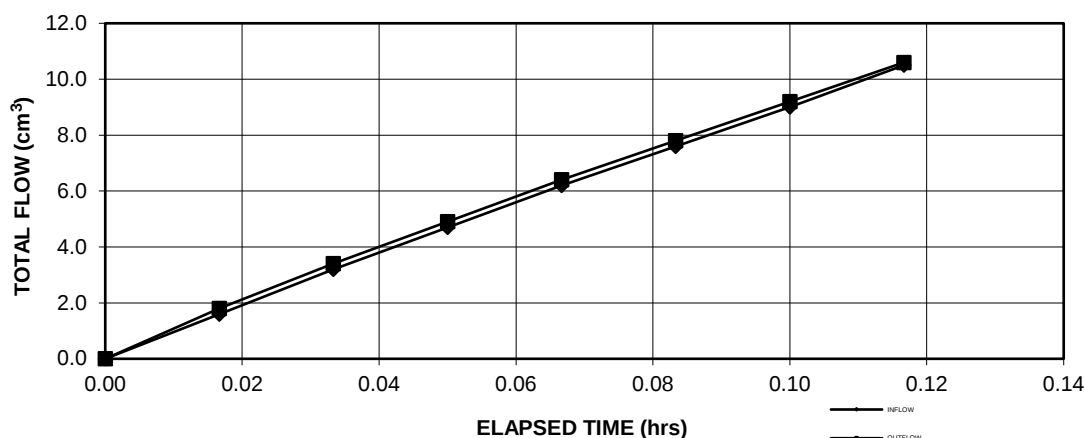


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-006

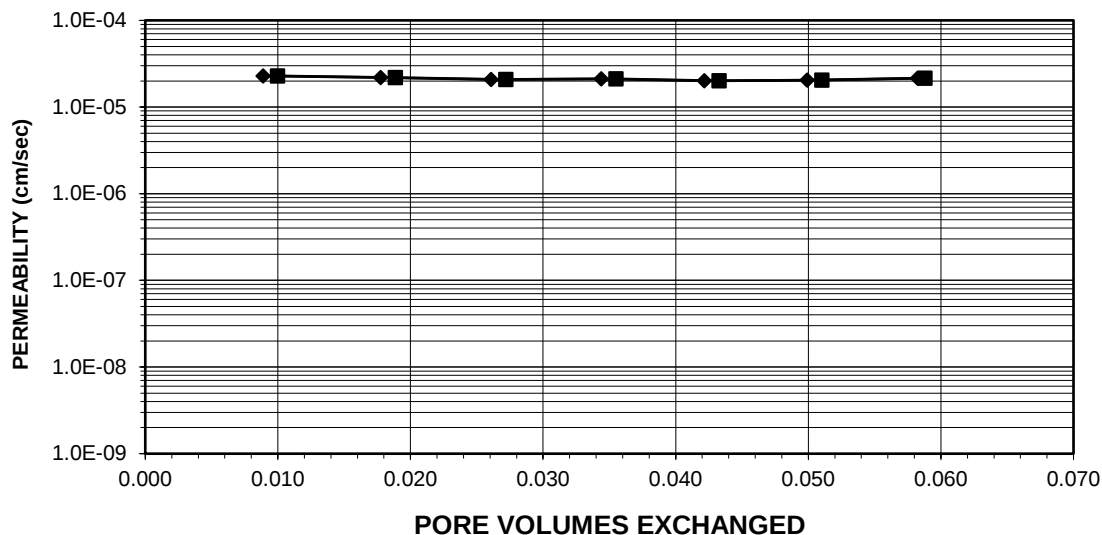
Boring No.: 5/28/25
Depth (ft): S1-2PC-4BFS (2)
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $2.1\text{E-}05$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $2.1\text{E-}07$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: WT

Date: 7/1/25

Checked By:

JLK

Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-006

Boring No.: 5/28/25
Depth (ft): S1-2PC-4BFS (2)
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Dark Gray Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	623	1125
Weight of Tare & Wet Sample (g)	473.83	695.23
Weight of Tare & Dry Sample (g)	373.58	531.80
Weight of Tare (g)	82.93	83.43
Weight of Water (g)	100.25	163.43
Weight of Dry Sample (g)	290.65	448.37
Moisture Content (%)	34.5	36.4

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	601.91	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	601.91	610.67
Length 1 (in)	2.979	2.969
Length 2 (in)	2.976	2.974
Length 3 (in)	2.976	2.976
Top Diameter (in)	3.015	3.020
Middle Diameter (in)	3.004	3.004
Bottom Diameter (in)	2.996	2.998
Average Length (in)	2.98	2.97
Average Area (in ²)	7.09	7.10
Sample Volume (cm ³)	345.99	346.06
Unit Wet Weight (g/cm ³)	1.74	1.76
Unit Wet Weight (pcf)	108.6	110.2
Unit Dry Weight (pcf)	80.7	80.7
Unit Dry Weight (g/cm ³)	1.29	1.29
Void Ratio, e	1.09	1.09
Porosity, n	0.52	0.52
Pore Volume (cm ³)	180.2	180.3
Total Weight of Sample After Test (g)		612.63

Tested By: WT Date: 7/1/25 Checked By: JLK Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-006

Boring No.: 5/28/25
Depth (ft): S1-2PC-4BFS (2)
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	87.5
Bottom Cap (psi)	90.0
Cell (psi)	95.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	23.27

Final Sample Dimensions

Sample Length (cm), L	7.55
Sample Diameter (cm)	7.64
Sample Area (cm ²), A	45.83
Inflow Burette Area (cm ²), a-in	1.036
Outflow Burette Area (cm ²), a-out	0.853
B Parameter (%)	95

AVERAGE PERMEABILITY = 2.1E-05 cm/sec @ 20°C
AVERAGE PERMEABILITY = 2.1E-07 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/2/2025	12	20	0.000	0.0	0.0	199.0	0	21.7	NA
7/2/2025	12	21	0.017	1.6	1.8	195.3	0	21.7	2.3E-05
7/2/2025	12	22	0.033	3.2	3.4	191.9	0	21.7	2.2E-05
7/2/2025	12	23	0.050	4.7	4.9	188.7	0	21.7	2.1E-05
7/2/2025	12	24	0.067	6.2	6.4	185.5	0	21.7	2.1E-05
7/2/2025	12	25	0.083	7.6	7.8	182.5	0	21.7	2.0E-05
7/2/2025	12	26	0.100	9.0	9.2	179.5	0	21.7	2.0E-05
7/2/2025	12	27	0.117	10.5	10.6	176.4	1	21.7	2.1E-05

Tested By: WT

Date: 7/1/25

Checked By: JLK

Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

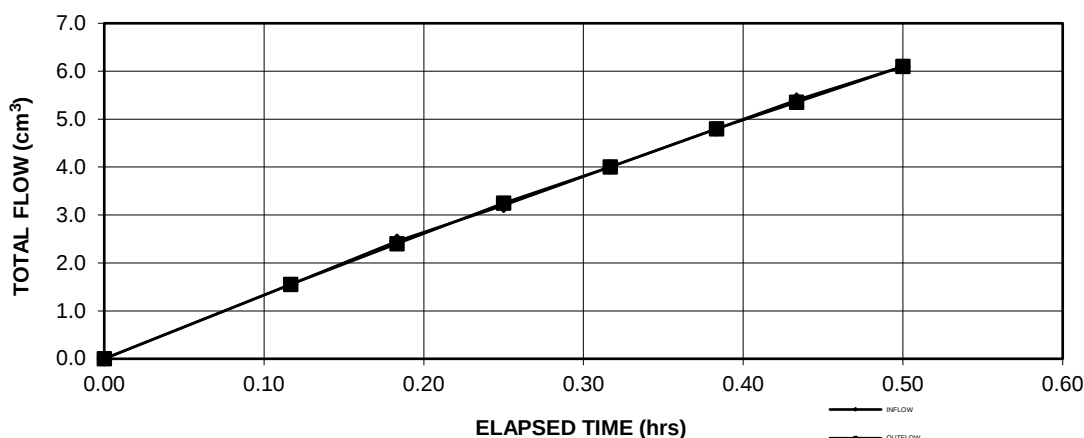


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-007

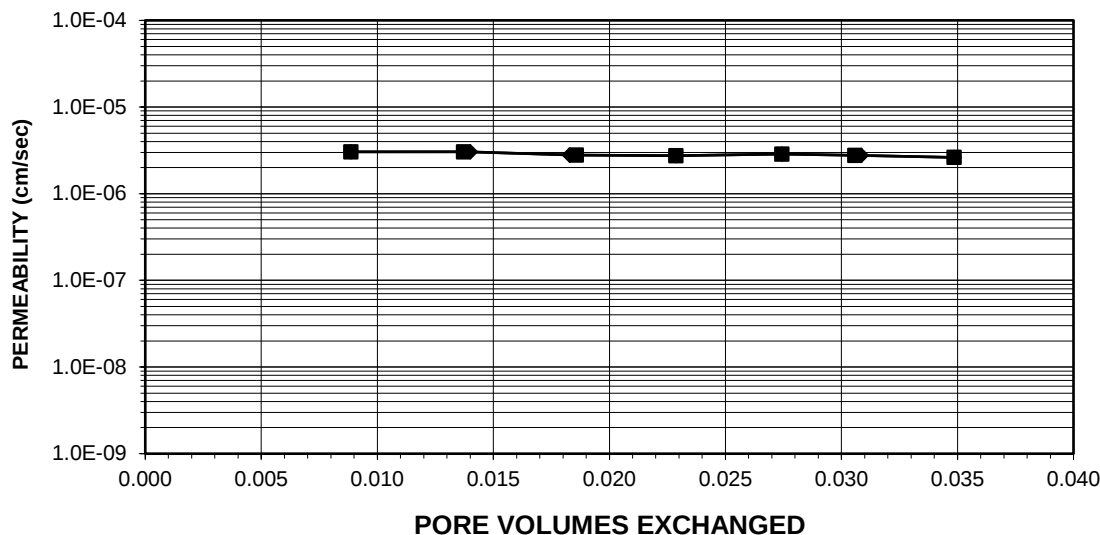
Boring No.: 5/28/25
Depth (ft): S1-8PC
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $2.7\text{E-}06$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $2.7\text{E-}08$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: WT

Date: 7/1/25

Checked By:

JLK

Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-007

Boring No.: 5/28/25
Depth (ft): S1-8PC
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Dark Gray Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	562	880
Weight of Tare & Wet Sample (g)	462.11	739.36
Weight of Tare & Dry Sample (g)	369.61	580.78
Weight of Tare (g)	84.02	108.50
Weight of Water (g)	92.50	158.58
Weight of Dry Sample (g)	285.59	472.28
Moisture Content (%)	32.4	33.6

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	628.77	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	628.77	634.41
Length 1 (in)	3.013	3.016
Length 2 (in)	3.013	3.011
Length 3 (in)	3.011	3.013
Top Diameter (in)	3.016	3.019
Middle Diameter (in)	3.004	3.005
Bottom Diameter (in)	2.995	3.000
Average Length (in)	3.01	3.01
Average Area (in ²)	7.09	7.11
Sample Volume (cm ³)	350.09	350.91
Unit Wet Weight (g/cm ³)	1.80	1.81
Unit Wet Weight (pcf)	112.1	112.9
Unit Dry Weight (pcf)	84.7	84.5
Unit Dry Weight (g/cm ³)	1.36	1.35
Void Ratio, e	0.99	0.99
Porosity, n	0.50	0.50
Pore Volume (cm ³)	174.2	175.0
Total Weight of Sample After Test (g)		632.33

Tested By: WT Date: 7/1/25 Checked By: JLK Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-007

Boring No.: 5/28/25
Depth (ft): S1-8PC
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	22.96

Final Sample Dimensions

Sample Length (cm), L	7.65
Sample Diameter (cm)	7.64
Sample Area (cm ²), A	45.85
Inflow Burette Area (cm ²), a-in	0.961
Outflow Burette Area (cm ²), a-out	1.020

AVERAGE PERMEABILITY = 2.7E-06 cm/sec @ 20°C
AVERAGE PERMEABILITY = 2.7E-08 m/sec @ 20°C

DATE	TIME		ELAPSED TIME	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD	FLOW	TEMP.	INCREMENTAL PERMEABILITY
(mm/dd/yy)	(hr)	(min)	t (hr)	(cm ³)	(cm ³)	h (cm)	(0 flow) (1 stop)	(°C)	@ 20°C (cm/sec)
7/2/2025	10	36	0.000	0.0	0.0	196.1	0	21.6	NA
7/2/2025	10	43	0.117	1.6	1.6	192.9	0	21.6	3.0E-06
7/2/2025	10	47	0.183	2.5	2.4	191.2	0	21.6	3.0E-06
7/2/2025	10	51	0.250	3.2	3.3	189.6	0	21.6	2.8E-06
7/2/2025	10	55	0.317	4.0	4.0	188.0	0	21.6	2.7E-06
7/2/2025	10	59	0.383	4.8	4.8	186.4	0	21.6	2.9E-06
7/2/2025	11	2	0.433	5.4	5.4	185.2	0	21.6	2.8E-06
7/2/2025	11	6	0.500	6.1	6.1	183.8	1	21.6	2.6E-06

Tested By: WT

Date: 7/1/25

Checked By: JLK

Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

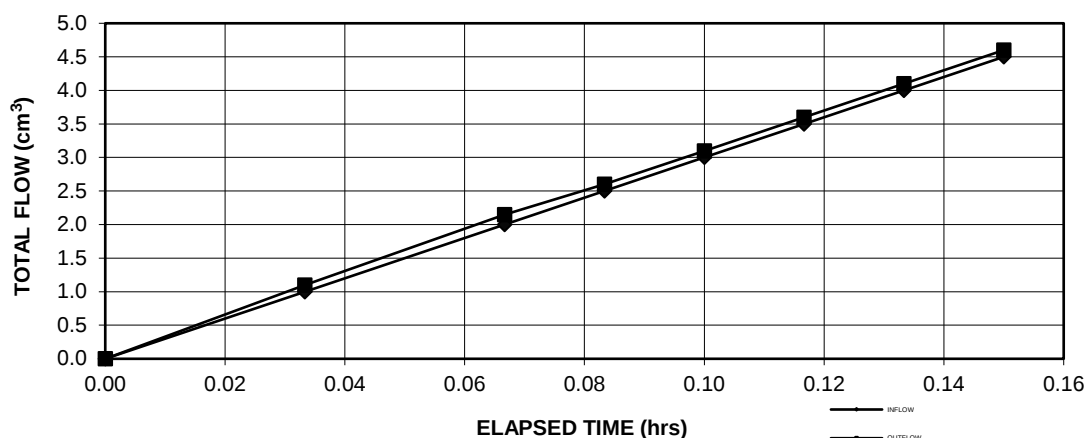


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-008

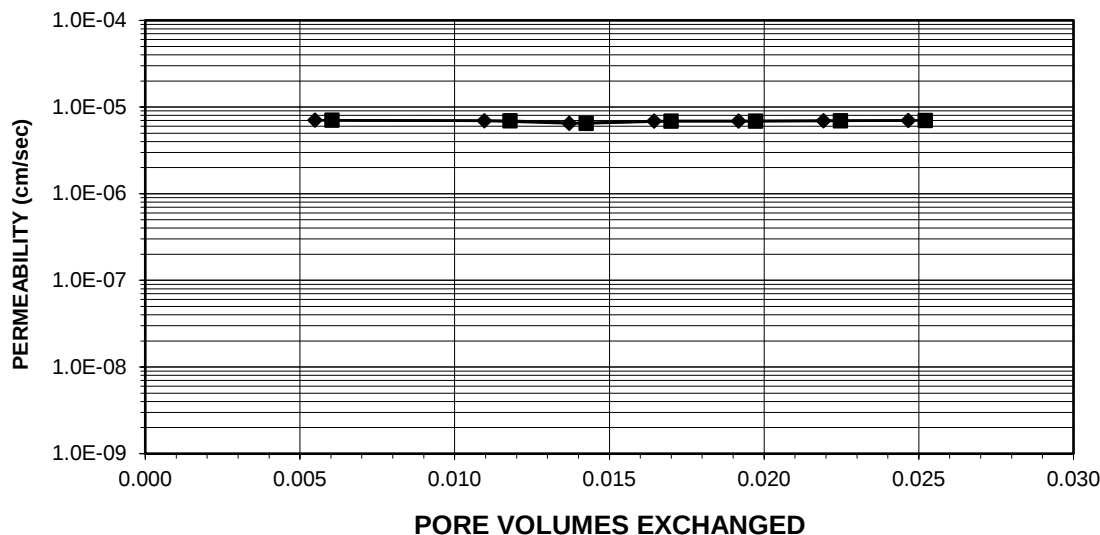
Boring No.: 5/28/25
Depth (ft): S1-2PC-6BFS
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $6.9\text{E-}06$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $6.9\text{E-}08$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: WT

Date: 7/1/25

Checked By:

JLK

Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-008

Boring No.: 5/28/25
Depth (ft): S1-2PC-6BFS
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Dark Gray Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	907	546
Weight of Tare & Wet Sample (g)	514.44	736.31
Weight of Tare & Dry Sample (g)	411.25	567.90
Weight of Tare (g)	109.98	84.57
Weight of Water (g)	103.19	168.41
Weight of Dry Sample (g)	301.27	483.33
Moisture Content (%)	34.3	34.8

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	649.29	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	649.29	652.15
Length 1 (in)	3.063	3.075
Length 2 (in)	3.063	3.056
Length 3 (in)	3.072	3.064
Top Diameter (in)	3.035	3.036
Middle Diameter (in)	3.025	3.031
Bottom Diameter (in)	3.018	3.016
Average Length (in)	3.07	3.07
Average Area (in ²)	7.19	7.20
Sample Volume (cm ³)	361.33	361.61
Unit Wet Weight (g/cm ³)	1.80	1.80
Unit Wet Weight (pcf)	112.2	112.6
Unit Dry Weight (pcf)	83.6	83.5
Unit Dry Weight (g/cm ³)	1.34	1.34
Void Ratio, e	1.02	1.02
Porosity, n	0.50	0.50
Pore Volume (cm ³)	182.2	182.5
Total Weight of Sample After Test (g)		652.39

Tested By: WT Date: 7/1/25 Checked By: JLK Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-008

Boring No.: 5/28/25
Depth (ft): S1-2PC-6BFS
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	22.58

Final Sample Dimensions

Sample Length (cm), L	7.79
Sample Diameter (cm)	7.69
Sample Area (cm ²), A	46.45
Inflow Burette Area (cm ²), a-in	0.962
Outflow Burette Area (cm ²), a-out	0.962
B Parameter (%)	95

AVERAGE PERMEABILITY = 6.9E-06 cm/sec @ 20°C
AVERAGE PERMEABILITY = 6.9E-08 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/2/2025	10	33	0.000	0.0	0.0	200.6	0	21.6	NA
7/2/2025	10	35	0.033	1.0	1.1	198.4	0	21.6	7.0E-06
7/2/2025	10	37	0.067	2.0	2.2	196.3	0	21.6	6.9E-06
7/2/2025	10	38	0.083	2.5	2.6	195.3	0	21.6	6.5E-06
7/2/2025	10	39	0.100	3.0	3.1	194.3	0	21.6	6.9E-06
7/2/2025	10	40	0.117	3.5	3.6	193.2	0	21.6	6.9E-06
7/2/2025	10	41	0.133	4.0	4.1	192.2	0	21.6	6.9E-06
7/2/2025	10	42	0.150	4.5	4.6	191.2	1	21.6	7.0E-06

Tested By: WT

Date: 7/1/25

Checked By: JLK

Date: 7/3/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

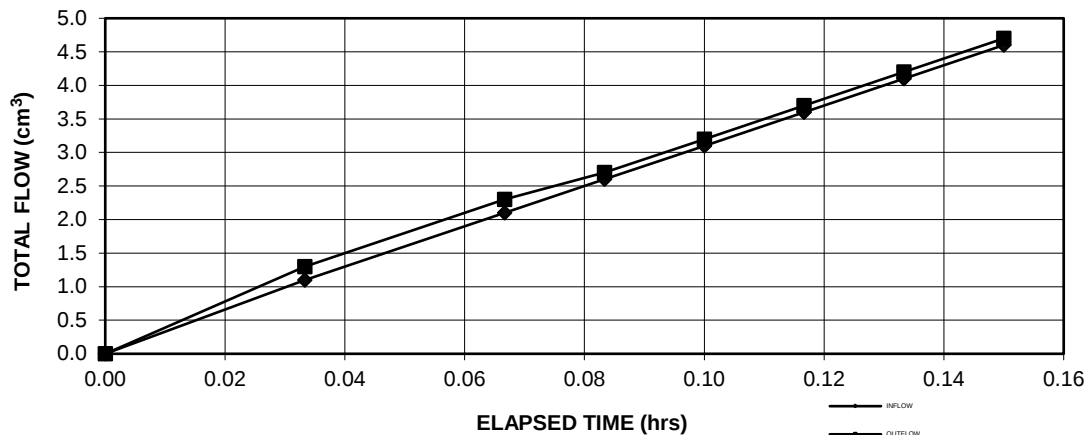


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-009

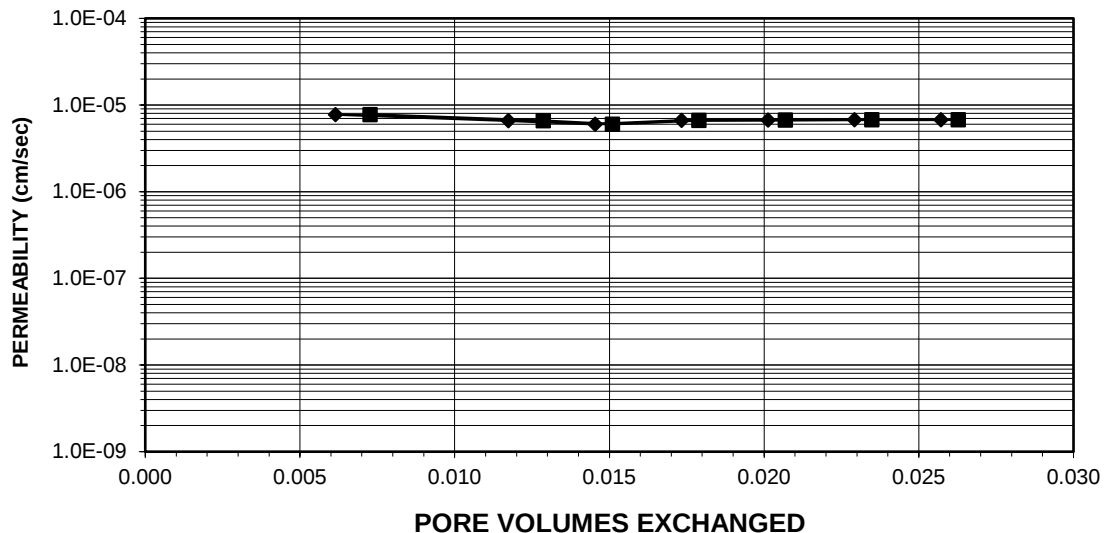
Boring No.: 5/28/25
Depth (ft): S1-2PC-6BFS (2)
Sample No.: 35 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $6.7\text{E-}06$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $6.7\text{E-}08$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/2/25

Checked By:

JLK

Date: 7/8/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-009

Boring No.: 5/28/25
Depth (ft): S1-2PC-6BFS (2)
Sample No.: 35 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Brown Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	909	1694
Weight of Tare & Wet Sample (g)	482.86	717.07
Weight of Tare & Dry Sample (g)	387.95	549.81
Weight of Tare (g)	108.82	83.12
Weight of Water (g)	94.91	167.26
Weight of Dry Sample (g)	279.13	466.69
Moisture Content (%)	34.0	35.8

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	630.56	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	630.56	639.21
Length 1 (in)	2.986	3.002
Length 2 (in)	2.990	2.999
Length 3 (in)	2.989	2.997
Top Diameter (in)	3.035	3.017
Middle Diameter (in)	3.025	3.024
Bottom Diameter (in)	3.024	3.033
Average Length (in)	2.99	3.00
Average Area (in ²)	7.20	7.19
Sample Volume (cm ³)	352.64	353.16
Unit Wet Weight (g/cm ³)	1.79	1.81
Unit Wet Weight (pcf)	111.6	113.0
Unit Dry Weight (pcf)	83.3	83.2
Unit Dry Weight (g/cm ³)	1.33	1.33
Void Ratio, e	1.02	1.03
Porosity, n	0.51	0.51
Pore Volume (cm ³)	178.4	178.9
Total Weight of Sample After Test (g)		638.77

Tested By: DP Date: 7/2/25 Checked By: JLK Date: 7/8/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-009

Boring No.: 5/28/25
Depth (ft): S1-2PC-6BFS (2)
Sample No.: 35 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	23.07

Final Sample Dimensions

Sample Length (cm), L	7.62
Sample Diameter (cm)	7.68
Sample Area (cm ²), A	46.36
Inflow Burette Area (cm ²), a-in	0.866
Outflow Burette Area (cm ²), a-out	0.962
B Parameter (%)	97

AVERAGE PERMEABILITY = 6.7E-06 cm/sec @ 20°C
AVERAGE PERMEABILITY = 6.7E-08 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/3/2025	12	26	0.000	0.0	0.0	202.9	0	21.8	NA
7/3/2025	12	28	0.033	1.1	1.3	200.2	0	21.8	7.8E-06
7/3/2025	12	30	0.067	2.1	2.3	198.0	0	21.8	6.6E-06
7/3/2025	12	31	0.083	2.6	2.7	197.0	0	21.8	6.0E-06
7/3/2025	12	32	0.100	3.1	3.2	195.9	0	21.8	6.7E-06
7/3/2025	12	33	0.117	3.6	3.7	194.8	0	21.8	6.7E-06
7/3/2025	12	34	0.133	4.1	4.2	193.7	0	21.8	6.8E-06
7/3/2025	12	35	0.150	4.6	4.7	192.7	1	21.8	6.8E-06

Tested By: DP

Date: 7/2/25

Checked By: JLK

Date: 7/8/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



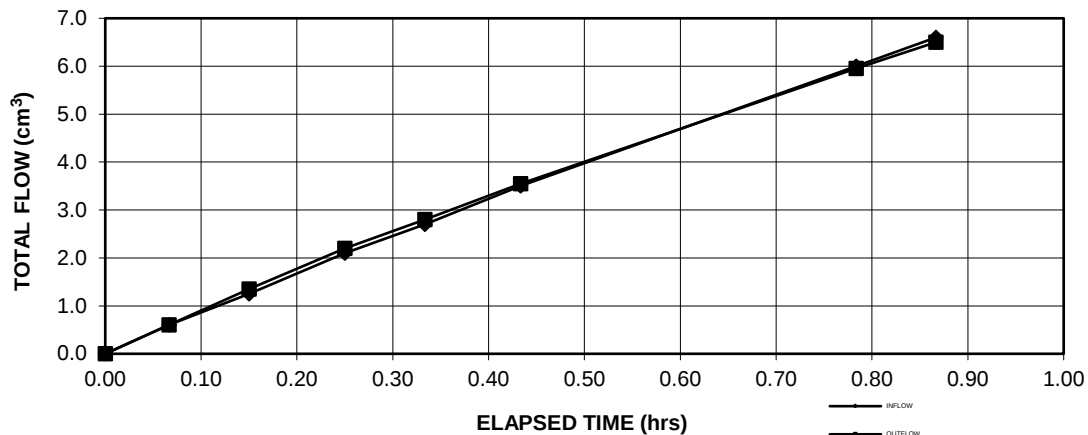
Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-010

Boring No.: 5/28/25
Depth (ft): S1-3PC-7BFS
Sample No.: 35 Day
Avg. Effective Consol. Pressure (psi): 6.25

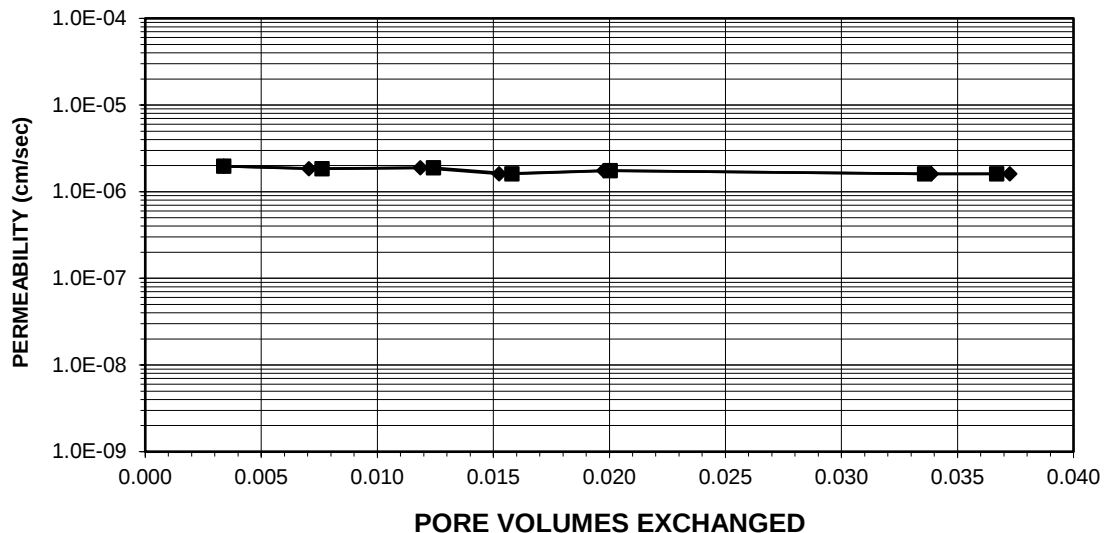
AVERAGE PERMEABILITY = $1.6\text{E-}06$ cm/sec @ 20°C

AVERAGE PERMEABILITY = $1.6\text{E-}08$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/2/25

Checked By:

JLK

Date: 7/8/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-010

Boring No.: 5/28/25
Depth (ft): S1-3PC-7BFS
Sample No.: 35 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Brown Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	586	555
Weight of Tare & Wet Sample (g)	427.14	725.25
Weight of Tare & Dry Sample (g)	345.68	558.89
Weight of Tare (g)	109.27	81.28
Weight of Water (g)	81.46	166.36
Weight of Dry Sample (g)	236.41	477.61
Moisture Content (%)	34.5	34.8

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	645.35	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	645.35	647.15
Length 1 (in)	3.007	3.010
Length 2 (in)	3.008	3.013
Length 3 (in)	3.010	3.014
Top Diameter (in)	3.037	3.017
Middle Diameter (in)	3.030	3.025
Bottom Diameter (in)	3.025	3.035
Average Length (in)	3.01	3.01
Average Area (in ²)	7.21	7.19
Sample Volume (cm ³)	355.63	354.92
Unit Wet Weight (g/cm ³)	1.81	1.82
Unit Wet Weight (pcf)	113.3	113.8
Unit Dry Weight (pcf)	84.2	84.4
Unit Dry Weight (g/cm ³)	1.35	1.35
Void Ratio, e	1.00	1.00
Porosity, n	0.50	0.50
Pore Volume (cm ³)	177.9	177.2
Total Weight of Sample After Test (g)		650.88

Tested By: DP Date: 7/2/25 Checked By: JLK Date: 7/8/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-002
Lab ID No.: 2025-330-002-010

Boring No.: 5/28/25
Depth (ft): S1-3PC-7BFS
Sample No.: 35 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	22.97

Final Sample Dimensions

Sample Length (cm), L	7.65
Sample Diameter (cm)	7.69
Sample Area (cm ²), A	46.39
Inflow Burette Area (cm ²), a-in	0.936
Outflow Burette Area (cm ²), a-out	0.972
B Parameter (%)	96

AVERAGE PERMEABILITY = 1.6E-06 cm/sec @ 20°C
AVERAGE PERMEABILITY = 1.6E-08 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/3/2025	12	26	0.000	0.0	0.0	200.9	0	21.8	NA
7/3/2025	12	30	0.067	0.6	0.6	199.6	0	21.8	2.0E-06
7/3/2025	12	35	0.150	1.3	1.4	198.1	0	21.8	1.8E-06
7/3/2025	12	41	0.250	2.1	2.2	196.4	0	21.8	1.9E-06
7/3/2025	12	46	0.333	2.7	2.8	195.1	0	21.8	1.6E-06
7/3/2025	12	52	0.433	3.5	3.6	193.5	0	21.8	1.7E-06
7/3/2025	13	13	0.783	6.0	6.0	188.4	0	21.8	1.6E-06
7/3/2025	13	18	0.867	6.6	6.5	187.2	1	21.8	1.6E-06

Tested By: DP

Date: 7/2/25

Checked By: JLK

Date: 7/8/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



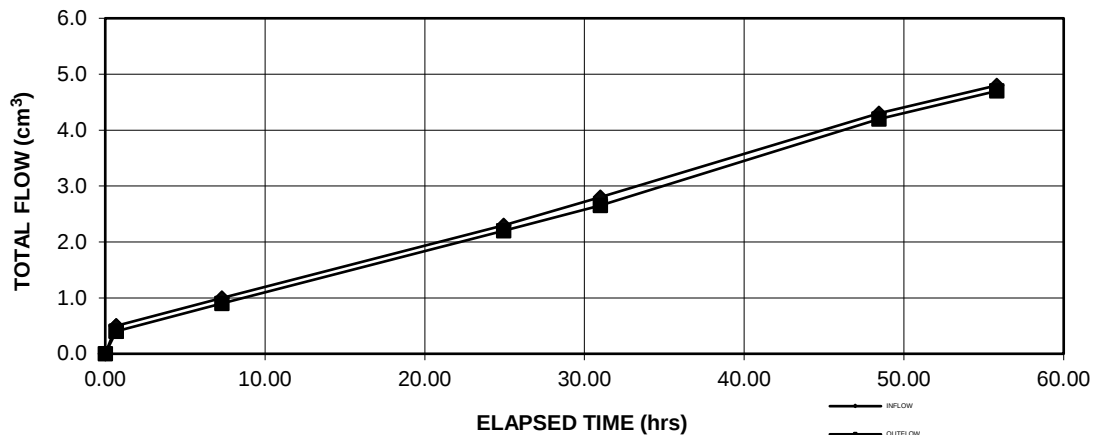
Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-001

Boring No.: 5/29/25
Depth (ft): S2-2PC-2BFS
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

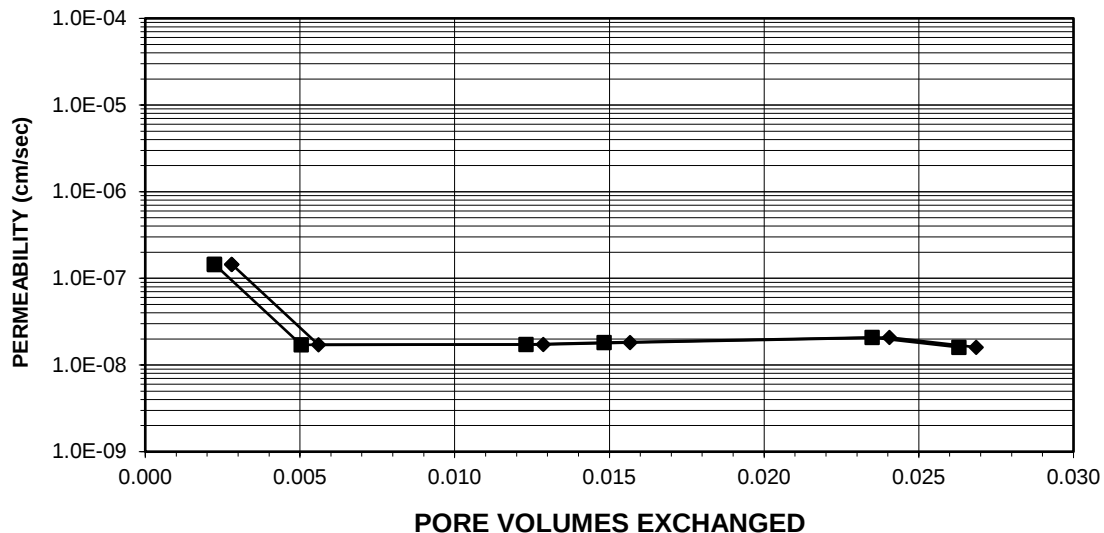
AVERAGE PERMEABILITY = $1.8\text{E-}08$ cm/sec @ 20°C

AVERAGE PERMEABILITY = $1.8\text{E-}10$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/2/25

Checked By:

JLK

Date: 7/10/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-001

Boring No.: 5/29/25
Depth (ft): S2-2PC-2BFS
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Remolded

Visual Description: Black Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	916	894
Weight of Tare & Wet Sample (g)	474.08	764.73
Weight of Tare & Dry Sample (g)	383.53	601.51
Weight of Tare (g)	109.46	109.66
Weight of Water (g)	90.55	163.22
Weight of Dry Sample (g)	274.07	491.85
Moisture Content (%)	33.0	33.2

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	650.57	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	650.57	651.28
Length 1 (in)	3.050	3.052
Length 2 (in)	3.037	3.051
Length 3 (in)	3.045	3.056
Top Diameter (in)	3.037	3.016
Middle Diameter (in)	3.031	3.025
Bottom Diameter (in)	3.025	3.038
Average Length (in)	3.04	3.05
Average Area (in ²)	7.22	7.19
Sample Volume (cm ³)	359.92	359.87
Unit Wet Weight (g/cm ³)	1.81	1.81
Unit Wet Weight (pcf)	112.8	113.0
Unit Dry Weight (pcf)	84.8	84.8
Unit Dry Weight (g/cm ³)	1.36	1.36
Void Ratio, e	0.99	0.99
Porosity, n	0.50	0.50
Pore Volume (cm ³)	178.8	178.8
Total Weight of Sample After Test (g)		655.89

Tested By: DP Date: 7/2/25 Checked By: JLK Date: 7/10/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-001

Boring No.: 5/29/25
Depth (ft): S2-2PC-2BFS
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	87.5
Bottom Cap (psi)	90.0
Cell (psi)	95.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	22.66

Final Sample Dimensions

Sample Length (cm), L	7.75
Sample Diameter (cm)	7.69
Sample Area (cm ²), A	46.41
Inflow Burette Area (cm ²), a-in	0.904
Outflow Burette Area (cm ²), a-out	0.876

AVERAGE PERMEABILITY = 1.8E-08 cm/sec @ 20°C
AVERAGE PERMEABILITY = 1.8E-10 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/3/2025	14	46	0.000	0.0	0.0	202.3	0	21.9	NA
7/3/2025	15	27	0.683	0.5	0.4	201.2	1	21.8	1.5E-07
7/7/2025	7	23	0.683	0.5	0.4	197.7	0	21.4	NA
7/7/2025	14	0	7.300	1.0	0.9	196.6	0	21.6	1.7E-08
7/8/2025	7	39	24.950	2.3	2.2	193.7	0	20.9	1.7E-08
7/8/2025	13	42	31.000	2.8	2.7	192.6	0	21.6	1.8E-08
7/9/2025	7	8	48.433	4.3	4.2	189.2	0	21.1	2.1E-08
7/9/2025	14	31	55.817	4.8	4.7	188.1	1	21.7	1.6E-08

Tested By: DP

Date: 7/2/25

Checked By: JLK

Date: 7/10/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

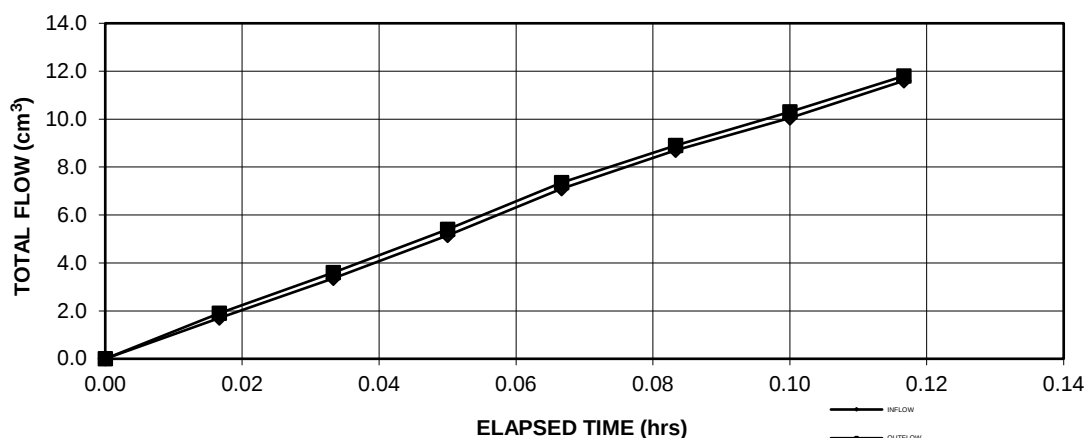


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-002

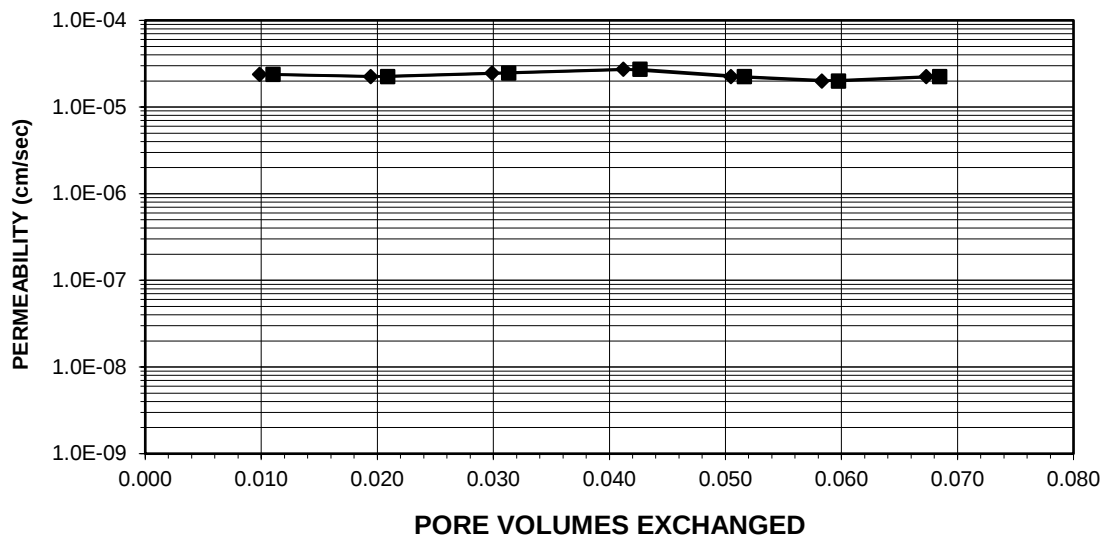
Boring No.: 5/29/25
Depth (ft): S2-2PC-2BFS (2)
Sample No.: 41 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $2.3\text{E-}05$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $2.3\text{E-}07$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: WT

Date: 7/9/25

Checked By:

JLK

Date: 7/11/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-002

Boring No.: 5/29/25
Depth (ft): S2-2PC-2BFS (2)
Sample No.: 41 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Dark Gray Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	890	1694
Weight of Tare & Wet Sample (g)	528.98	724.29
Weight of Tare & Dry Sample (g)	435.25	569.01
Weight of Tare (g)	110.04	83.14
Weight of Water (g)	93.73	155.28
Weight of Dry Sample (g)	325.21	485.87
Moisture Content (%)	28.8	32.0

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	629.39	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	629.39	644.72
Length 1 (in)	3.005	3.001
Length 2 (in)	3.001	3.002
Length 3 (in)	3.002	2.997
Top Diameter (in)	3.032	3.030
Middle Diameter (in)	3.024	3.026
Bottom Diameter (in)	3.018	3.019
Average Length (in)	3.00	3.00
Average Area (in ²)	7.19	7.19
Sample Volume (cm ³)	353.55	353.32
Unit Wet Weight (g/cm ³)	1.78	1.82
Unit Wet Weight (pcf)	111.1	113.9
Unit Dry Weight (pcf)	86.3	86.3
Unit Dry Weight (g/cm ³)	1.38	1.38
Void Ratio, e	0.95	0.95
Porosity, n	0.49	0.49
Pore Volume (cm ³)	172.6	172.4
Total Weight of Sample After Test (g)		641.54

Tested By: WT Date: 7/9/25 Checked By: JLK Date: 7/11/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-002

Boring No.: 5/29/25
Depth (ft): S2-2PC-2BFS (2)
Sample No.: 41 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	23.07

Final Sample Dimensions

Sample Length (cm), L	7.62
Sample Diameter (cm)	7.68
Sample Area (cm ²), A	46.37
Inflow Burette Area (cm ²), a-in	0.936
Outflow Burette Area (cm ²), a-out	0.972
B Parameter (%)	95

AVERAGE PERMEABILITY = 2.3E-05 cm/sec @ 20°C
AVERAGE PERMEABILITY = 2.3E-07 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/10/2025	12	38	0.000	0.0	0.0	200.9	0	21.6	NA
7/10/2025	12	39	0.017	1.7	1.9	197.1	0	21.6	2.4E-05
7/10/2025	12	40	0.033	3.4	3.6	193.6	0	21.6	2.3E-05
7/10/2025	12	41	0.050	5.2	5.4	189.8	0	21.6	2.5E-05
7/10/2025	12	42	0.067	7.1	7.4	185.7	0	21.6	2.7E-05
7/10/2025	12	43	0.083	8.7	8.9	182.5	0	21.6	2.2E-05
7/10/2025	12	44	0.100	10.1	10.3	179.6	0	21.6	2.0E-05
7/10/2025	12	45	0.117	11.6	11.8	176.4	1	21.6	2.3E-05

Tested By: WT

Date: 7/9/25

Checked By: JLK

Date: 7/11/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

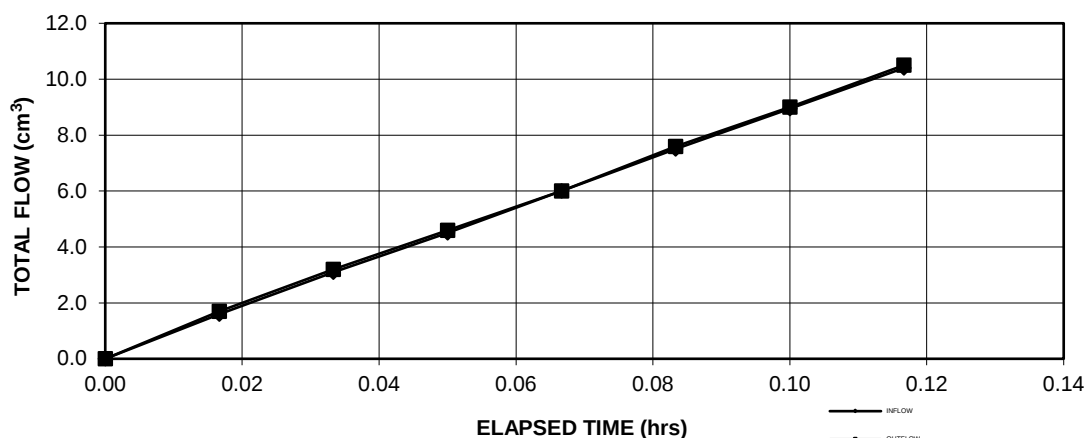


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-003

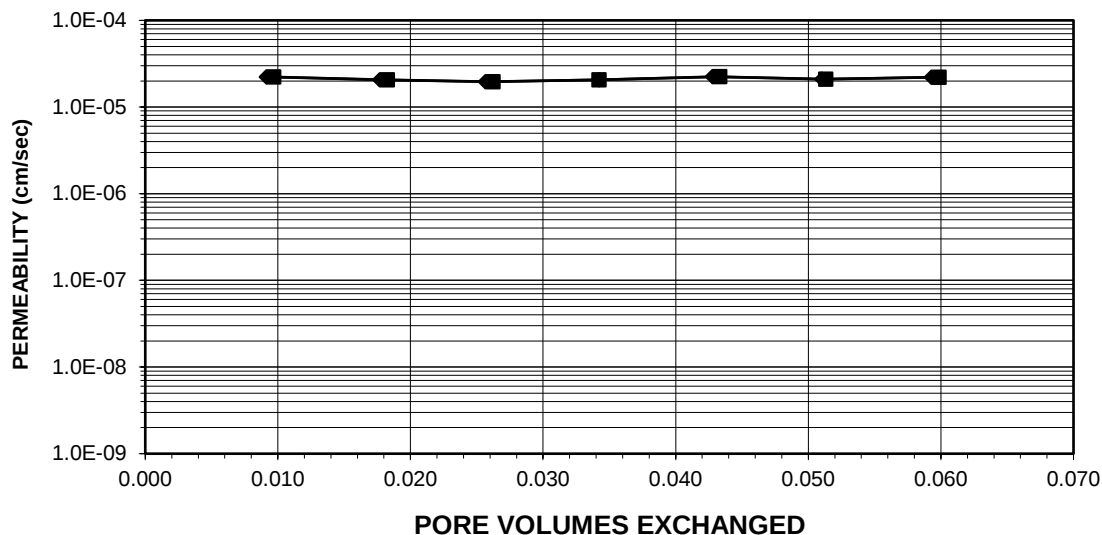
Boring No.: 5/29/25
Depth (ft): S2-2PC-4BFS
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $2.1\text{E-}05$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $2.1\text{E-}07$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/2/25

Checked By:

JLK

Date: 7/7/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-003

Boring No.: 5/29/25
Depth (ft): S2-2PC-4BFS
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Black Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	1598	550
Weight of Tare & Wet Sample (g)	462.65	722.10
Weight of Tare & Dry Sample (g)	380.10	564.05
Weight of Tare (g)	96.83	81.12
Weight of Water (g)	82.55	158.05
Weight of Dry Sample (g)	283.27	482.93
Moisture Content (%)	29.1	32.7

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	629.78	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	629.78	647.27
Length 1 (in)	3.001	3.022
Length 2 (in)	3.013	3.016
Length 3 (in)	3.014	3.017
Top Diameter (in)	3.035	3.021
Middle Diameter (in)	3.032	3.025
Bottom Diameter (in)	3.027	3.036
Average Length (in)	3.01	3.02
Average Area (in ²)	7.22	7.20
Sample Volume (cm ³)	355.90	356.02
Unit Wet Weight (g/cm ³)	1.77	1.82
Unit Wet Weight (pcf)	110.5	113.5
Unit Dry Weight (pcf)	85.5	85.5
Unit Dry Weight (g/cm ³)	1.37	1.37
Void Ratio, e	0.97	0.97
Porosity, n	0.49	0.49
Pore Volume (cm ³)	175.3	175.4
Total Weight of Sample After Test (g)		644.32

Tested By: DP Date: 7/2/25 Checked By: JLK Date: 7/7/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-003

Boring No.: 5/29/25
Depth (ft): S2-2PC-4BFS
Sample No.: 34 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	67.5
Bottom Cap (psi)	70.0
Cell (psi)	75.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	22.93

Final Sample Dimensions

Sample Length (cm), L	7.67
Sample Diameter (cm)	7.69
Sample Area (cm ²), A	46.44
Inflow Burette Area (cm ²), a-in	0.961
Outflow Burette Area (cm ²), a-out	1.020
B Parameter (%)	96

AVERAGE PERMEABILITY = 2.1E-05 cm/sec @ 20°C
AVERAGE PERMEABILITY = 2.1E-07 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/3/2025	10	58	0.000	0.0	0.0	196.1	0	21.7	NA
7/3/2025	10	59	0.017	1.6	1.7	192.7	0	21.7	2.2E-05
7/3/2025	11	0	0.033	3.1	3.2	189.7	0	21.7	2.1E-05
7/3/2025	11	1	0.050	4.5	4.6	186.9	0	21.7	2.0E-05
7/3/2025	11	2	0.067	6.0	6.0	184.0	0	21.7	2.1E-05
7/3/2025	11	3	0.083	7.5	7.6	180.8	0	21.7	2.2E-05
7/3/2025	11	4	0.100	9.0	9.0	178.0	0	21.7	2.1E-05
7/3/2025	11	5	0.117	10.4	10.5	175.0	1	21.7	2.2E-05

Tested By: DP

Date: 7/2/25

Checked By: JLK

Date: 7/7/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

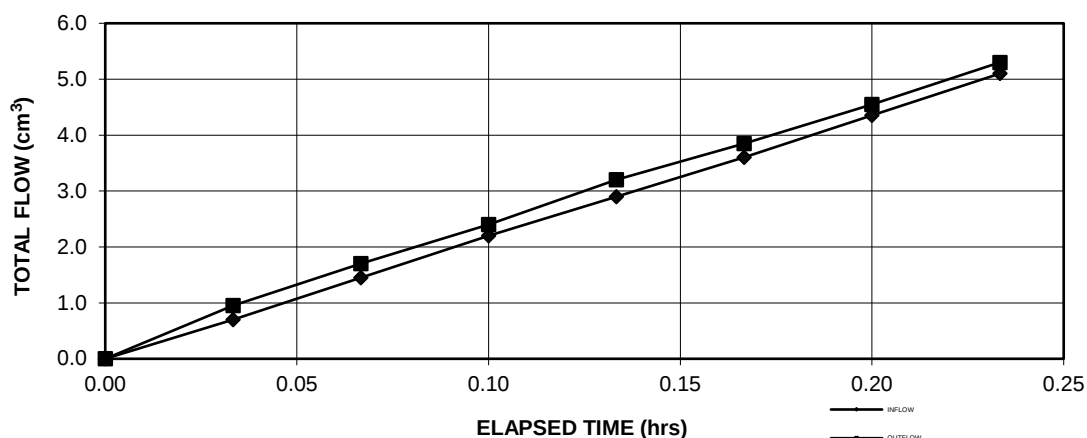


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-004

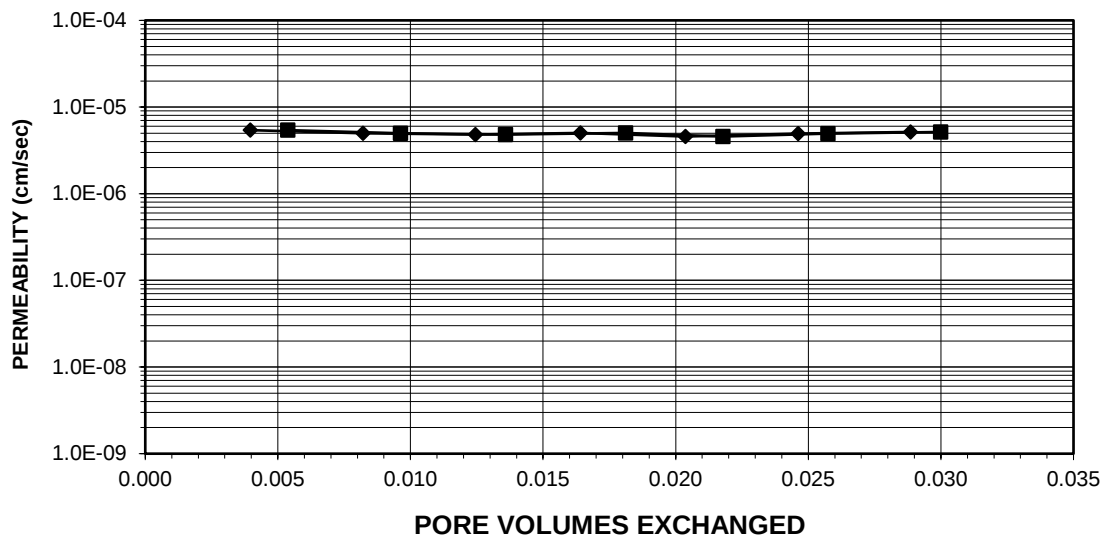
Boring No.: 5/29/25
Depth (ft): S2-2PC-4BFS (2)
Sample No.: 41 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $4.9\text{E-}06$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $4.9\text{E-}08$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: WT

Date: 7/9/25

Checked By:

JLK

Date: 7/11/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-004

Boring No.: 5/29/25
Depth (ft): S2-2PC-4BFS (2)
Sample No.: 41 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Black Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	538	615
Weight of Tare & Wet Sample (g)	459.65	719.80
Weight of Tare & Dry Sample (g)	364.98	558.62
Weight of Tare (g)	81.20	83.52
Weight of Water (g)	94.67	161.18
Weight of Dry Sample (g)	283.78	475.10
Moisture Content (%)	33.4	33.9

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	636.79	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	636.79	639.49
Length 1 (in)	2.996	3.007
Length 2 (in)	3.003	2.997
Length 3 (in)	3.000	2.999
Top Diameter (in)	3.032	3.032
Middle Diameter (in)	3.023	3.025
Bottom Diameter (in)	3.016	3.020
Average Length (in)	3.00	3.00
Average Area (in ²)	7.18	7.19
Sample Volume (cm ³)	352.97	353.59
Unit Wet Weight (g/cm ³)	1.80	1.81
Unit Wet Weight (pcf)	112.6	112.9
Unit Dry Weight (pcf)	84.4	84.3
Unit Dry Weight (g/cm ³)	1.35	1.35
Void Ratio, e	1.00	1.00
Porosity, n	0.50	0.50
Pore Volume (cm ³)	176.1	176.7
Total Weight of Sample After Test (g)		641.06

Tested By: WT Date: 7/9/25 Checked By: JLK Date: 7/11/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-003
Lab ID No.: 2025-330-003-004

Boring No.: 5/29/25
Depth (ft): S2-2PC-4BFS (2)
Sample No.: 41 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	23.06

Final Sample Dimensions

Sample Length (cm), L	7.62
Sample Diameter (cm)	7.69
Sample Area (cm ²), A	46.39
Inflow Burette Area (cm ²), a-in	0.962
Outflow Burette Area (cm ²), a-out	0.962
B Parameter (%)	96

AVERAGE PERMEABILITY = 4.9E-06 cm/sec @ 20°C

AVERAGE PERMEABILITY = 4.9E-08 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/10/2025	12	10	0.000	0.0	0.0	200.6	0	21.6	NA
7/10/2025	12	12	0.033	0.7	0.9	198.9	0	21.6	5.4E-06
7/10/2025	12	14	0.067	1.5	1.7	197.3	0	21.6	5.0E-06
7/10/2025	12	16	0.100	2.2	2.4	195.8	0	21.6	4.8E-06
7/10/2025	12	18	0.133	2.9	3.2	194.3	0	21.6	5.0E-06
7/10/2025	12	20	0.167	3.6	3.9	192.9	0	21.6	4.6E-06
7/10/2025	12	22	0.200	4.4	4.6	191.4	0	21.6	4.9E-06
7/10/2025	12	24	0.233	5.1	5.3	189.8	1	21.6	5.2E-06

Tested By: WT

Date: 7/9/25

Checked By: JLK

Date: 7/11/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

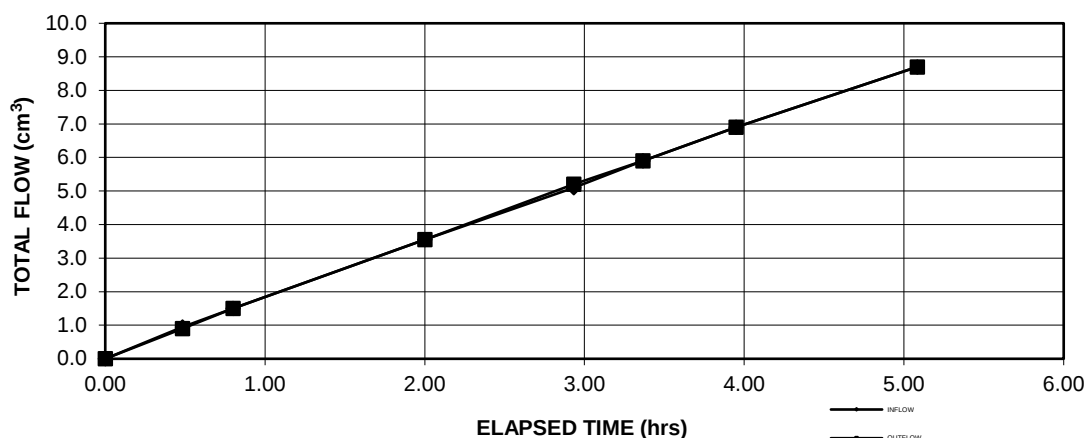


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-001

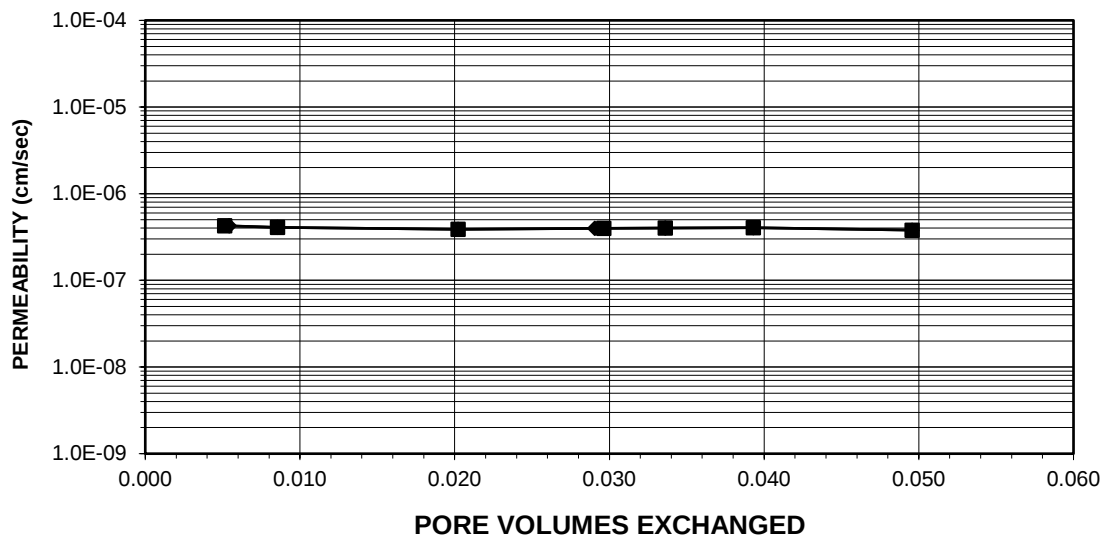
Boring No.: 5/29/25
Depth (ft): S2-10PC
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $4.0\text{E-}07$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $4.0\text{E-}09$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/25/25

Checked By:

JLK

Date: 7/30/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-001

Boring No.: 5/29/25
Depth (ft): S2-10PC
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Black Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	875	1722
Weight of Tare & Wet Sample (g)	503.81	748.35
Weight of Tare & Dry Sample (g)	408.88	588.53
Weight of Tare (g)	109.98	81.14
Weight of Water (g)	94.93	159.82
Weight of Dry Sample (g)	298.90	507.39
Moisture Content (%)	31.8	31.5

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	664.72	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	664.72	663.40
Length 1 (in)	3.063	3.077
Length 2 (in)	3.054	3.053
Length 3 (in)	3.078	3.070
Top Diameter (in)	3.039	3.036
Middle Diameter (in)	3.032	3.030
Bottom Diameter (in)	3.025	3.024
Average Length (in)	3.07	3.07
Average Area (in ²)	7.22	7.21
Sample Volume (cm ³)	362.64	362.36
Unit Wet Weight (g/cm ³)	1.83	1.83
Unit Wet Weight (pcf)	114.4	114.3
Unit Dry Weight (pcf)	86.8	86.9
Unit Dry Weight (g/cm ³)	1.39	1.39
Void Ratio, e	0.94	0.94
Porosity, n	0.48	0.48
Pore Volume (cm ³)	175.8	175.5
Total Weight of Sample After Test (g)		670.21

Tested By: DP Date: 7/25/25 Checked By: JLK Date: 7/30/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-001

Boring No.: 5/29/25
Depth (ft): S2-10PC
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	22.56

Final Sample Dimensions

Sample Length (cm), L	7.79
Sample Diameter (cm)	7.70
Sample Area (cm ²), A	46.52
Inflow Burette Area (cm ²), a-in	1.044
Outflow Burette Area (cm ²), a-out	0.888

AVERAGE PERMEABILITY = 4.0E-07 cm/sec @ 20°C
AVERAGE PERMEABILITY = 4.0E-09 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/28/2025	7	55	0.000	0.0	0.0	202.9	0	21.3	NA
7/28/2025	8	24	0.483	1.0	0.9	200.9	0	21.3	4.3E-07
7/28/2025	8	43	0.800	1.5	1.5	199.7	0	21.3	4.1E-07
7/28/2025	9	55	2.000	3.6	3.6	195.5	0	21.4	3.9E-07
7/28/2025	10	51	2.933	5.1	5.2	192.1	0	21.5	4.0E-07
7/28/2025	11	17	3.367	5.9	5.9	190.6	0	21.6	4.0E-07
7/28/2025	11	52	3.950	6.9	6.9	188.5	0	21.6	4.0E-07
7/28/2025	13	0	5.083	8.7	8.7	184.7	1	21.7	3.8E-07

Tested By: DP

Date: 7/25/25

Checked By: JLK

Date: 7/30/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

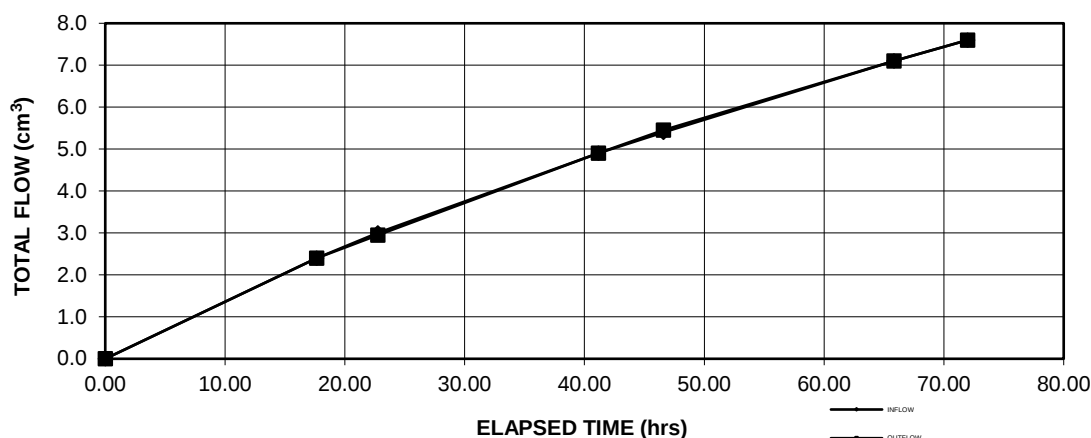


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-002

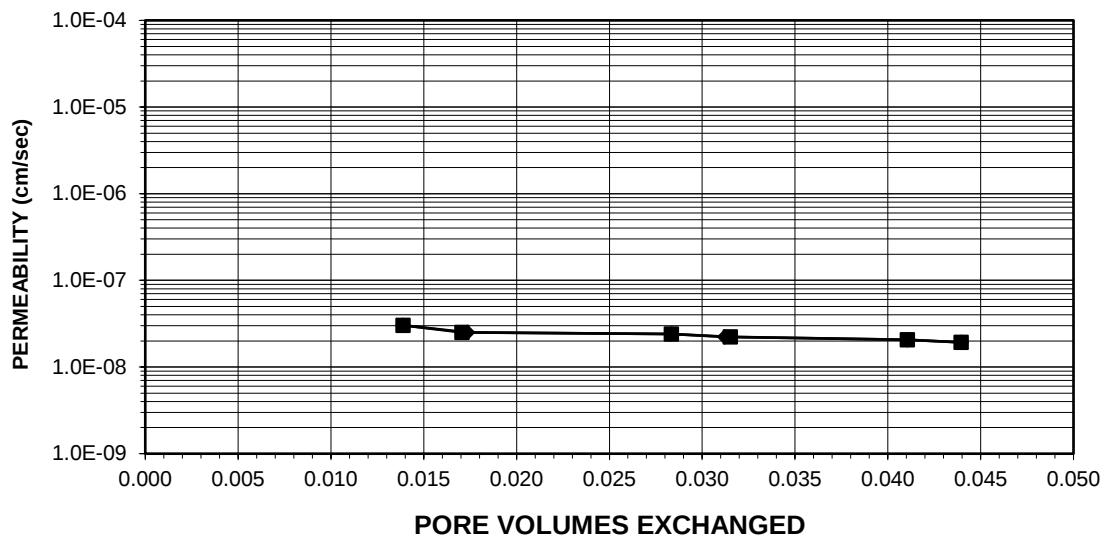
Boring No.: 5/29/25
Depth (ft): S2-3PC-7BFS
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $2.2\text{E-}08$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $2.2\text{E-}10$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/25/25

Checked By:

JLK

Date: 7/31/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-002

Boring No.: 5/29/25
Depth (ft): S2-3PC-7BFS
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Black Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	614	589
Weight of Tare & Wet Sample (g)	468.75	729.84
Weight of Tare & Dry Sample (g)	374.46	570.42
Weight of Tare (g)	83.97	82.39
Weight of Water (g)	94.29	159.42
Weight of Dry Sample (g)	290.49	488.03
Moisture Content (%)	32.5	32.7

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	652.21	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	652.21	653.23
Length 1 (in)	3.019	3.012
Length 2 (in)	3.013	3.010
Length 3 (in)	3.023	3.025
Top Diameter (in)	3.016	3.032
Middle Diameter (in)	3.027	3.026
Bottom Diameter (in)	3.035	3.019
Average Length (in)	3.02	3.02
Average Area (in ²)	7.19	7.19
Sample Volume (cm ³)	355.71	355.32
Unit Wet Weight (g/cm ³)	1.83	1.84
Unit Wet Weight (pcf)	114.5	114.8
Unit Dry Weight (pcf)	86.4	86.5
Unit Dry Weight (g/cm ³)	1.38	1.39
Void Ratio, e	0.95	0.95
Porosity, n	0.49	0.49
Pore Volume (cm ³)	173.3	173.0
Total Weight of Sample After Test (g)		655.91

Tested By: DP Date: 7/25/25 Checked By: JLK Date: 7/31/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-002

Boring No.: 5/29/25
Depth (ft): S2-3PC-7BFS
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	22.95

Final Sample Dimensions

Sample Length (cm), L	7.66
Sample Diameter (cm)	7.69
Sample Area (cm ²), A	46.39
Inflow Burette Area (cm ²), a-in	0.963
Outflow Burette Area (cm ²), a-out	0.957

AVERAGE PERMEABILITY = 2.2E-08 cm/sec @ 20°C
AVERAGE PERMEABILITY = 2.2E-10 m/sec @ 20°C

DATE	TIME		ELAPSED TIME	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD	FLOW	TEMP.	INCREMENTAL PERMEABILITY
(mm/dd/yy)	(hr)	(min)	t (hr)	(cm ³)	(cm ³)	h (cm)	(0 flow) (1 stop)	(°C)	@ 20°C (cm/sec)
7/27/2025	14	15	0.000	0.0	0.0	198.7	0	21.1	NA
7/28/2025	7	53	17.633	2.4	2.4	193.8	0	21.3	3.0E-08
7/28/2025	13	0	22.750	3.0	3.0	192.6	0	21.7	2.5E-08
7/29/2025	7	25	41.167	4.9	4.9	188.7	0	21.1	2.4E-08
7/29/2025	12	51	46.600	5.4	5.5	187.6	0	21.7	2.2E-08
7/30/2025	8	5	65.833	7.1	7.1	184.2	0	21.1	2.1E-08
7/30/2025	14	14	71.983	7.6	7.6	183.1	1	21.5	1.9E-08

Tested By: DP

Date: 7/25/25

Checked By: JLK

Date: 7/31/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

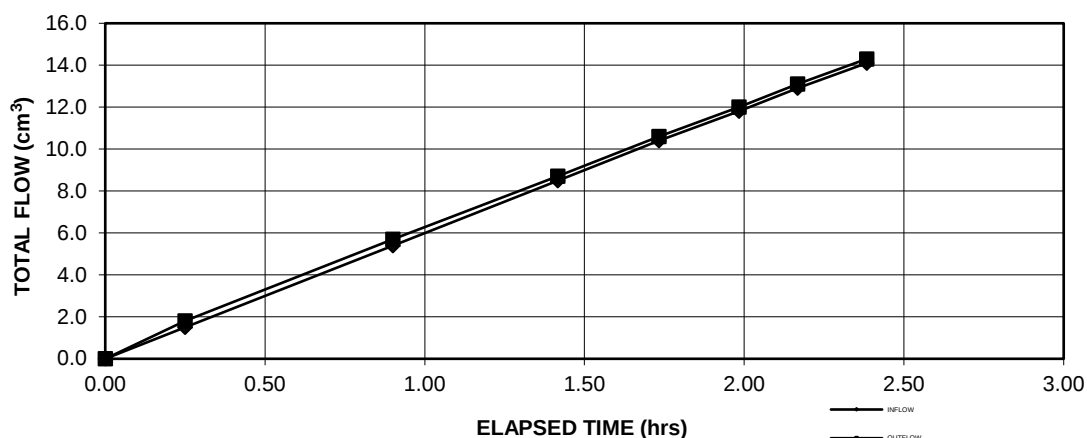


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-003

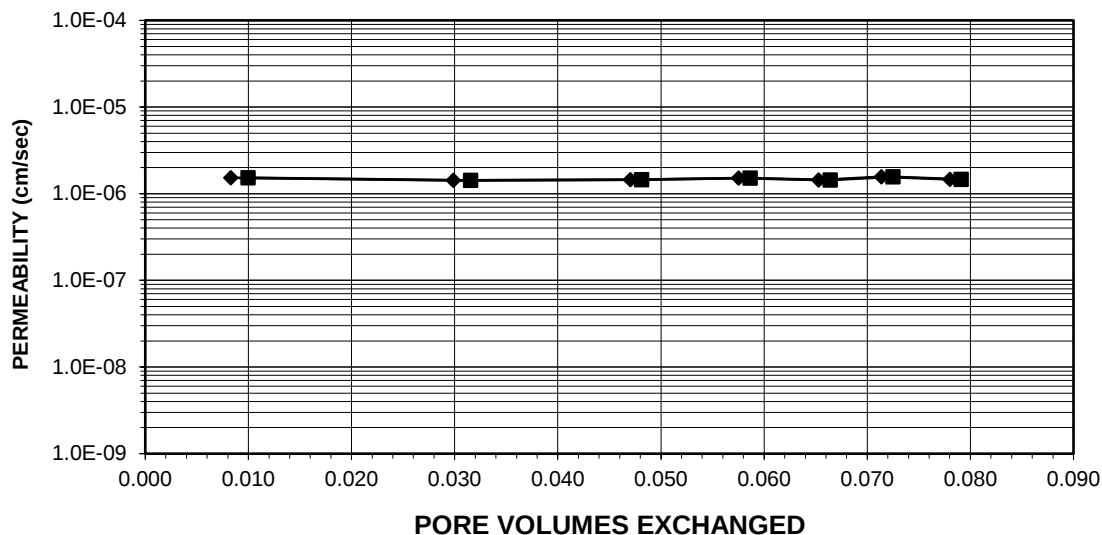
Boring No.: 5/30/25
Depth (ft): S1-10PC
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $1.5\text{E-}06$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $1.5\text{E-}08$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/25/25

Checked By:

JLK

Date: 7/30/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-003

Boring No.: 5/30/25
Depth (ft): S1-10PC
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Brown Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	546	1125
Weight of Tare & Wet Sample (g)	488.51	761.36
Weight of Tare & Dry Sample (g)	390.97	594.36
Weight of Tare (g)	84.58	83.37
Weight of Water (g)	97.54	167.00
Weight of Dry Sample (g)	306.39	510.99
Moisture Content (%)	31.8	32.7

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	671.35	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	671.35	675.66
Length 1 (in)	3.121	3.150
Length 2 (in)	3.103	3.116
Length 3 (in)	3.165	3.130
Top Diameter (in)	3.036	3.023
Middle Diameter (in)	3.030	3.026
Bottom Diameter (in)	3.021	3.032
Average Length (in)	3.13	3.13
Average Area (in ²)	7.21	7.20
Sample Volume (cm ³)	369.56	369.35
Unit Wet Weight (g/cm ³)	1.82	1.83
Unit Wet Weight (pcf)	113.4	114.2
Unit Dry Weight (pcf)	86.0	86.1
Unit Dry Weight (g/cm ³)	1.38	1.38
Void Ratio, e	0.96	0.96
Porosity, n	0.49	0.49
Pore Volume (cm ³)	181.0	180.7
Total Weight of Sample After Test (g)		678.70

Tested By: DP Date: 7/25/25 Checked By: JLK Date: 7/30/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-003

Boring No.: 5/30/25
Depth (ft): S1-10PC
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	22.09

Final Sample Dimensions

Sample Length (cm), L	7.96
Sample Diameter (cm)	7.69
Sample Area (cm ²), A	46.43
Inflow Burette Area (cm ²), a-in	0.962
Outflow Burette Area (cm ²), a-out	0.962
B Parameter (%)	95

AVERAGE PERMEABILITY = 1.5E-06 cm/sec @ 20°C
AVERAGE PERMEABILITY = 1.5E-08 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/29/2025	7	37	0.000	0.0	0.0	200.6	0	21.1	NA
7/29/2025	7	52	0.250	1.5	1.8	197.1	0	21.1	1.5E-06
7/29/2025	8	31	0.900	5.4	5.7	189.1	0	21.3	1.4E-06
7/29/2025	9	2	1.417	8.5	8.7	182.8	0	21.4	1.5E-06
7/29/2025	9	21	1.733	10.4	10.6	178.9	0	21.4	1.5E-06
7/29/2025	9	36	1.983	11.8	12.0	176.0	0	21.5	1.4E-06
7/29/2025	9	47	2.167	12.9	13.1	173.7	0	21.5	1.6E-06
7/29/2025	10	0	2.383	14.1	14.3	171.2	1	21.5	1.5E-06

Tested By: DP

Date: 7/25/25

Checked By: JLK

Date: 7/30/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

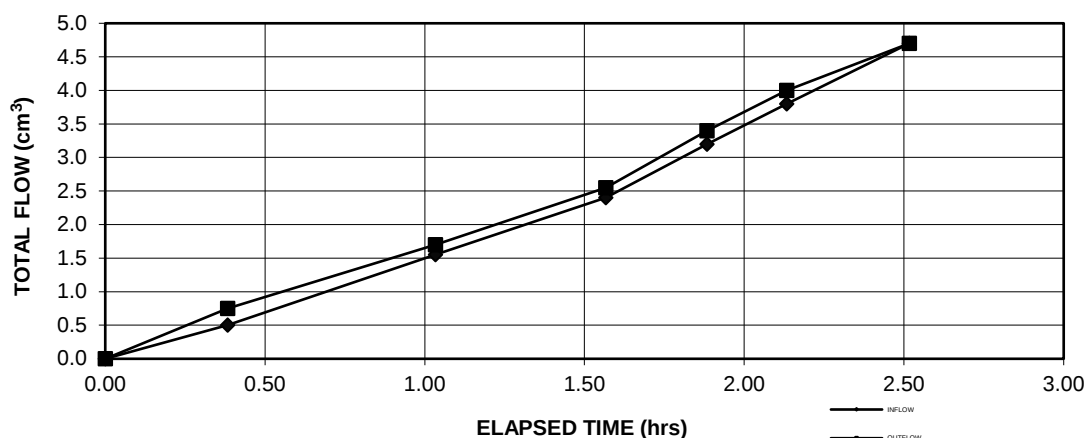


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-004

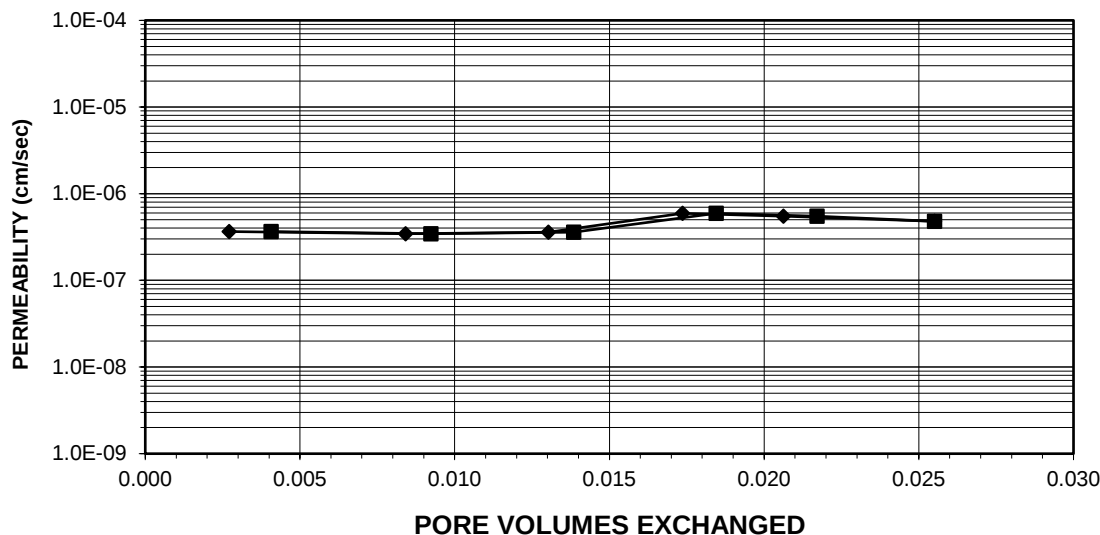
Boring No.: 5/30/25
Depth (ft): S1-3PC-7BFS
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $5.0\text{E-}07$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $5.0\text{E-}09$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/25/25

Checked By:

JLK

Date: 7/30/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-004

Boring No.: 5/30/25
Depth (ft): S1-3PC-7BFS
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Brown Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	545	ZY
Weight of Tare & Wet Sample (g)	510.70	746.30
Weight of Tare & Dry Sample (g)	403.60	571.80
Weight of Tare (g)	82.51	83.06
Weight of Water (g)	107.10	174.50
Weight of Dry Sample (g)	321.09	488.74
Moisture Content (%)	33.4	35.7

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	661.67	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	661.67	673.32
Length 1 (in)	3.097	3.058
Length 2 (in)	3.072	3.084
Length 3 (in)	3.053	3.091
Top Diameter (in)	3.036	3.051
Middle Diameter (in)	3.048	3.049
Bottom Diameter (in)	3.052	3.044
Average Length (in)	3.07	3.08
Average Area (in ²)	7.28	7.30
Sample Volume (cm ³)	366.91	368.00
Unit Wet Weight (g/cm ³)	1.80	1.83
Unit Wet Weight (pcf)	112.6	114.2
Unit Dry Weight (pcf)	84.4	84.2
Unit Dry Weight (g/cm ³)	1.35	1.35
Void Ratio, e	1.00	1.00
Porosity, n	0.50	0.50
Pore Volume (cm ³)	183.1	184.2
Total Weight of Sample After Test (g)		666.76

Tested By: DP Date: 7/25/25 Checked By: JLK Date: 7/30/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-004

Boring No.: 5/30/25
Depth (ft): S1-3PC-7BFS
Sample No.: 56 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	22.48

Final Sample Dimensions

Sample Length (cm), L	7.82
Sample Diameter (cm)	7.74
Sample Area (cm ²), A	47.07
Inflow Burette Area (cm ²), a-in	0.962
Outflow Burette Area (cm ²), a-out	0.962

AVERAGE PERMEABILITY = 5.0E-07 cm/sec @ 20°C
AVERAGE PERMEABILITY = 5.0E-09 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/29/2025	7	28	0.000	0.0	0.0	200.6	0	21.1	NA
7/29/2025	7	51	0.383	0.5	0.8	199.3	0	21.1	3.6E-07
7/29/2025	8	30	1.033	1.6	1.7	197.2	0	21.3	3.4E-07
7/29/2025	9	2	1.567	2.4	2.6	195.4	0	21.4	3.6E-07
7/29/2025	9	21	1.883	3.2	3.4	193.7	0	21.4	5.9E-07
7/29/2025	9	36	2.133	3.8	4.0	192.5	0	21.5	5.5E-07
7/29/2025	9	59	2.517	4.7	4.7	190.8	1	21.5	4.8E-07

Tested By: DP

Date: 7/25/25

Checked By: JLK

Date: 7/30/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

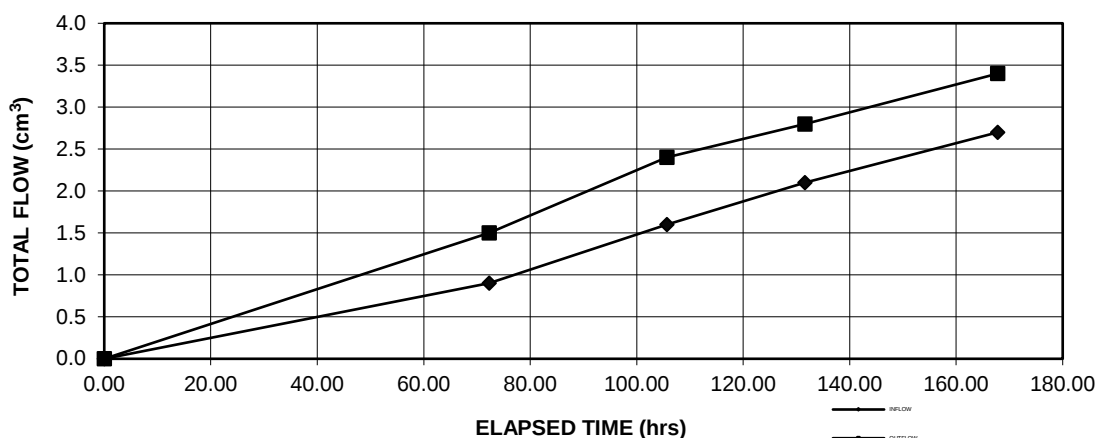


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-005

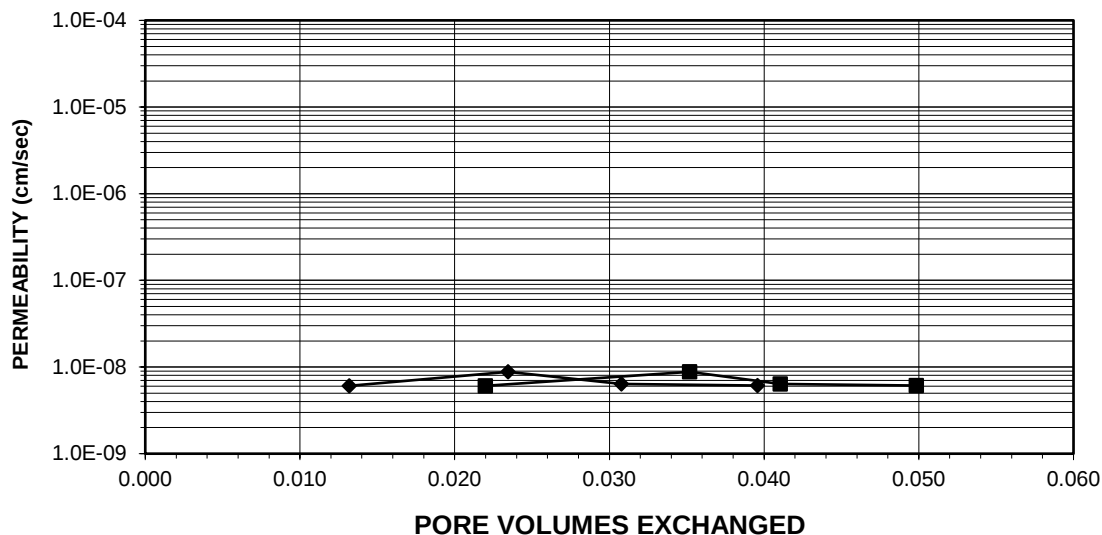
Boring No.: 6/23/25
Depth (ft): S3-15PC
Sample No.: 31 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $6.8\text{E-}09$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $6.8\text{E-}11$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/25/25

Checked By:

KC

Date: 8/6/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-005

Boring No.: 6/23/25
Depth (ft): S3-15PC
Sample No.: 31 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Brown Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	562	916
Weight of Tare & Wet Sample (g)	157.47	287.25
Weight of Tare & Dry Sample (g)	132.26	221.91
Weight of Tare (g)	84.02	109.47
Weight of Water (g)	25.21	65.34
Weight of Dry Sample (g)	48.24	112.44
Moisture Content (%)	52.3	58.1

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	174.05	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	174.05	180.74
Length 1 (in)	2.156	2.157
Length 2 (in)	2.147	2.148
Length 3 (in)	2.154	2.149
Top Diameter (in)	2.002	1.995
Middle Diameter (in)	2.001	1.999
Bottom Diameter (in)	1.998	2.001
Average Length (in)	2.15	2.15
Average Area (in ²)	3.14	3.14
Sample Volume (cm ³)	110.84	110.57
Unit Wet Weight (g/cm ³)	1.57	1.63
Unit Wet Weight (pcf)	98.0	102.0
Unit Dry Weight (pcf)	64.4	64.5
Unit Dry Weight (g/cm ³)	1.03	1.03
Void Ratio, e	1.62	1.61
Porosity, n	0.62	0.62
Pore Volume (cm ³)	68.5	68.2
Total Weight of Sample After Test (g)		178.37

Tested By: DP Date: 7/25/25 Checked By: KC Date: 8/6/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-005

Boring No.: 6/23/25
Depth (ft): S3-15PC
Sample No.: 31 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	87.5
Bottom Cap (psi)	90.0
Cell (psi)	95.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	32.16

Final Sample Dimensions

Sample Length (cm), L	5.46
Sample Diameter (cm)	5.08
Sample Area (cm ²), A	20.23
Inflow Burette Area (cm ²), a-in	0.904
Outflow Burette Area (cm ²), a-out	0.876
	0

AVERAGE PERMEABILITY = 6.8E-09 cm/sec @ 20°C
AVERAGE PERMEABILITY = 6.8E-11 m/sec @ 20°C

DATE	TIME	ELAPSED TIME	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD	FLOW	TEMP.	INCREMENTAL PERMEABILITY	
(mm/dd/yy)	(hr)	(min)	t (hr)	(cm ³)	(cm ³)	h (cm)	(0 flow) (1 stop)	(°C)	@ 20°C (cm/sec)
7/29/2025	7	23	0.000	0.0	0.0	202.3	0	21.1	NA
8/1/2025	7	42	72.317	0.9	1.5	199.5	0	21.2	6.1E-09
8/2/2025	17	5	105.700	1.6	2.4	197.7	0	21.4	8.8E-09
8/3/2025	19	0	131.617	2.1	2.8	196.7	0	21.6	6.4E-09
8/5/2025	7	11	167.800	2.7	3.4	195.4	1	21.5	6.1E-09

Tested By: DP Date: 7/25/25 Checked By: KC Date: 8/6/25

PERMEABILITY TEST

ASTM D 5084-16a Method C

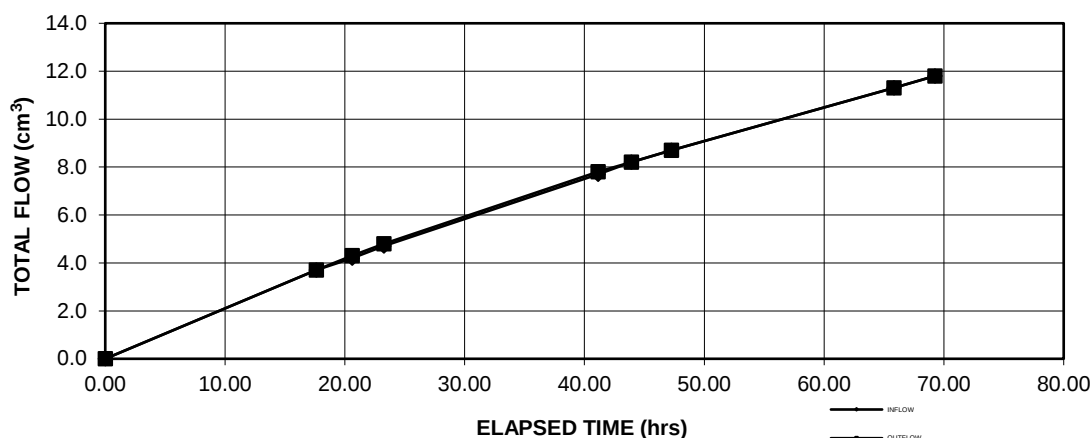


Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-006

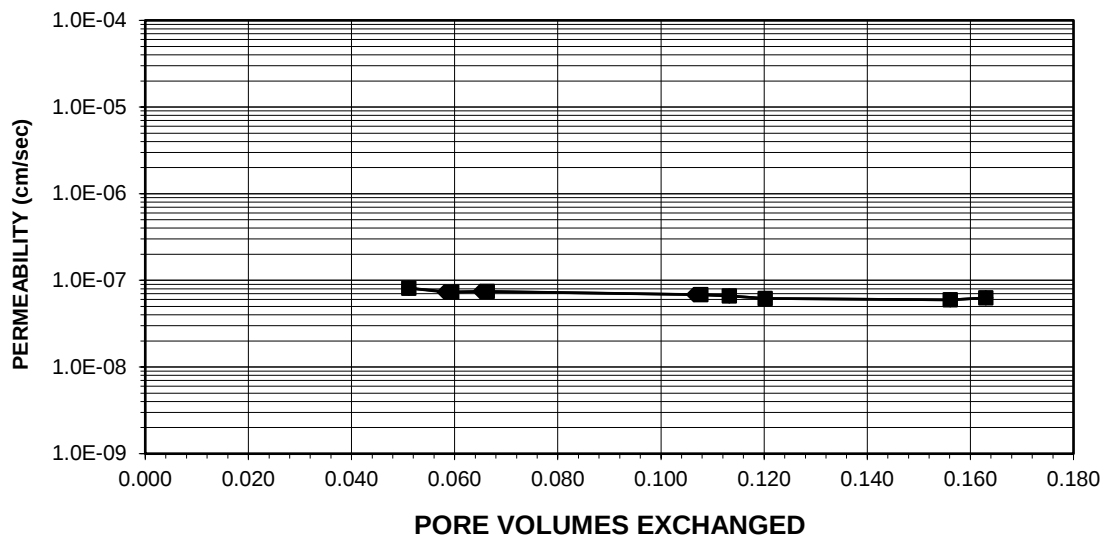
Boring No.: 6/23/25
Depth (ft): S3-6PC-14BFS
Sample No.: 31 Day
Avg. Effective Consol. Pressure (psi): 6.25

AVERAGE PERMEABILITY = $6.3\text{E-}08$ cm/sec @ 20°C
AVERAGE PERMEABILITY = $6.3\text{E-}10$ m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



Tested By: DP

Date: 7/25/25

Checked By:

JLK

Date: 7/31/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-006

Boring No.: 6/23/25
Depth (ft): S3-6PC-14BFS
Sample No.: 31 Day
Avg. Effective Consol. Pressure (psi): 6.25

Specific Gravity: 2.70 Assumed
Sample Condition: Previously Remolded

Visual Description: Brown Stabilized Material

Permeant Type: Deaired Water

MOISTURE CONTENT:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Tare Number	878	1720
Weight of Tare & Wet Sample (g)	188.40	264.84
Weight of Tare & Dry Sample (g)	160.03	195.10
Weight of Tare (g)	109.85	81.42
Weight of Water (g)	28.37	69.74
Weight of Dry Sample (g)	50.18	113.68
Moisture Content (%)	56.5	61.3

SPECIMEN:	<u>BEFORE TEST</u>	<u>AFTER TEST</u>
Weight of Tube & Wet Sample (g)	180.65	NA
Weight of Tube (g)	0.00	NA
Weight of Wet Sample (g)	180.65	186.20
Length 1 (in)	2.232	2.232
Length 2 (in)	2.224	2.232
Length 3 (in)	2.226	2.234
Top Diameter (in)	2.004	2.005
Middle Diameter (in)	2.002	2.000
Bottom Diameter (in)	2.000	2.000
Average Length (in)	2.23	2.23
Average Area (in ²)	3.15	3.15
Sample Volume (cm ³)	114.90	115.13
Unit Wet Weight (g/cm ³)	1.57	1.62
Unit Wet Weight (pcf)	98.1	101.0
Unit Dry Weight (pcf)	62.7	62.6
Unit Dry Weight (g/cm ³)	1.00	1.00
Void Ratio, e	1.69	1.69
Porosity, n	0.63	0.63
Pore Volume (cm ³)	72.2	72.4
Total Weight of Sample After Test (g)		184.33

Tested By: DP Date: 7/25/25 Checked By: JLK Date: 7/31/25

PERMEABILITY TEST

ASTM D 5084-16a Method C



Client: ENTACT, LLC
Client Project: Glacier NW Site E9447
Project No.: 2025-330-004
Lab ID No.: 2025-330-004-006

Boring No.: 6/23/25
Depth (ft): S3-6PC-14BFS
Sample No.: 31 Day
Avg. Effective Consol. Pressure (psi): 6.25

Pressure Heads (Constant)

Top Cap (psi)	77.5
Bottom Cap (psi)	80.0
Cell (psi)	85.0
Total Pressure Head (cm)	175.8
Hydraulic Gradient	30.99

Final Sample Dimensions

Sample Length (cm), L	5.67
Sample Diameter (cm)	5.08
Sample Area (cm ²), A	20.30
Inflow Burette Area (cm ²), a-in	1.056
Outflow Burette Area (cm ²), a-out	0.902

AVERAGE PERMEABILITY = 6.3E-08 cm/sec @ 20°C
AVERAGE PERMEABILITY = 6.3E-10 m/sec @ 20°C

DATE	TIME		ELAPSED TIME t	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD h	FLOW (0 flow) (1 stop)	TEMP. (°C)	INCREMENTAL PERMEABILITY @ 20°C (cm/sec)
(mm/dd/yy)	(hr)	(min)	(hr)	(cm ³)	(cm ³)	(cm)			
7/27/2025	14	15	0.000	0.0	0.0	198.0	0	21.1	NA
7/28/2025	7	52	17.617	3.7	3.7	190.4	0	21.3	8.1E-08
7/28/2025	10	51	20.600	4.2	4.3	189.2	0	21.5	7.3E-08
7/28/2025	13	30	23.250	4.7	4.8	188.2	0	21.7	7.4E-08
7/29/2025	7	24	41.150	7.7	7.8	182.0	0	21.1	6.8E-08
7/29/2025	10	10	43.917	8.2	8.2	181.1	0	21.5	6.6E-08
7/29/2025	13	30	47.250	8.7	8.7	180.1	0	21.7	6.2E-08
7/30/2025	8	5	65.833	11.3	11.3	174.7	0	21.1	6.0E-08
7/30/2025	11	30	69.250	11.8	11.8	173.7	1	21.5	6.3E-08

Tested By: DP

Date: 7/25/25

Checked By: JLK

Date: 7/31/25

ATTACHMENT 4
BASELINE ANALYTICAL WITH EPA LEAF 1316 REPORT



ANALYTICAL REPORT

PREPARED FOR

Attn: Rory Kilkenny
ENTACT, LLC
701 Fifth Ave.
Suite 4200
Seattle, Washington 98104

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JOB DESCRIPTION

Glacier NW ISS Treatability Study REVISE

JOB NUMBER

180-190960-1

Eurofins Pittsburgh

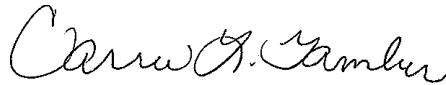
Job Notes

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

PA Lab ID: 02-00416

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

Authorization



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Authorized for release by
Carrie Gamber, Senior Project Manager
Carrie.Gamber@et.eurofinsus.com
(412)963-2428

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Case Narrative

Client: ENTACT, LLC
Project: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Job ID: 180-190960-1

Eurofins Pittsburgh

CASE NARRATIVE

Client: ENTACT, LLC

Project: Glacier NW ISS Treatability Study REVISE

Report Number: 180-190960-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 05/27/2025; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.6 C.

SEMIVOLATILES

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

300 IC

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

DIOXINS

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 410-654337 and analytical batch 410-654452 recovered outside control limits for the following analytes: 1,2,3,7,8-PeCDF, 13C-2,3,4,7,8-PeCDF and 13C-2,3,7,8-TCDD. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

METALS

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

GENERAL CHEMISTRY

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

Eurofins Pittsburgh

Definitions/Glossary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

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

Accreditation/Certification Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00690	06-28-25
California	State	3122	05-30-26
Connecticut	State	PH-0820	09-30-26
Florida	NELAP	E871008	06-30-25
Georgia	State	PA 02-00416	04-30-26
Illinois	NELAP	200005	07-31-25
Kansas	NELAP	E-10350	01-31-26
Kentucky (UST)	State	162013	04-30-26
Kentucky (WW)	State	KY98043	12-31-25
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-25
New Hampshire	NELAP	2030	04-04-26
New Jersey	NELAP	PA005	06-30-25
New York	NELAP	11182	03-31-26
North Carolina (WW/SW)	State	434	12-31-25
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-26
Pennsylvania	NELAP	02-00416	04-30-26
Rhode Island	State	LAO00375	12-30-25
South Carolina	State	89014	04-30-25 *
Texas	NELAP	T104704528	03-31-26
US Fish & Wildlife	US Federal Programs	A21930	04-30-26
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	03-31-24 *
Virginia	NELAP	460189	09-14-25
West Virginia DEP	State	142	01-31-26
Wisconsin	State	998027800	08-31-25

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-25
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-25
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Pittsburgh

Accreditation/Certification Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-25
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-25
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-25
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-26
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	01-10-26
New Jersey	NELAP	PA011	06-30-25
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-25
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-25
Oregon	NELAP	PA200001	09-11-25
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-25
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-25
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-25
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Pittsburgh

Sample Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-190960-1	WATER #1 - SITE GROUND WATER	Water	05/27/25 13:20	05/27/25 16:38
180-190960-2	WATER #2 - SITE TAP WATER	Water	05/27/25 13:20	05/27/25 16:38
180-190960-3	WATER #3- LAB PROVIDED DEIONIZED WATER MADE ANAEROBIC BY NITROGEN SPARGING	Water	06/23/25 11:00	05/27/25 16:38

Method Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Method	Method Description	Protocol	Laboratory
EPA 8270E LL	Semivolatile Organic Compounds (GC/MS)	SW846	EET PIT
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	EET PIT
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
2540C - 2015	Total Dissolved Solids (Dried at 180 °C)	SM	EET PIT
4500-O G-2016	Oxygen, Dissolved	SM	EET PIT
EPA 180.1	Turbidity, Nephelometric	EPA	EET PIT
EPA 9040C	pH	SW846	EET PIT
SM 2510B	Conductivity, Specific Conductance	SM	EET PIT
SM 2520B	Salinity, Electrical Conductivity	SM	EET PIT
SM 2580B	Reduction-Oxidation (REDOX) Potential	SM	EET PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PIT
8290A	Separatory Funnel (Liquid-Liquid) Extraction of Dioxins and Furans	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Client Sample ID: WATER #1 - SITE GROUND WATER

Lab Sample ID: 180-190960-1

Date Collected: 05/27/25 13:20

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			240 mL	250 uL	496742	05/28/25 15:59	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	496904	05/30/25 19:05	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	497223	06/05/25 19:23	ERP	EET PIT
		Instrument ID: INTEGRION								
Total/NA	Prep	8290A			993.7 mL	20 uL	654337	06/06/25 21:06	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	658184	06/16/25 14:23	TJK2	ELLE
		Instrument ID: DF17280B								
Total Recoverable	Prep	3005A			50 mL	50 mL	654496	06/11/25 06:55	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			656430	06/11/25 18:23	I9IN	ELLE
		Instrument ID: E09 - 30921								
Total/NA	Analysis	2540C - 2015		1	100 mL	100 mL	496951	05/30/25 15:16	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 9040C		1			497815	06/14/25 12:57	BAB	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	SM 2510B		1			497170	06/04/25 12:06	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2520B		1			497786	06/13/25 13:55	RSR	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: WATER #2 - SITE TAP WATER

Lab Sample ID: 180-190960-2

Date Collected: 05/27/25 13:20

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			230 mL	250 uL	496742	05/28/25 15:59	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	496904	05/30/25 19:28	VVP	EET PIT
		Instrument ID: CHMSD7								
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1 mL	497223	06/05/25 18:40	ERP	EET PIT
		Instrument ID: INTEGRION								
Total/NA	Prep	8290A			1023.7 mL	20 uL	654337	06/06/25 21:06	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	658184	06/16/25 15:15	TJK2	ELLE
		Instrument ID: DF17280B								
Total Recoverable	Prep	3005A			50 mL	50 mL	654496	06/11/25 06:55	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			656430	06/11/25 18:19	I9IN	ELLE
		Instrument ID: E09 - 30921								
Total/NA	Analysis	2540C - 2015		1	100 mL	100 mL	496951	05/30/25 15:16	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 9040C		1			497815	06/14/25 12:57	BAB	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	SM 2510B		1			497170	06/04/25 12:07	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2520B		1			497786	06/13/25 13:55	RSR	EET PIT
		Instrument ID: NOEQUIP								

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

**Client Sample ID: WATER #3- LAB PROVIDED DEIONIZED
WATER MADE ANAEROBIC BY NITROGEN SPARGING**

Lab Sample ID: 180-190960-3

Date Collected: 06/23/25 11:00

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	4500-O G-2016		1	300 mL	300 mL	498335	06/23/25 10:05	ELS	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 180.1		1			498339	06/23/25 10:48	RSK	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 9040C		1			498343	06/23/25 10:57	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2510B		1			498364	06/23/25 14:32	SNR	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2580B		1			498340	06/23/25 10:12	ELS	EET PIT
		Instrument ID: NOEQUIP								

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Analyst References:

Lab: EET PIT

Batch Type: Prep

BJT = Bill Trout

Batch Type: Analysis

A1K = Agnes Komlos

BAB = Brooke Batyi

ELS = Edwin Shireman

ERP = Evan Papak

RSK = Robert Kurtz

RSR = Roseann Ruyechan

SNR = Sabra Richart

VVP = Vincent Piccolino

Lab: ELLE

Batch Type: Prep

SJ7Z = Christopher Albaugh

UJL8 = James Mertz

Batch Type: Analysis

I9IN = Miles Yiengst

TJK2 = Brandon Jensen

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Client Sample ID: WATER #1 - SITE GROUND WATER

Lab Sample ID: 180-190960-1

Date Collected: 05/27/25 13:20

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.2	0.88	ug/L		05/28/25 15:59	05/30/25 19:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	66		23 - 128				05/28/25 15:59	05/30/25 19:05	1
2-Fluorobiphenyl	57		20 - 105				05/28/25 15:59	05/30/25 19:05	1
2-Fluorophenol (Surr)	49		20 - 105				05/28/25 15:59	05/30/25 19:05	1
Nitrobenzene-d5 (Surr)	54		20 - 107				05/28/25 15:59	05/30/25 19:05	1
Phenol-d5 (Surr)	47		20 - 106				05/28/25 15:59	05/30/25 19:05	1
Terphenyl-d14 (Surr)	70		22 - 120				05/28/25 15:59	05/30/25 19:05	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	7.18		1.00	0.756	mg/L			06/05/25 19:23	1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	4.6	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,7,8-PeCDF	ND	+	25	2.8	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		06/06/25 21:06	06/16/25 14:23	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		06/06/25 21:06	06/16/25 14:23	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		06/06/25 21:06	06/16/25 14:23	1
2,3,4,7,8-PeCDF	ND	+	25	2.5	pg/L		06/06/25 21:06	06/16/25 14:23	1
2,3,7,8-TCDD	ND	+	5.0	0.88	pg/L		06/06/25 21:06	06/16/25 14:23	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		06/06/25 21:06	06/16/25 14:23	1
OCDD	220		110	36	pg/L		06/06/25 21:06	06/16/25 14:23	1
OCDF	ND		50	10	pg/L		06/06/25 21:06	06/16/25 14:23	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	88		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,4,6,7,8-HpCDF	91		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,4,7,8-HxCDD	80		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,4,7,8-HxCDF	86		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,4,7,8,9-HpCDF	76		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,6,7,8-HxCDD	94		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,6,7,8-HxCDF	95		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,7,8-PeCDD	86		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,7,8-PeCDF	93		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,7,8,9-HxCDD	88		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-1,2,3,7,8,9-HxCDF	83		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-2,3,4,6,7,8-HxCDF	91		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-2,3,4,7,8-PeCDF	96		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-2,3,7,8-TCDD	95		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-2,3,7,8-TCDF	106		40 - 135				06/06/25 21:06	06/16/25 14:23	1
13C-OCDD	88		40 - 135				06/06/25 21:06	06/16/25 14:23	1

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Client Sample ID: WATER #1 - SITE GROUND WATER

Lab Sample ID: 180-190960-1

Date Collected: 05/27/25 13:20

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-OCDF	81		40 - 135	06/06/25 21:06	06/16/25 14:23	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	620		2.0	0.68	ug/L		06/11/25 06:55	06/11/25 18:23	1
Copper	8.9		1.0	0.85	ug/L		06/11/25 06:55	06/11/25 18:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C - 2015)	370		10	10	mg/L			05/30/25 15:16	1
pH (SW846 EPA 9040C)	7.4	HF	0.1	0.1	SU			06/14/25 12:57	1
Specific Conductance (SM 2510B)	600		1.0	1.0	umhos/cm			06/04/25 12:06	1
Electrical Conductivity (SM 2510B)	600		1.0	1.0	umhos/cm			06/04/25 12:06	1
Salinity (SM 2520B)	ND		2.0	2.0	No Unit			06/13/25 13:55	1

Client Sample ID: WATER #2 - SITE TAP WATER

Lab Sample ID: 180-190960-2

Date Collected: 05/27/25 13:20

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		05/28/25 15:59	05/30/25 19:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		23 - 128	05/28/25 15:59	05/30/25 19:28	1
2-Fluorobiphenyl	59		20 - 105	05/28/25 15:59	05/30/25 19:28	1
2-Fluorophenol (Surr)	52		20 - 105	05/28/25 15:59	05/30/25 19:28	1
Nitrobenzene-d5 (Surr)	60		20 - 107	05/28/25 15:59	05/30/25 19:28	1
Phenol-d5 (Surr)	52		20 - 106	05/28/25 15:59	05/30/25 19:28	1
Terphenyl-d14 (Surr)	76		22 - 120	05/28/25 15:59	05/30/25 19:28	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.35		1.00	0.756	mg/L			06/05/25 18:40	1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		24	4.4	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,4,6,7,8-HpCDF	ND		24	4.3	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,4,7,8-HxCDD	ND		24	2.4	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,4,7,8-HxCDF	ND		24	2.4	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,4,7,8,9-HpCDF	ND		24	2.4	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,6,7,8-HxCDD	ND		24	2.4	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,6,7,8-HxCDF	ND		24	2.4	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,7,8-PeCDD	ND		24	3.1	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,7,8-PeCDF	ND	+	24	2.7	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,7,8,9-HxCDD	ND		24	2.4	pg/L		06/06/25 21:06	06/16/25 15:15	1
1,2,3,7,8,9-HxCDF	ND		24	3.4	pg/L		06/06/25 21:06	06/16/25 15:15	1
2,3,4,6,7,8-HxCDF	ND		24	2.4	pg/L		06/06/25 21:06	06/16/25 15:15	1
2,3,4,7,8-PeCDF	ND	+	24	2.4	pg/L		06/06/25 21:06	06/16/25 15:15	1

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Client Sample ID: WATER #2 - SITE TAP WATER

Lab Sample ID: 180-190960-2

Date Collected: 05/27/25 13:20

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND	++	4.9	0.85	pg/L		06/06/25 21:06	06/16/25 15:15	1
2,3,7,8-TCDF	ND		4.9	2.2	pg/L		06/06/25 21:06	06/16/25 15:15	1
OCDD	ND		110	35	pg/L		06/06/25 21:06	06/16/25 15:15	1
OCDF	ND		49	9.8	pg/L		06/06/25 21:06	06/16/25 15:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,4,7,8-HxCDD	86		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,4,7,8-HxCDF	87		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,4,7,8,9-HpCDF	81		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,6,7,8-HxCDD	101		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,6,7,8-HxCDF	98		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,7,8-PeCDD	95		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,7,8-PeCDF	98		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,7,8,9-HxCDD	94		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-1,2,3,7,8,9-HxCDF	88		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-2,3,4,6,7,8-HxCDF	92		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-2,3,4,7,8-PeCDF	98		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-2,3,7,8-TCDD	95		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-2,3,7,8-TCDF	100		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-OCDD	91		40 - 135				06/06/25 21:06	06/16/25 15:15	1
13C-OCDF	85		40 - 135				06/06/25 21:06	06/16/25 15:15	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		06/11/25 06:55	06/11/25 18:19	1
Copper	9.3		1.0	0.85	ug/L		06/11/25 06:55	06/11/25 18:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C - 2015)	48		10	10	mg/L			05/30/25 15:16	1
pH (SW846 EPA 9040C)	7.5	HF	0.1	0.1	SU			06/14/25 12:57	1
Specific Conductance (SM 2510B)	74		1.0	1.0	umhos/cm			06/04/25 12:07	1
Electrical Conductivity (SM 2510B)	74		1.0	1.0	umhos/cm			06/04/25 12:07	1
Salinity (SM 2520B)	ND		2.0	2.0	No Unit			06/13/25 13:55	1

Client Sample ID: WATER #3- LAB PROVIDED DEIONIZED

Lab Sample ID: 180-190960-3

WATER MADE ANAEROBIC BY NITROGEN SPARGING

Date Collected: 06/23/25 11:00

Matrix: Water

Date Received: 05/27/25 16:38

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oxygen, Dissolved (SM 4500-O G-2016)	7.5	HF	2.0	2.0	mg/L			06/23/25 10:05	1
Turbidity (EPA 180.1)	1.5		0.85	0.05	NTU			06/23/25 10:48	1
pH (SW846 EPA 9040C)	5.9	HF	0.1	0.1	SU			06/23/25 10:57	1
Specific Conductance (SM 2510B)	ND		1.0	1.0	umhos/cm			06/23/25 14:32	1
Oxidation Reduction Potential (SM 2580B)	71		10	10	millivolts			06/23/25 10:12	1

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-496742/1-A

Matrix: Water

Analysis Batch: 496904

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 496742

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		05/28/25 11:54	05/30/25 14:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		23 - 128				05/28/25 11:54	05/30/25 14:53	1
2-Fluorobiphenyl	84		20 - 105				05/28/25 11:54	05/30/25 14:53	1
2-Fluorophenol (Surr)	73		20 - 105				05/28/25 11:54	05/30/25 14:53	1
Nitrobenzene-d5 (Surr)	76		20 - 107				05/28/25 11:54	05/30/25 14:53	1
Phenol-d5 (Surr)	70		20 - 106				05/28/25 11:54	05/30/25 14:53	1
Terphenyl-d14 (Surr)	85		22 - 120				05/28/25 11:54	05/30/25 14:53	1

Lab Sample ID: LCS 180-496742/2-A

Matrix: Water

Analysis Batch: 496904

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 496742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	40.0	28.1		ug/L		70	35 - 102
Surrogate	%Recovery	Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	82		23 - 128				
2-Fluorobiphenyl	73		20 - 105				
2-Fluorophenol (Surr)	70		20 - 105				
Nitrobenzene-d5 (Surr)	68		20 - 107				
Phenol-d5 (Surr)	63		20 - 106				
Terphenyl-d14 (Surr)	56		22 - 120				

Lab Sample ID: LCSD 180-496742/3-A

Matrix: Water

Analysis Batch: 496904

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 496742

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pentachlorophenol	40.0	28.3		ug/L		71	35 - 102	1	17
Surrogate	%Recovery	Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	84		23 - 128						
2-Fluorobiphenyl	75		20 - 105						
2-Fluorophenol (Surr)	72		20 - 105						
Nitrobenzene-d5 (Surr)	68		20 - 107						
Phenol-d5 (Surr)	64		20 - 106						
Terphenyl-d14 (Surr)	58		22 - 120						

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-497223/6

Matrix: Water

Analysis Batch: 497223

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		1.00	0.756	mg/L			06/05/25 10:33	1

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: LCS 180-497223/7

Matrix: Water

Analysis Batch: 497223

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	50.0	49.63		mg/L		99	90 - 110

Lab Sample ID: 180-190960-2 MS

Matrix: Water

Analysis Batch: 497223

Client Sample ID: WATER #2 - SITE TAP WATER

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	2.35		50.0	52.03		mg/L		99	90 - 110

Lab Sample ID: 180-190960-2 MSD

Matrix: Water

Analysis Batch: 497223

Client Sample ID: WATER #2 - SITE TAP WATER

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	2.35		50.0	51.50		mg/L		98	90 - 110	1	20

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 410-654337/1-A

Matrix: Water

Analysis Batch: 654452

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 654337

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	4.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		06/06/25 21:06	06/09/25 21:06	1
2,3,7,8-TCDD	ND		5.0	0.87	pg/L		06/06/25 21:06	06/09/25 21:06	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		06/06/25 21:06	06/09/25 21:06	1
OCDD	ND		110	36	pg/L		06/06/25 21:06	06/09/25 21:06	1
OCDF	ND		50	10	pg/L		06/06/25 21:06	06/09/25 21:06	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	107		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-1,2,3,4,6,7,8-HpCDF	119		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-1,2,3,4,7,8-HxCDD	97		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-1,2,3,4,7,8-HxCDF	112		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-1,2,3,4,7,8,9-HpCDF	111		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-1,2,3,6,7,8-HxCDD	104		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-1,2,3,6,7,8-HxCDF	119		40 - 135	06/06/25 21:06	06/09/25 21:06	1

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 410-654337/1-A

Matrix: Water

Analysis Batch: 654452

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 654337

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	86		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-1,2,3,7,8-PeCDF	101		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-1,2,3,7,8,9-HxCDD	101		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-1,2,3,7,8,9-HxCDF	110		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-2,3,4,6,7,8-HxCDF	114		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-2,3,4,7,8-PeCDF	103		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-2,3,7,8-TCDD	99		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-2,3,7,8-TCDF	131		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-OCDD	102		40 - 135	06/06/25 21:06	06/09/25 21:06	1
13C-OCDF	109		40 - 135	06/06/25 21:06	06/09/25 21:06	1

Lab Sample ID: LCS 410-654337/2-A

Matrix: Water

Analysis Batch: 654452

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 654337

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,4,6,7,8-HpCDD	1000	1120		pg/L		112	71 - 120
1,2,3,4,6,7,8-HpCDF	1000	1100		pg/L		110	73 - 120
1,2,3,4,7,8-HxCDD	1000	1170		pg/L		117	76 - 120
1,2,3,4,7,8-HxCDF	1000	1090		pg/L		109	76 - 120
1,2,3,4,7,8,9-HpCDF	1000	1080		pg/L		108	71 - 120
1,2,3,6,7,8-HxCDD	1000	1140		pg/L		114	77 - 120
1,2,3,6,7,8-HxCDF	1000	1110		pg/L		111	76 - 120
1,2,3,7,8-PeCDD	1000	1230		pg/L		123	80 - 126
1,2,3,7,8-PeCDF	1000	1250	*+	pg/L		125	76 - 123
1,2,3,7,8,9-HxCDD	1000	1150		pg/L		115	76 - 123
1,2,3,7,8,9-HxCDF	1000	1060		pg/L		106	76 - 120
2,3,4,6,7,8-HxCDF	1000	1100		pg/L		110	75 - 120
2,3,4,7,8-PeCDF	1000	1220	*+	pg/L		122	75 - 121
2,3,7,8-TCDD	200	251	*+	pg/L		125	71 - 120
2,3,7,8-TCDF	200	231		pg/L		116	68 - 128
OCDD	2000	2360		pg/L		118	71 - 120
OCDF	2000	2220		pg/L		111	71 - 120

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,4,6,7,8-HpCDD	104		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	113		40 - 135
13C-1,2,3,4,7,8-HxCDD	98		40 - 135
13C-1,2,3,4,7,8-HxCDF	109		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	107		40 - 135
13C-1,2,3,6,7,8-HxCDD	102		40 - 135
13C-1,2,3,6,7,8-HxCDF	115		40 - 135
13C-1,2,3,7,8-PeCDD	86		40 - 135
13C-1,2,3,7,8-PeCDF	101		40 - 135
13C-1,2,3,7,8,9-HxCDD	97		40 - 135
13C-1,2,3,7,8,9-HxCDF	108		40 - 135
13C-2,3,4,6,7,8-HxCDF	111		40 - 135
13C-2,3,4,7,8-PeCDF	105		40 - 135
13C-2,3,7,8-TCDD	100		40 - 135

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-654337/2-A

Matrix: Water

Analysis Batch: 654452

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 654337

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDF	125		40 - 135
13C-OCDD	96		40 - 135
13C-OCDF	105		40 - 135

Lab Sample ID: LCSD 410-654337/3-A

Matrix: Water

Analysis Batch: 654452

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 654337

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	1000	1130		pg/L		113	71 - 120	1	25
1,2,3,4,6,7,8-HpCDF	1000	1070		pg/L		107	73 - 120	2	25
1,2,3,4,7,8-HxCDD	1000	1150		pg/L		115	76 - 120	2	25
1,2,3,4,7,8-HxCDF	1000	1090		pg/L		109	76 - 120	0	25
1,2,3,4,7,8,9-HpCDF	1000	1060		pg/L		106	71 - 120	2	25
1,2,3,6,7,8-HxCDD	1000	1130		pg/L		113	77 - 120	1	25
1,2,3,6,7,8-HxCDF	1000	1080		pg/L		108	76 - 120	3	25
1,2,3,7,8-PeCDD	1000	1200		pg/L		120	80 - 126	2	25
1,2,3,7,8-PeCDF	1000	1250	*+	pg/L		125	76 - 123	1	25
1,2,3,7,8,9-HxCDD	1000	1170		pg/L		117	76 - 123	1	25
1,2,3,7,8,9-HxCDF	1000	1040		pg/L		104	76 - 120	2	25
2,3,4,6,7,8-HxCDF	1000	1080		pg/L		108	75 - 120	1	25
2,3,4,7,8-PeCDF	1000	1200		pg/L		120	75 - 121	2	25
2,3,7,8-TCDD	200	233		pg/L		117	71 - 120	7	25
2,3,7,8-TCDF	200	230		pg/L		115	68 - 128	0	25
OCDD	2000	2340		pg/L		117	71 - 120	1	25
OCDF	2000	2200		pg/L		110	71 - 120	1	25

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-1,2,3,4,6,7,8-HpCDD	100		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	115		40 - 135
13C-1,2,3,4,7,8-HxCDD	99		40 - 135
13C-1,2,3,4,7,8-HxCDF	109		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	107		40 - 135
13C-1,2,3,6,7,8-HxCDD	103		40 - 135
13C-1,2,3,6,7,8-HxCDF	116		40 - 135
13C-1,2,3,7,8-PeCDD	91		40 - 135
13C-1,2,3,7,8-PeCDF	103		40 - 135
13C-1,2,3,7,8,9-HxCDD	97		40 - 135
13C-1,2,3,7,8,9-HxCDF	109		40 - 135
13C-2,3,4,6,7,8-HxCDF	113		40 - 135
13C-2,3,4,7,8-PeCDF	110		40 - 135
13C-2,3,7,8-TCDD	101		40 - 135
13C-2,3,7,8-TCDF	126		40 - 135
13C-OCDD	96		40 - 135
13C-OCDF	105		40 - 135

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-654496/1-A
Matrix: Water
Analysis Batch: 656430

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 654496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		06/11/25 06:55	06/11/25 16:14	1
Copper	ND		1.0	0.85	ug/L		06/11/25 06:55	06/11/25 16:14	1

Lab Sample ID: LCS 410-654496/2-A
Matrix: Water
Analysis Batch: 656430

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 654496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	487		ug/L		97	90 - 109
Copper	500	498		ug/L		100	90 - 110

Method: 2540C - 2015 - Total Dissolved Solids (Dried at 180 °C)

Lab Sample ID: MB 180-496951/1
Matrix: Water
Analysis Batch: 496951

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			05/30/25 15:16	1

Lab Sample ID: LCS 180-496951/2
Matrix: Water
Analysis Batch: 496951

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	420	384		mg/L		91	85 - 115

Method: 4500-O G-2016 - Oxygen, Dissolved

Lab Sample ID: 180-190960-3 DU
Matrix: Water
Analysis Batch: 498335

Client Sample ID: WATER #3- LAB PROVIDED DEIONIZED WATER MADE ANAEROBIC BY NITROGEN SPARGING
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxygen, Dissolved	7.5	HF	7.21		mg/L		4	20

Method: EPA 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 180-498339/7
Matrix: Water
Analysis Batch: 498339

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	ND		0.85	0.05	NTU			06/23/25 10:46	1

Eurofins Pittsburgh

QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Method: EPA 180.1 - Turbidity, Nephelometric (Continued)

Lab Sample ID: LCS 180-498339/8

Matrix: Water

Analysis Batch: 498339

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Turbidity	0.850	0.85		NTU		100	90 - 110

Lab Sample ID: 180-190960-3 DU

Client Sample ID: WATER #3- LAB PROVIDED DEIONIZED WATER MADE

ANAEROBIC BY NITROGEN SPARGING

Matrix: Water

Analysis Batch: 498339

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	1.5		1.5		NTU		1	20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-497815/1

Matrix: Water

Analysis Batch: 497815

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-498343/1

Matrix: Water

Analysis Batch: 498343

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 180-190960-3 DU

Client Sample ID: WATER #3- LAB PROVIDED DEIONIZED WATER MADE

ANAEROBIC BY NITROGEN SPARGING

Matrix: Water

Analysis Batch: 498343

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	5.9	HF	6.0		SU		1	2

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 180-497170/2

Matrix: Water

Analysis Batch: 497170

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			06/04/25 12:01	1
Electrical Conductivity	ND		1.0	1.0	umhos/cm			06/04/25 12:01	1

Lab Sample ID: LCS 180-497170/1

Matrix: Water

Analysis Batch: 497170

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	84.0	84.3		umhos/cm		100	90 - 110

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: LCS 180-497170/1

Matrix: Water

Analysis Batch: 497170

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Electrical Conductivity	84.0	84.3		umhos/cm		100	90 - 110

Lab Sample ID: MB 180-498364/2

Matrix: Water

Analysis Batch: 498364

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			06/23/25 14:31	1

Lab Sample ID: LCS 180-498364/1

Matrix: Water

Analysis Batch: 498364

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	84.0	87.2		umhos/cm		104	90 - 110

Lab Sample ID: 180-190960-3 DU

Client Sample ID: WATER #3- LAB PROVIDED DEIONIZED WATER MADE

ANAEROBIC BY NITROGEN SPARGING

Matrix: Water

Analysis Batch: 498364

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	ND		ND		umhos/cm		NC	20

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

Lab Sample ID: LCS 180-498340/1

Matrix: Water

Analysis Batch: 498340

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	471		millivolts		99	98 - 102

Lab Sample ID: 180-190960-3 DU

Client Sample ID: WATER #3- LAB PROVIDED DEIONIZED WATER MADE

ANAEROBIC BY NITROGEN SPARGING

Matrix: Water

Analysis Batch: 498340

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Oxidation Reduction Potential	71		75.0		millivolts		5	20

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QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

GC/MS Semi VOA

Prep Batch: 496742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total/NA	Water	3520C	
180-190960-2	WATER #2 - SITE TAP WATER	Total/NA	Water	3520C	
MB 180-496742/1-A	Method Blank	Total/NA	Water	3520C	
LCS 180-496742/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 180-496742/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 496904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total/NA	Water	EPA 8270E LL	496742
180-190960-2	WATER #2 - SITE TAP WATER	Total/NA	Water	EPA 8270E LL	496742
MB 180-496742/1-A	Method Blank	Total/NA	Water	EPA 8270E LL	496742
LCS 180-496742/2-A	Lab Control Sample	Total/NA	Water	EPA 8270E LL	496742
LCSD 180-496742/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 8270E LL	496742

HPLC/IC

Analysis Batch: 497223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total/NA	Water	EPA 300.0 R2.1	
180-190960-2	WATER #2 - SITE TAP WATER	Total/NA	Water	EPA 300.0 R2.1	
MB 180-497223/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-497223/7	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-190960-2 MS	WATER #2 - SITE TAP WATER	Total/NA	Water	EPA 300.0 R2.1	
180-190960-2 MSD	WATER #2 - SITE TAP WATER	Total/NA	Water	EPA 300.0 R2.1	

Specialty Organics

Prep Batch: 654337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total/NA	Water	8290A	
180-190960-2	WATER #2 - SITE TAP WATER	Total/NA	Water	8290A	
MB 410-654337/1-A	Method Blank	Total/NA	Water	8290A	
LCS 410-654337/2-A	Lab Control Sample	Total/NA	Water	8290A	
LCSD 410-654337/3-A	Lab Control Sample Dup	Total/NA	Water	8290A	

Analysis Batch: 654452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-654337/1-A	Method Blank	Total/NA	Water	8290A	654337
LCS 410-654337/2-A	Lab Control Sample	Total/NA	Water	8290A	654337
LCSD 410-654337/3-A	Lab Control Sample Dup	Total/NA	Water	8290A	654337

Analysis Batch: 658184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total/NA	Water	8290A	654337
180-190960-2	WATER #2 - SITE TAP WATER	Total/NA	Water	8290A	654337

Metals

Prep Batch: 654496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total Recoverable	Water	3005A	
180-190960-2	WATER #2 - SITE TAP WATER	Total Recoverable	Water	3005A	

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QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

Metals (Continued)

Prep Batch: 654496 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-654496/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-654496/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 656430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total Recoverable	Water	6020B	654496
180-190960-2	WATER #2 - SITE TAP WATER	Total Recoverable	Water	6020B	654496
MB 410-654496/1-A	Method Blank	Total Recoverable	Water	6020B	654496
LCS 410-654496/2-A	Lab Control Sample	Total Recoverable	Water	6020B	654496

General Chemistry

Analysis Batch: 496951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total/NA	Water	2540C - 2015	
180-190960-2	WATER #2 - SITE TAP WATER	Total/NA	Water	2540C - 2015	
MB 180-496951/1	Method Blank	Total/NA	Water	2540C - 2015	
LCS 180-496951/2	Lab Control Sample	Total/NA	Water	2540C - 2015	

Analysis Batch: 497170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total/NA	Water	SM 2510B	
180-190960-2	WATER #2 - SITE TAP WATER	Total/NA	Water	SM 2510B	
MB 180-497170/2	Method Blank	Total/NA	Water	SM 2510B	
LCS 180-497170/1	Lab Control Sample	Total/NA	Water	SM 2510B	

Analysis Batch: 497786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total/NA	Water	SM 2520B	
180-190960-2	WATER #2 - SITE TAP WATER	Total/NA	Water	SM 2520B	

Analysis Batch: 497815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-1	WATER #1 - SITE GROUND WATER	Total/NA	Water	EPA 9040C	
180-190960-2	WATER #2 - SITE TAP WATER	Total/NA	Water	EPA 9040C	
LCS 180-497815/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 498335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-3	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	4500-O G-2016	
180-190960-3 DU	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	4500-O G-2016	

Analysis Batch: 498339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-3	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	EPA 180.1	
MB 180-498339/7	Method Blank	Total/NA	Water	EPA 180.1	
LCS 180-498339/8	Lab Control Sample	Total/NA	Water	EPA 180.1	
180-190960-3 DU	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	EPA 180.1	

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QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190960-1

General Chemistry

Analysis Batch: 498340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-3	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	SM 2580B	
LCS 180-498340/1	Lab Control Sample	Total/NA	Water	SM 2580B	
180-190960-3 DU	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	SM 2580B	

Analysis Batch: 498343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-3	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	EPA 9040C	
LCS 180-498343/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-190960-3 DU	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	EPA 9040C	

Analysis Batch: 498364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190960-3	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	SM 2510B	
MB 180-498364/2	Method Blank	Total/NA	Water	SM 2510B	
LCS 180-498364/1	Lab Control Sample	Total/NA	Water	SM 2510B	
180-190960-3 DU	WATER #3- LAB PROVIDED DEIONIZED WATER	Total/NA	Water	SM 2510B	

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301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2488

Chain of Custody Record



Client Information		Sampler: Nick Darrow		Lab PM: Gamber, Carrie L.		Carrier Tracking No(s):		COC No: 180-112297-19672.1	
Client Contact: Rory Kilkenny		Phone: 412-915-2731		E-Mail: Carrie.Gamber@eurofins.com		State of Origin:		Page: Page 1 of 1	
Company: Entact, LLC.		PWSID:		Due Date Requested:		Analysis Requested		Preservation Codes:	
Address: 701 Fifth Ave. Suite 4200		TAT Requested (days):		Compliance Project: ☐ Yes ☒ No		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
City: Seattle		State: WA		PO #: E9447		Matrix (W=water, S=solid, G=grab, L=leachate, A=air)		pH	
Phone: 541-256-0037		SSOW#: 18029834		Sample Date: 5/27		Sample Time: 13:20		Sample Type (C=comp, G=grab)	
Email: kicarr@entact.com; rilkenny@entact.com; ndarrow@entact.com		Project #:		Sample Date: 5/27		Sample Time: 13:20		Sample Type (C=comp, G=grab)	
Project Name: Glacier NW ISS Treatability Study		Site: Glacier NW - Baseline Water Testing		Sample Date: 5/27		Sample Time: 13:20		Sample Type (C=comp, G=grab)	
Sample Identification		Water #1 - Site Ground Water		Sample Date: 5/27		Sample Time: 13:20		Sample Type (C=comp, G=grab)	
Water #2 - Site Tap Water		Sample Date: 5/27		Sample Time: 13:20		Sample Type (C=comp, G=grab)		Sample Type (C=comp, G=grab)	
Water #3 - Lab Provided Deionized Water Made Anaerobic by Nitrogen Sparging		Sample Date: 5/27		Sample Time: 13:20		Sample Type (C=comp, G=grab)		Sample Type (C=comp, G=grab)	
Possible Hazard Id		Non-Hazard ☐ Irritable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological ☐		Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: [Signature]		Relinquished by: [Signature]	
Date/Time: 5/27/25 16:38		Date/Time: 5/27/25 16:38		Date/Time: 5/27/25 16:38		Date/Time: 5/27/25 16:38		Date/Time: 5/27/25 16:38	
Relinquished by: [Signature]		Relinquished by: [Signature]		Relinquished by: [Signature]		Relinquished by: [Signature]		Relinquished by: [Signature]	
Relinquished by: [Signature]		Relinquished by: [Signature]		Relinquished by: [Signature]		Relinquished by: [Signature]		Relinquished by: [Signature]	
Custody Seal No.: ☐ Yes ☒ No		Custody Seal No.: ☐ Yes ☒ No		Custody Seal No.: ☐ Yes ☒ No		Custody Seal No.: ☐ Yes ☒ No		Custody Seal No.: ☐ Yes ☒ No	

301 Alpha Drive RIDC Park
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6/25/2025

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-190960-1

Login Number: 190960

List Source: Eurofins Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

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

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-190960-1

Login Number: 190960

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 2

List Creation: 06/02/25 05:51 AM

Creator: Cyms, Carolyn M

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	



ANALYTICAL REPORT

PREPARED FOR

Attn: Rory Kilkenny
ENTACT, LLC
701 Fifth Ave.
Suite 4200
Seattle, Washington 98104

Generated 8/1/2025 7:20:10 AM

JOB DESCRIPTION

Glacier NW ISS Treatability Study REVISE

JOB NUMBER

180-190963-1

Eurofins Pittsburgh

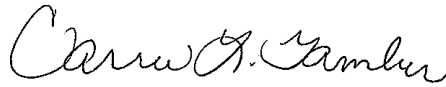
Job Notes

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PA Lab ID: 02-00416

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

Authorization



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8/1/2025 7:20:10 AM

Authorized for release by
Carrie Gamber, Senior Project Manager
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(412)963-2428

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Case Narrative

Client: ENTACT, LLC
Project: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Job ID: 180-190963-1

Eurofins Pittsburgh

CASE NARRATIVE

Client: ENTACT, LLC

Project: Glacier NW ISS Treatability Study REVISE

Report Number: 180-190963-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 05/27/2025; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.2 C.

SEMIVOLATILES

The following sample was diluted to bring the concentration of target analytes within the calibration range: SOIL #2 (180-190963-2). Elevated reporting limits (RLs) are provided.

The following sample was diluted to bring the concentration of target analytes within the calibration range: SOIL #2 L/S 0.5 (180-190963-12). Elevated reporting limits (RLs) are provided.

Pentachlorophenol failed the recovery criteria low for the MS of sample SOIL #2MS (180-190963-2) in batch 180-497051. Pentachlorophenol failed the recovery criteria low for the MSD of sample SOIL #2MSD (180-190963-2) in batch 180-497051.

DIOXINS

Samples SOIL #2 L/S 10.0 (180-190963-19), SOIL #2 L/S 5.0 (180-190963-20), SOIL #2 L/S 2.0 (180-190963-21), SOIL #2 L/S 1.0 (180-190963-22) and SOIL #2 L/S 0.5 (180-190963-23) required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Elevated reporting limits are provided for the following sample due to limited sample provided for preparation/analysis: SOIL #2 L/S 0.5 (180-190963-23).

The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit for several samples. Signal-to-noise ratios are within method recommended limits.

Diphenyl ethers were found to be interfering with 1,2,3,7,8-PeCDF and 2,3,7,8-TCDF at greater than 20%. Native compound has been marked non-detect due to diphenyl ether interference: SOIL #2 L/S 1.0 (180-190963-22)

Diphenyl ethers were found to be interfering with 2,3,7,8-TCDF at greater than 20%. Native compound has been marked non-detect due to diphenyl ether interference: SOIL #2 L/S 0.5 (180-190963-23)

Due to methodology limitation, the result for OCDD on 410-676725 was above the upper calibration range and is reported as an Estimated ("E") value in samples: SOIL #2 L/S 10.0 (180-190963-19) and SOIL #2 L/S 5.0 (180-190963-20).

The bracketing continuing calibration verification (CCV) associated with batch 410-676725 has analytes with percent difference values that are between the method criteria of 30% to 35% deviation from the initial calibration curve. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate the Isotope Dilution Analyte (IDA) recovery in the associated samples.

METALS

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Case Narrative

Client: ENTACT, LLC
Project: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Job ID: 180-190963-1 (Continued)

Eurofins Pittsburgh

Sample SOIL #2 (180-190963-2) required dilution prior to analysis. The reporting limits have been adjusted accordingly.

PERCENT SOLIDS

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

Eurofins Pittsburgh

Definitions/Glossary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
FL	MS and/or MSD recovery below control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
^c	CCV Recovery is outside acceptance limits.
E	Result exceeded calibration range.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Eurofins Pittsburgh

Accreditation/Certification Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00690	06-28-25 *
California	State	3122	05-30-26
Connecticut	State	PH-0820	09-30-26
Florida	NELAP	E871008	06-30-25 *
Georgia	State	PA 02-00416	04-30-26
Illinois	NELAP	200005	07-31-25
Kansas	NELAP	E-10350	01-31-26
Kentucky (UST)	State	162013	04-30-26
Kentucky (WW)	State	KY98043	12-31-25
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25 *
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-25
New Hampshire	NELAP	2030	04-04-26
New Jersey	NELAP	PA005	06-30-25 *
New York	NELAP	11182	03-31-26
North Carolina (WW/SW)	State	434	12-31-25
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-26
Pennsylvania	NELAP	02-00416	04-30-26
Rhode Island	State	LAO00375	12-30-25
South Carolina	State	89014	04-30-25 *
Texas	NELAP	T104704528	03-31-26
US Fish & Wildlife	US Federal Programs	A21930	04-30-26
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	03-31-24 *
Virginia	NELAP	460189	09-14-25
West Virginia DEP	State	142	01-31-26
Wisconsin	State	998027800	08-31-25

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-26
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-25
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-26
Connecticut	State	PH-0746	06-30-27
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	07-01-26
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Pittsburgh

Accreditation/Certification Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-25
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-26
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-26
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-25
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-26
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	01-10-26
New Jersey	NELAP	PA011	06-30-26
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-26
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-25
Oregon	NELAP	PA200001	09-11-25
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-25
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-25
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-25
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Pittsburgh

Sample Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-190963-1	SOIL #1	Solid	05/27/25 13:00	05/27/25 16:38
180-190963-2	SOIL #2	Solid	05/27/25 13:00	05/27/25 16:38
180-190963-8	SOIL #2 L/S 10.0	Solid	05/27/25 13:00	05/27/25 16:38
180-190963-9	SOIL #2 L/S 5.0	Solid	05/27/25 13:00	05/27/25 16:38
180-190963-10	SOIL #2 L/S 2.0	Solid	05/27/25 13:00	05/27/25 16:38
180-190963-11	SOIL #2 L/S 1.0	Solid	05/27/25 13:00	05/27/25 16:38
180-190963-12	SOIL #2 L/S 0.5	Solid	05/27/25 13:00	05/27/25 16:38
180-190963-13	MB	Solid	05/30/25 00:00	05/27/25 16:38
180-190963-14	SOIL #1 L/S 10.0	Water	06/25/25 06:40	05/27/25 16:38
180-190963-15	SOIL #1 L/S 5.0	Water	06/25/25 06:40	05/27/25 16:38
180-190963-16	SOIL #1 L/S 2.0	Water	06/25/25 06:40	05/27/25 16:38
180-190963-17	SOIL #1 L/S 1.0	Water	06/25/25 06:40	05/27/25 16:38
180-190963-18	SOIL #1 L/S 0.5	Water	06/25/25 06:40	05/27/25 16:38
180-190963-19	SOIL #2 L/S 10.0	Water	06/25/25 07:40	05/27/25 16:38
180-190963-20	SOIL #2 L/S 5.0	Water	06/25/25 07:40	05/27/25 16:38
180-190963-21	SOIL #2 L/S 2.0	Water	06/25/25 07:40	05/27/25 16:38
180-190963-22	SOIL #2 L/S 1.0	Water	06/25/25 07:40	05/27/25 16:38
180-190963-23	SOIL #2 L/S 0.5	Water	06/25/25 08:40	05/27/25 16:38
180-190963-24	MB	Water	06/25/25 08:40	05/27/25 16:38

Method Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Method	Method Description	Protocol	Laboratory
EPA 8270E LL	Semivolatile Organic Compounds (GC/MS)	SW846	EET PIT
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
2540G	SM 2540G	SM22	EET PIT
1316	Liquid-Solid Partitioning as a Function of Liquid-To-Solid Ratio via Parallel	SW846	EET PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3050B	Preparation, Metals	SW846	ELLE
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PIT
3541	Automated Soxhlet Extraction (Low Level)	SW846	EET PIT
8290A	Separatory Funnel (Liquid-Liquid) Extraction of Dioxins and Furans	SW846	ELLE

Protocol References:

SM22 = Standard Methods For The Examination Of Water And Wastewater, 22nd Edition

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

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #1

Date Collected: 05/27/25 13:00

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			496948	05/30/25 14:37	LWM	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: SOIL #1

Date Collected: 05/27/25 13:00

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-1

Matrix: Solid

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.00 g	100 mL	654085	06/09/25 06:10	UJL8	ELLE
Total/NA	Analysis	6020B		2			656432	06/11/25 23:09	LHF4	ELLE
Instrument ID: E10										

Client Sample ID: SOIL #2

Date Collected: 05/27/25 13:00

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			496948	05/30/25 14:37	LWM	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: SOIL #2

Date Collected: 05/27/25 13:00

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-2

Matrix: Solid

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541	DL		15.5 g	0.5 mL	497037	06/02/25 15:31	DVC	EET PIT
Total/NA	Analysis	EPA 8270E LL	DL	10	1 mL	1 mL	497053	06/03/25 18:12	VVP	EET PIT
Instrument ID: CH733										
Total/NA	Prep	3541			15.5 g	0.5 mL	497037	06/02/25 15:31	DVC	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	497051	06/03/25 19:13	VVP	EET PIT
Instrument ID: CH751										
Total/NA	Prep	3050B			1.04 g	100 mL	676632	07/29/25 22:00	UAMX	ELLE
Total/NA	Analysis	6020B		10			678529	07/30/25 17:18	I9IN	ELLE
Instrument ID: E07 - 27813										
Total/NA	Prep	3050B			1.04 g	100 mL	676632	07/29/25 22:00	UAMX	ELLE
Total/NA	Analysis	6020B		2			678370	07/30/25 12:16	F7JF	ELLE
Instrument ID: E09 - 30921										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 10.0

Lab Sample ID: 180-190963-8

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1316			175 g	1347.7 mL	498327	06/23/25 08:45	TCS	EET PIT
Leach	Prep	3520C			180 mL	250 uL	498831	07/01/25 11:02	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	498978	07/03/25 16:42	VVP	EET PIT
Instrument ID: CHMSD7										

Client Sample ID: SOIL #2 L/S 5.0

Lab Sample ID: 180-190963-9

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1316			375 g	1404.8 mL	498327	06/23/25 08:45	TCS	EET PIT
Leach	Prep	3520C			200 mL	250 uL	498831	07/01/25 11:02	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	498978	07/03/25 17:04	VVP	EET PIT
Instrument ID: CHMSD7										

Client Sample ID: SOIL #2 L/S 2.0

Lab Sample ID: 180-190963-10

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1316			1050 g	1441.7 mL	498327	06/23/25 08:45	TCS	EET PIT
Leach	Prep	3520C			190 mL	250 uL	498831	07/01/25 11:02	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	498978	07/03/25 17:26	VVP	EET PIT
Instrument ID: CHMSD7										

Client Sample ID: SOIL #2 L/S 1.0

Lab Sample ID: 180-190963-11

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1316			2500 g	1455.0 mL	498327	06/23/25 08:45	TCS	EET PIT
Leach	Prep	3520C			130 mL	250 uL	498831	07/01/25 11:02	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	498978	07/03/25 17:48	VVP	EET PIT
Instrument ID: CHMSD7										

Client Sample ID: SOIL #2 L/S 0.5

Lab Sample ID: 180-190963-12

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1316			4100 g	764.7 mL	498327	06/23/25 08:45	TCS	EET PIT
Leach	Prep	3520C			160 mL	250 uL	498831	07/01/25 11:02	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		15	1 mL	1 mL	499057	07/07/25 19:37	VVP	EET PIT
Instrument ID: CH731										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: MB

Date Collected: 05/30/25 00:00

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1316			1.0 g	2000 mL	498327	06/23/25 08:45	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	498831	07/01/25 11:02	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	498978	07/03/25 18:32	VVP	EET PIT
Instrument ID: CHMSD7										

Client Sample ID: SOIL #1 L/S 10.0

Date Collected: 06/25/25 06:40

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	674868	07/22/25 22:15	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			675265	07/23/25 10:19	F7JF	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: SOIL #1 L/S 5.0

Date Collected: 06/25/25 06:40

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 22:04	I9IN	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: SOIL #1 L/S 2.0

Date Collected: 06/25/25 06:40

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 21:50	I9IN	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: SOIL #1 L/S 1.0

Date Collected: 06/25/25 06:40

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 21:54	I9IN	ELLE
Instrument ID: E07 - 27813										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #1 L/S 0.5

Lab Sample ID: 180-190963-18

Date Collected: 06/25/25 06:40

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 22:02	I9IN	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: SOIL #2 L/S 10.0

Lab Sample ID: 180-190963-19

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A	DL		977.5 mL	20 uL	673529	07/18/25 22:13	SJ7Z	ELLE
Total/NA	Analysis	8290A	DL	40	20 uL	20 uL	676725	07/27/25 12:57	TJK2	ELLE
Instrument ID: DF17280B										
Total/NA	Prep	8290A			977.5 mL	20 uL	673529	07/18/25 22:13	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	675873	07/24/25 19:16	ABB4	ELLE
Instrument ID: DF17611B										
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 22:00	I9IN	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: SOIL #2 L/S 5.0

Lab Sample ID: 180-190963-20

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			990.1 mL	20 uL	673529	07/18/25 22:13	SJ7Z	ELLE
Total/NA	Analysis	8290A		40	20 uL	20 uL	676725	07/27/25 13:50	TJK2	ELLE
Instrument ID: DF17280B										
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 21:56	I9IN	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: SOIL #2 L/S 2.0

Lab Sample ID: 180-190963-21

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			982.9 mL	20 uL	673529	07/18/25 22:13	SJ7Z	ELLE
Total/NA	Analysis	8290A		40	20 uL	20 uL	676725	07/27/25 14:43	TJK2	ELLE
Instrument ID: DF17280B										
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 21:52	I9IN	ELLE
Instrument ID: E07 - 27813										

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Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 1.0

Lab Sample ID: 180-190963-22

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A	DL		958.6 mL	20 uL	673529	07/18/25 22:13	SJ7Z	ELLE
Total/NA	Analysis	8290A	DL	40	20 uL	20 uL	676725	07/27/25 15:37	TJK2	ELLE
Instrument ID: DF17280B										
Total/NA	Prep	8290A			958.6 mL	20 uL	673529	07/18/25 22:13	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	675873	07/24/25 21:49	ABB4	ELLE
Instrument ID: DF17611B										
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 21:37	I9IN	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: SOIL #2 L/S 0.5

Lab Sample ID: 180-190963-23

Date Collected: 06/25/25 08:40

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A	DL		668.8 mL	20 uL	673529	07/18/25 22:13	SJ7Z	ELLE
Total/NA	Analysis	8290A	DL	40	20 uL	20 uL	676725	07/27/25 16:30	TJK2	ELLE
Instrument ID: DF17280B										
Total/NA	Prep	8290A			668.8 mL	20 uL	673529	07/18/25 22:13	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	675873	07/24/25 22:41	ABB4	ELLE
Instrument ID: DF17611B										
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 21:48	I9IN	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: MB

Lab Sample ID: 180-190963-24

Date Collected: 06/25/25 08:40

Matrix: Water

Date Received: 05/27/25 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			1004 mL	20 uL	673529	07/18/25 22:13	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	675873	07/24/25 23:32	ABB4	ELLE
Instrument ID: DF17611B										
Total Recoverable	Prep	3005A			50 mL	50 mL	665894	07/16/25 10:10	X3ZX	ELLE
Total Recoverable	Analysis	6020B		1			672375	07/16/25 21:58	I9IN	ELLE
Instrument ID: E07 - 27813										

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Analyst References:

- Lab: EET PIT
- Batch Type: Leach
 - TCS = Thomas Say
 - Batch Type: Prep
 - BJT = Bill Trout
 - DVC = Daniel Capodanno
 - Batch Type: Analysis
 - LWM = Leslie McIntire
 - VVP = Vincent Piccolino
- Lab: ELLE
- Batch Type: Prep
 - SJ7Z = Christopher Albaugh
 - UAMX = Annamaria Kuhns
 - UJL8 = James Mertz
 - X3ZX = Skyler Ruf
 - Batch Type: Analysis
 - ABB4 = Francis Licopoli
 - F7JF = Dennis Dick
 - I9IN = Miles Yiengst
 - LHF4 = Diamond Boyer
 - TJK2 = Brandon Jensen

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #1

Date Collected: 05/27/25 13:00

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-1

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (SM22 2540G)	22.0		0.1	0.1	%			05/30/25 14:37	1
Percent Solids (SM22 2540G)	78.0		0.1	0.1	%			05/30/25 14:37	1

Client Sample ID: SOIL #1

Date Collected: 05/27/25 13:00

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-1

Matrix: Solid

Percent Solids: 78.0

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	240		0.51	0.17	mg/Kg	☼	06/09/25 06:10	06/11/25 23:09	2
Copper	68		0.51	0.23	mg/Kg	☼	06/09/25 06:10	06/11/25 23:09	2

Client Sample ID: SOIL #2

Date Collected: 05/27/25 13:00

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-2

Matrix: Solid

Percent Solids: 79.1

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	5000	E 4 FL	210	66	ug/Kg	☼	06/02/25 15:31	06/03/25 19:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	60		20 - 119	06/02/25 15:31	06/03/25 19:13	1
2-Fluorobiphenyl	57		35 - 105	06/02/25 15:31	06/03/25 19:13	1
2-Fluorophenol (Surr)	60		32 - 105	06/02/25 15:31	06/03/25 19:13	1
Nitrobenzene-d5 (Surr)	62		34 - 109	06/02/25 15:31	06/03/25 19:13	1
Phenol-d5 (Surr)	64		34 - 105	06/02/25 15:31	06/03/25 19:13	1
Terphenyl-d14 (Surr)	59		20 - 117	06/02/25 15:31	06/03/25 19:13	1

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	8000	4	2100	660	ug/Kg	☼	06/02/25 15:31	06/03/25 18:12	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	65		20 - 119	06/02/25 15:31	06/03/25 18:12	10
2-Fluorobiphenyl	65		35 - 105	06/02/25 15:31	06/03/25 18:12	10
2-Fluorophenol (Surr)	60		32 - 105	06/02/25 15:31	06/03/25 18:12	10
Nitrobenzene-d5 (Surr)	53		34 - 109	06/02/25 15:31	06/03/25 18:12	10
Phenol-d5 (Surr)	56		34 - 105	06/02/25 15:31	06/03/25 18:12	10
Terphenyl-d14 (Surr)	64		20 - 117	06/02/25 15:31	06/03/25 18:12	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	150		0.49	0.16	mg/Kg	☼	07/29/25 22:00	07/30/25 12:16	2
Copper	330		2.4	1.1	mg/Kg	☼	07/29/25 22:00	07/30/25 17:18	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (SM22 2540G)	20.9		0.1	0.1	%			05/30/25 14:37	1
Percent Solids (SM22 2540G)	79.1		0.1	0.1	%			05/30/25 14:37	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 10.0

Lab Sample ID: 180-190963-8

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	31		6.9	1.2	ug/L		07/01/25 11:02	07/03/25 16:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	108		23 - 128				07/01/25 11:02	07/03/25 16:42	1
2-Fluorophenol (Surr)	91		20 - 105				07/01/25 11:02	07/03/25 16:42	1
Phenol-d5 (Surr)	90		20 - 106				07/01/25 11:02	07/03/25 16:42	1

Client Sample ID: SOIL #2 L/S 5.0

Lab Sample ID: 180-190963-9

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	11		6.3	1.1	ug/L		07/01/25 11:02	07/03/25 17:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	98		23 - 128				07/01/25 11:02	07/03/25 17:04	1
2-Fluorophenol (Surr)	73		20 - 105				07/01/25 11:02	07/03/25 17:04	1
Phenol-d5 (Surr)	74		20 - 106				07/01/25 11:02	07/03/25 17:04	1

Client Sample ID: SOIL #2 L/S 2.0

Lab Sample ID: 180-190963-10

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	9.2		6.6	1.1	ug/L		07/01/25 11:02	07/03/25 17:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	86		23 - 128				07/01/25 11:02	07/03/25 17:26	1
2-Fluorophenol (Surr)	77		20 - 105				07/01/25 11:02	07/03/25 17:26	1
Phenol-d5 (Surr)	74		20 - 106				07/01/25 11:02	07/03/25 17:26	1

Client Sample ID: SOIL #2 L/S 1.0

Lab Sample ID: 180-190963-11

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	6.3	J	9.6	1.6	ug/L		07/01/25 11:02	07/03/25 17:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		23 - 128				07/01/25 11:02	07/03/25 17:48	1
2-Fluorophenol (Surr)	65		20 - 105				07/01/25 11:02	07/03/25 17:48	1
Phenol-d5 (Surr)	65		20 - 106				07/01/25 11:02	07/03/25 17:48	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 0.5

Lab Sample ID: 180-190963-12

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	560		120	20	ug/L		07/01/25 11:02	07/07/25 19:37	15

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	47		23 - 128	07/01/25 11:02	07/07/25 19:37	15
2-Fluorophenol (Surr)	34		20 - 105	07/01/25 11:02	07/07/25 19:37	15
Phenol-d5 (Surr)	35		20 - 106	07/01/25 11:02	07/07/25 19:37	15

Client Sample ID: MB

Lab Sample ID: 180-190963-13

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 05/27/25 16:38

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		07/01/25 11:02	07/03/25 18:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	91		23 - 128	07/01/25 11:02	07/03/25 18:32	1
2-Fluorophenol (Surr)	70		20 - 105	07/01/25 11:02	07/03/25 18:32	1
Phenol-d5 (Surr)	71		20 - 106	07/01/25 11:02	07/03/25 18:32	1

Client Sample ID: SOIL #1 L/S 10.0

Lab Sample ID: 180-190963-14

Date Collected: 06/25/25 06:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	540		2.0	0.68	ug/L		07/22/25 22:15	07/23/25 10:19	1
Copper	12		1.0	0.85	ug/L		07/22/25 22:15	07/23/25 10:19	1

Client Sample ID: SOIL #1 L/S 5.0

Lab Sample ID: 180-190963-15

Date Collected: 06/25/25 06:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	540		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 22:04	1
Copper	24		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 22:04	1

Client Sample ID: SOIL #1 L/S 2.0

Lab Sample ID: 180-190963-16

Date Collected: 06/25/25 06:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	580		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 21:50	1
Copper	32		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 21:50	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #1 L/S 1.0

Date Collected: 06/25/25 06:40

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-17

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	640		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 21:54	1
Copper	45		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 21:54	1

Client Sample ID: SOIL #1 L/S 0.5

Date Collected: 06/25/25 06:40

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-18

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	620		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 22:02	1
Copper	41		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 22:02	1

Client Sample ID: SOIL #2 L/S 10.0

Date Collected: 06/25/25 07:40

Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-19

Matrix: Water

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	19000		26	4.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,4,6,7,8-HpCDF	11000		26	4.5	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,4,7,8-HxCDD	110		26	2.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,4,7,8-HxCDF	2400		26	2.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,4,7,8,9-HpCDF	1300	*5-	26	2.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,6,7,8-HxCDD	600		26	2.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,6,7,8-HxCDF	360	I	26	2.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,7,8-PeCDD	57		26	3.2	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,7,8-PeCDF	32	*5-	26	2.8	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,7,8,9-HxCDD	260	*5-	26	2.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
1,2,3,7,8,9-HxCDF	250	*5-	26	3.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
2,3,4,6,7,8-HxCDF	440	*5-	26	2.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
2,3,4,7,8-PeCDF	210		26	2.6	pg/L		07/18/25 22:13	07/24/25 19:16	1
2,3,7,8-TCDD	ND	*5-	5.1	0.89	pg/L		07/18/25 22:13	07/24/25 19:16	1
2,3,7,8-TCDF	15	I *5-	5.1	2.4	pg/L		07/18/25 22:13	07/24/25 19:16	1
OCDF	36000		51	10	pg/L		07/18/25 22:13	07/24/25 19:16	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	44		40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,4,6,7,8-HpCDF	43		40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,4,7,8-HxCDD	40		40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,4,7,8-HxCDF	43		40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,4,7,8,9-HpCDF	38	*5-	40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,6,7,8-HxCDD	45		40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,6,7,8-HxCDF	42		40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,7,8-PeCDD	46		40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,7,8-PeCDF	37	*5-	40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,7,8,9-HxCDD	39	*5-	40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-1,2,3,7,8,9-HxCDF	29	*5-	40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-2,3,4,6,7,8-HxCDF	39	*5-	40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-2,3,4,7,8-PeCDF	46		40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-2,3,7,8-TCDD	39	*5-	40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-2,3,7,8-TCDF	36	*5-	40 - 135	07/18/25 22:13	07/24/25 19:16	1

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 10.0

Lab Sample ID: 180-190963-19

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-OCDD	63		40 - 135	07/18/25 22:13	07/24/25 19:16	1
13C-OCDF	51		40 - 135	07/18/25 22:13	07/24/25 19:16	1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	1900000	E	4500	1500	pg/L		07/18/25 22:13	07/27/25 12:57	40
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	38	I *5-	40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,4,6,7,8-HpCDF	41		40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,4,7,8-HxCDD	39	*5-	40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,4,7,8-HxCDF	43		40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,4,7,8,9-HpCDF	27	I *5-	40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,6,7,8-HxCDD	41		40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,6,7,8-HxCDF	46		40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,7,8-PeCDD	42		40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,7,8-PeCDF	39	*5-	40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,7,8,9-HxCDD	41		40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-1,2,3,7,8,9-HxCDF	44	^c	40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-2,3,4,6,7,8-HxCDF	41		40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-2,3,4,7,8-PeCDF	43		40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-2,3,7,8-TCDD	40		40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-2,3,7,8-TCDF	35	*5-	40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-OCDD	46	I	40 - 135				07/18/25 22:13	07/27/25 12:57	40
13C-OCDF	48	^c	40 - 135				07/18/25 22:13	07/27/25 12:57	40

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	270		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 22:00	1
Copper	41		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 22:00	1

Client Sample ID: SOIL #2 L/S 5.0

Lab Sample ID: 180-190963-20

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	110000		1000	180	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,4,6,7,8-HpCDF	44000		1000	180	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,4,7,8-HxCDD	300	J	1000	100	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,4,7,8-HxCDF	10000		1000	100	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,4,7,8,9-HpCDF	5900	*5-	1000	100	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,6,7,8-HxCDD	2300		1000	100	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,6,7,8-HxCDF	1400	*5-	1000	100	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,7,8-PeCDD	170	J I	1000	130	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,7,8-PeCDF	190	J I	1000	110	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,7,8,9-HxCDD	620	J	1000	100	pg/L		07/18/25 22:13	07/27/25 13:50	40
1,2,3,7,8,9-HxCDF	810	J	1000	140	pg/L		07/18/25 22:13	07/27/25 13:50	40
2,3,4,6,7,8-HxCDF	1700		1000	100	pg/L		07/18/25 22:13	07/27/25 13:50	40
2,3,4,7,8-PeCDF	720	J	1000	100	pg/L		07/18/25 22:13	07/27/25 13:50	40
2,3,7,8-TCDD	ND		200	35	pg/L		07/18/25 22:13	07/27/25 13:50	40

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 5.0

Lab Sample ID: 180-190963-20

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND	*5-	200	93	pg/L		07/18/25 22:13	07/27/25 13:50	40
OCDD	15000000	E	4400	1500	pg/L		07/18/25 22:13	07/27/25 13:50	40
OCDF	150000		2000	400	pg/L		07/18/25 22:13	07/27/25 13:50	40
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	61		40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,4,6,7,8-HpCDF	51		40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,4,7,8-HxCDD	47	I	40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,4,7,8-HxCDF	45	I	40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,4,7,8,9-HpCDF	36	*5-	40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,6,7,8-HxCDD	56		40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,6,7,8-HxCDF	38	*5-	40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,7,8-PeCDD	55		40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,7,8-PeCDF	40		40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,7,8,9-HxCDD	50	I	40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-1,2,3,7,8,9-HxCDF	40	^c	40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-2,3,4,6,7,8-HxCDF	41		40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-2,3,4,7,8-PeCDF	45		40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-2,3,7,8-TCDD	43		40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-2,3,7,8-TCDF	36	I *5-	40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-OCDD	103		40 - 135				07/18/25 22:13	07/27/25 13:50	40
13C-OCDF	83	^c	40 - 135				07/18/25 22:13	07/27/25 13:50	40

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	270		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 21:56	1
Copper	26		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 21:56	1

Client Sample ID: SOIL #2 L/S 2.0

Lab Sample ID: 180-190963-21

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	23000		1000	180	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,4,6,7,8-HpCDF	14000		1000	180	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,4,7,8-HxCDD	ND		1000	100	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,4,7,8-HxCDF	3400		1000	100	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,4,7,8,9-HpCDF	1800	*5-	1000	100	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,6,7,8-HxCDD	780	J	1000	100	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,6,7,8-HxCDF	510	J	1000	100	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,7,8-PeCDD	ND		1000	130	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,7,8-PeCDF	ND		1000	110	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,7,8,9-HxCDD	220	J I	1000	100	pg/L		07/18/25 22:13	07/27/25 14:43	40
1,2,3,7,8,9-HxCDF	400	J	1000	140	pg/L		07/18/25 22:13	07/27/25 14:43	40
2,3,4,6,7,8-HxCDF	760	J	1000	100	pg/L		07/18/25 22:13	07/27/25 14:43	40
2,3,4,7,8-PeCDF	360	J I	1000	100	pg/L		07/18/25 22:13	07/27/25 14:43	40
2,3,7,8-TCDD	ND		200	36	pg/L		07/18/25 22:13	07/27/25 14:43	40
2,3,7,8-TCDF	ND		200	94	pg/L		07/18/25 22:13	07/27/25 14:43	40
OCDD	1100000		4500	1500	pg/L		07/18/25 22:13	07/27/25 14:43	40
OCDF	29000		2000	410	pg/L		07/18/25 22:13	07/27/25 14:43	40

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 2.0

Lab Sample ID: 180-190963-21

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	54		40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,4,6,7,8-HpCDF	56		40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,4,7,8-HxCDD	54	I	40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,4,7,8-HxCDF	56		40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,4,7,8,9-HpCDF	39	*5-	40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,6,7,8-HxCDD	59		40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,6,7,8-HxCDF	57	I	40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,7,8-PeCDD	58		40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,7,8-PeCDF	54		40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,7,8,9-HxCDD	51		40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-1,2,3,7,8,9-HxCDF	50	^c	40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-2,3,4,6,7,8-HxCDF	43	I	40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-2,3,4,7,8-PeCDF	62		40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-2,3,7,8-TCDD	48	I	40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-2,3,7,8-TCDF	57	I	40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-OCDD	57		40 - 135	07/18/25 22:13	07/27/25 14:43	40
13C-OCDF	57	^c	40 - 135	07/18/25 22:13	07/27/25 14:43	40

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	240		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 21:52	1
Copper	24		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 21:52	1

Client Sample ID: SOIL #2 L/S 1.0

Lab Sample ID: 180-190963-22

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	19000		26	4.7	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,4,6,7,8-HpCDF	8700		26	4.6	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,4,7,8-HxCDD	42		26	2.6	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,4,7,8-HxCDF	2500		26	2.6	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,4,7,8,9-HpCDF	1100		26	2.6	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,6,7,8-HxCDD	680		26	2.6	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,6,7,8-HxCDF	320		26	2.6	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,7,8-PeCDD	25	J *5-	26	3.3	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,7,8-PeCDF	ND		26	2.9	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,7,8,9-HxCDD	130		26	2.6	pg/L		07/18/25 22:13	07/24/25 21:49	1
1,2,3,7,8,9-HxCDF	230		26	3.7	pg/L		07/18/25 22:13	07/24/25 21:49	1
2,3,4,6,7,8-HxCDF	430		26	2.6	pg/L		07/18/25 22:13	07/24/25 21:49	1
2,3,4,7,8-PeCDF	320		26	2.6	pg/L		07/18/25 22:13	07/24/25 21:49	1
2,3,7,8-TCDD	ND		5.2	0.91	pg/L		07/18/25 22:13	07/24/25 21:49	1
2,3,7,8-TCDF	ND		5.2	2.4	pg/L		07/18/25 22:13	07/24/25 21:49	1
OCDF	22000		52	10	pg/L		07/18/25 22:13	07/24/25 21:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	58		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-1,2,3,4,6,7,8-HpCDF	68		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-1,2,3,4,7,8-HxCDD	53		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-1,2,3,4,7,8-HxCDF	64		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-1,2,3,4,7,8,9-HpCDF	64		40 - 135	07/18/25 22:13	07/24/25 21:49	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 1.0

Lab Sample ID: 180-190963-22

Date Collected: 06/25/25 07:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,6,7,8-HxCDD	64		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-1,2,3,6,7,8-HxCDF	64		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-1,2,3,7,8-PeCDD	38	*5-	40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-1,2,3,7,8-PeCDF	41		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-1,2,3,7,8,9-HxCDD	54		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-1,2,3,7,8,9-HxCDF	42		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-2,3,4,6,7,8-HxCDF	59		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-2,3,4,7,8-PeCDF	43		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-2,3,7,8-TCDD	45		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-2,3,7,8-TCDF	52		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-OCDD	79		40 - 135	07/18/25 22:13	07/24/25 21:49	1
13C-OCDF	65		40 - 135	07/18/25 22:13	07/24/25 21:49	1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	1500000		4600	1500	pg/L		07/18/25 22:13	07/27/25 15:37	40
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	56		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,4,6,7,8-HpCDF	59		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,4,7,8-HxCDD	53		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,4,7,8-HxCDF	54		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,4,7,8,9-HpCDF	45		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,6,7,8-HxCDD	59		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,6,7,8-HxCDF	55		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,7,8-PeCDD	71		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,7,8-PeCDF	60		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,7,8,9-HxCDD	53		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-1,2,3,7,8,9-HxCDF	55	^c	40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-2,3,4,6,7,8-HxCDF	50		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-2,3,4,7,8-PeCDF	61		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-2,3,7,8-TCDD	51		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-2,3,7,8-TCDF	52		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-OCDD	60		40 - 135				07/18/25 22:13	07/27/25 15:37	40
13C-OCDF	64	^c	40 - 135				07/18/25 22:13	07/27/25 15:37	40

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	200		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 21:37	1
Copper	30		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 21:37	1

Client Sample ID: SOIL #2 L/S 0.5

Lab Sample ID: 180-190963-23

Date Collected: 06/25/25 08:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	25000		37	6.8	pg/L		07/18/25 22:13	07/24/25 22:41	1
1,2,3,4,6,7,8-HpCDF	21000		37	6.6	pg/L		07/18/25 22:13	07/24/25 22:41	1
1,2,3,4,7,8-HxCDD	76		37	3.7	pg/L		07/18/25 22:13	07/24/25 22:41	1
1,2,3,4,7,8-HxCDF	4800		37	3.7	pg/L		07/18/25 22:13	07/24/25 22:41	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 0.5

Lab Sample ID: 180-190963-23

Date Collected: 06/25/25 08:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	2300		37	3.7	pg/L		07/18/25 22:13	07/24/25 22:41	1
1,2,3,6,7,8-HxCDD	970		37	3.7	pg/L		07/18/25 22:13	07/24/25 22:41	1
1,2,3,6,7,8-HxCDF	680		37	3.7	pg/L		07/18/25 22:13	07/24/25 22:41	1
1,2,3,7,8-PeCDD	40		37	4.7	pg/L		07/18/25 22:13	07/24/25 22:41	1
1,2,3,7,8-PeCDF	ND		37	4.1	pg/L		07/18/25 22:13	07/24/25 22:41	1
1,2,3,7,8,9-HxCDD	170		37	3.7	pg/L		07/18/25 22:13	07/24/25 22:41	1
1,2,3,7,8,9-HxCDF	460		37	5.2	pg/L		07/18/25 22:13	07/24/25 22:41	1
2,3,4,6,7,8-HxCDF	860		37	3.7	pg/L		07/18/25 22:13	07/24/25 22:41	1
2,3,4,7,8-PeCDF	490		37	3.7	pg/L		07/18/25 22:13	07/24/25 22:41	1
2,3,7,8-TCDD	2.0	J I	7.5	1.3	pg/L		07/18/25 22:13	07/24/25 22:41	1
2,3,7,8-TCDF	ND		7.5	3.4	pg/L		07/18/25 22:13	07/24/25 22:41	1
OCDF	39000		75	15	pg/L		07/18/25 22:13	07/24/25 22:41	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,4,6,7,8-HpCDF	83		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,4,7,8-HxCDD	68		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,4,7,8-HxCDF	80		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,4,7,8,9-HpCDF	82		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,6,7,8-HxCDD	77		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,6,7,8-HxCDF	80		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,7,8-PeCDD	74		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,7,8-PeCDF	74		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,7,8,9-HxCDD	72		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-1,2,3,7,8,9-HxCDF	72		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-2,3,4,6,7,8-HxCDF	75		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-2,3,4,7,8-PeCDF	73		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-2,3,7,8-TCDD	68		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-2,3,7,8-TCDF	72		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-OCDD	67		40 - 135				07/18/25 22:13	07/24/25 22:41	1
13C-OCDF	59		40 - 135				07/18/25 22:13	07/24/25 22:41	1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	1200000		6600	2200	pg/L		07/18/25 22:13	07/27/25 16:30	40
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	67		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,4,6,7,8-HpCDF	69		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,4,7,8-HxCDD	70		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,4,7,8-HxCDF	73		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,4,7,8,9-HpCDF	57		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,6,7,8-HxCDD	75		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,6,7,8-HxCDF	66		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,7,8-PeCDD	76		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,7,8-PeCDF	73		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,7,8,9-HxCDD	70		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-1,2,3,7,8,9-HxCDF	75	^c	40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-2,3,4,6,7,8-HxCDF	67		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-2,3,4,7,8-PeCDF	71		40 - 135				07/18/25 22:13	07/27/25 16:30	40
13C-2,3,7,8-TCDD	68		40 - 135				07/18/25 22:13	07/27/25 16:30	40

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: SOIL #2 L/S 0.5

Lab Sample ID: 180-190963-23

Date Collected: 06/25/25 08:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) - DL (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	59		40 - 135	07/18/25 22:13	07/27/25 16:30	40
13C-OCDD	66		40 - 135	07/18/25 22:13	07/27/25 16:30	40
13C-OCDF	73	^c	40 - 135	07/18/25 22:13	07/27/25 16:30	40

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	200		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 21:48	1
Copper	36		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 21:48	1

Client Sample ID: MB

Lab Sample ID: 180-190963-24

Date Collected: 06/25/25 08:40

Matrix: Water

Date Received: 05/27/25 16:38

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	13	J	25	4.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,7,8-PeCDD	ND		25	3.1	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,7,8-PeCDF	ND		25	2.7	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
2,3,4,7,8-PeCDF	19	J I	25	2.5	pg/L		07/18/25 22:13	07/24/25 23:32	1
2,3,7,8-TCDD	ND		5.0	0.87	pg/L		07/18/25 22:13	07/24/25 23:32	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		07/18/25 22:13	07/24/25 23:32	1
OCDD	380		110	36	pg/L		07/18/25 22:13	07/24/25 23:32	1
OCDF	15	J	50	10	pg/L		07/18/25 22:13	07/24/25 23:32	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,4,6,7,8-HpCDF	74		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,4,7,8-HxCDD	73		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,4,7,8,9-HpCDF	72		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,6,7,8-HxCDD	88		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,6,7,8-HxCDF	83		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,7,8-PeCDD	97		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,7,8-PeCDF	93		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,7,8,9-HxCDD	78		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-1,2,3,7,8,9-HxCDF	77		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-2,3,4,6,7,8-HxCDF	82		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-2,3,4,7,8-PeCDF	95		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-2,3,7,8-TCDD	86		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-2,3,7,8-TCDF	94		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-OCDD	50		40 - 135	07/18/25 22:13	07/24/25 23:32	1
13C-OCDF	53		40 - 135	07/18/25 22:13	07/24/25 23:32	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Client Sample ID: MB
Date Collected: 06/25/25 08:40
Date Received: 05/27/25 16:38

Lab Sample ID: 180-190963-24
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Arsenic	1.1	J	2.0	0.68	ug/L		07/16/25 10:10	07/16/25 21:58	1	
Copper	ND		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 21:58	1	

QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-497037/1-A

Matrix: Solid

Analysis Batch: 497051

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 497037

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		170	54	ug/Kg		06/02/25 15:31	06/03/25 09:33	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	57		20 - 119				06/02/25 15:31	06/03/25 09:33	1
2-Fluorobiphenyl	55		35 - 105				06/02/25 15:31	06/03/25 09:33	1
2-Fluorophenol (Surr)	59		32 - 105				06/02/25 15:31	06/03/25 09:33	1
Nitrobenzene-d5 (Surr)	62		34 - 109				06/02/25 15:31	06/03/25 09:33	1
Phenol-d5 (Surr)	63		34 - 105				06/02/25 15:31	06/03/25 09:33	1
Terphenyl-d14 (Surr)	60		20 - 117				06/02/25 15:31	06/03/25 09:33	1

Lab Sample ID: LCS 180-497037/2-A

Matrix: Solid

Analysis Batch: 497051

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 497037

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	1330	883		ug/Kg		66	34 - 112
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	74		20 - 119				
2-Fluorobiphenyl	66		35 - 105				
2-Fluorophenol (Surr)	69		32 - 105				
Nitrobenzene-d5 (Surr)	74		34 - 109				
Phenol-d5 (Surr)	70		34 - 105				
Terphenyl-d14 (Surr)	51		20 - 117				

Lab Sample ID: 180-190963-2 MS

Matrix: Solid

Analysis Batch: 497051

Client Sample ID: SOIL #2

Prep Type: Total/NA

Prep Batch: 497037

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	5000	E 4 FL	1630	5120	E FL	ug/Kg	☼	5	34 - 112
Surrogate	MS %Recovery	MS Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	65		20 - 119						
2-Fluorobiphenyl	59		35 - 105						
2-Fluorophenol (Surr)	60		32 - 105						
Nitrobenzene-d5 (Surr)	64		34 - 109						
Phenol-d5 (Surr)	64		34 - 105						
Terphenyl-d14 (Surr)	63		20 - 117						

Lab Sample ID: 180-190963-2 MSD

Matrix: Solid

Analysis Batch: 497051

Client Sample ID: SOIL #2

Prep Type: Total/NA

Prep Batch: 497037

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pentachlorophenol	5000	E 4 FL	1630	5010	E FL	ug/Kg	☼	-2	34 - 112	2	28

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-190963-2 MSD

Matrix: Solid

Analysis Batch: 497051

Client Sample ID: SOIL #2

Prep Type: Total/NA

Prep Batch: 497037

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr)	63		20 - 119
2-Fluorobiphenyl	57		35 - 105
2-Fluorophenol (Surr)	58		32 - 105
Nitrobenzene-d5 (Surr)	63		34 - 109
Phenol-d5 (Surr)	62		34 - 105
Terphenyl-d14 (Surr)	59		20 - 117

Lab Sample ID: MB 180-498831/1-A

Matrix: Solid

Analysis Batch: 498978

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 498831

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		07/01/25 11:02	07/03/25 12:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	67		23 - 128				07/01/25 11:02	07/03/25 12:18	1
2-Fluorophenol (Surr)	76		20 - 105				07/01/25 11:02	07/03/25 12:18	1
Phenol-d5 (Surr)	72		20 - 106				07/01/25 11:02	07/03/25 12:18	1

Lab Sample ID: LCS 180-498831/2-A

Matrix: Solid

Analysis Batch: 498978

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 498831

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits	
Pentachlorophenol	40.0	30.2		ug/L		76		35 - 102	
Surrogate	%Recovery	Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	71		23 - 128						
2-Fluorophenol (Surr)	80		20 - 105						
Phenol-d5 (Surr)	73		20 - 106						

Lab Sample ID: LCSD 180-498831/3-A

Matrix: Solid

Analysis Batch: 498978

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 498831

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
Pentachlorophenol	40.0	31.2		ug/L		78		35 - 102	3	17
Surrogate	%Recovery	Qualifier	Limits							
2,4,6-Tribromophenol (Surr)	72		23 - 128							
2-Fluorophenol (Surr)	79		20 - 105							
Phenol-d5 (Surr)	71		20 - 106							

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 410-673529/1-A

Matrix: Water

Analysis Batch: 675453

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 673529

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	4.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		07/18/25 22:13	07/24/25 03:46	1
2,3,7,8-TCDD	ND		5.0	0.87	pg/L		07/18/25 22:13	07/24/25 03:46	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		07/18/25 22:13	07/24/25 03:46	1
OCDD	ND		110	36	pg/L		07/18/25 22:13	07/24/25 03:46	1
OCDF	ND		50	10	pg/L		07/18/25 22:13	07/24/25 03:46	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	90		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,4,6,7,8-HpCDF	96		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,4,7,8-HxCDD	82		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,4,7,8-HxCDF	95		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,4,7,8,9-HpCDF	98		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,6,7,8-HxCDD	89		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,6,7,8-HxCDF	96		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,7,8-PeCDD	83		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,7,8-PeCDF	81		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,7,8,9-HxCDD	91		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-1,2,3,7,8,9-HxCDF	92		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-2,3,4,6,7,8-HxCDF	93		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-2,3,4,7,8-PeCDF	81		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-2,3,7,8-TCDD	80		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-2,3,7,8-TCDF	79		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-OCDD	98		40 - 135	07/18/25 22:13	07/24/25 03:46	1
13C-OCDF	102		40 - 135	07/18/25 22:13	07/24/25 03:46	1

Lab Sample ID: LCS 410-673529/2-A

Matrix: Water

Analysis Batch: 675453

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 673529

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,4,6,7,8-HpCDD	1000	1100		pg/L		110	71 - 120
1,2,3,4,6,7,8-HpCDF	1000	1100		pg/L		110	73 - 120
1,2,3,4,7,8-HxCDD	1000	1120		pg/L		112	76 - 120
1,2,3,4,7,8-HxCDF	1000	1120		pg/L		112	76 - 120
1,2,3,4,7,8,9-HpCDF	1000	1130		pg/L		113	71 - 120
1,2,3,6,7,8-HxCDD	1000	1050		pg/L		105	77 - 120
1,2,3,6,7,8-HxCDF	1000	1120		pg/L		112	76 - 120

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-673529/2-A

Matrix: Water

Analysis Batch: 675453

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 673529

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,7,8-PeCDD	1000	1000		pg/L		100	80 - 126
1,2,3,7,8-PeCDF	1000	1040		pg/L		104	76 - 123
1,2,3,7,8,9-HxCDD	1000	1100		pg/L		110	76 - 123
1,2,3,7,8,9-HxCDF	1000	1140		pg/L		114	76 - 120
2,3,4,6,7,8-HxCDF	1000	1090		pg/L		109	75 - 120
2,3,4,7,8-PeCDF	1000	1040		pg/L		104	75 - 121
2,3,7,8-TCDD	200	207		pg/L		104	71 - 120
2,3,7,8-TCDF	200	214		pg/L		107	68 - 128
OCDD	2000	2250		pg/L		113	71 - 120
OCDF	2000	2300		pg/L		115	71 - 120

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,4,6,7,8-HpCDD	98		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	104		40 - 135
13C-1,2,3,4,7,8-HxCDD	91		40 - 135
13C-1,2,3,4,7,8-HxCDF	101		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	108		40 - 135
13C-1,2,3,6,7,8-HxCDD	100		40 - 135
13C-1,2,3,6,7,8-HxCDF	105		40 - 135
13C-1,2,3,7,8-PeCDD	100		40 - 135
13C-1,2,3,7,8-PeCDF	96		40 - 135
13C-1,2,3,7,8,9-HxCDD	97		40 - 135
13C-1,2,3,7,8,9-HxCDF	103		40 - 135
13C-2,3,4,6,7,8-HxCDF	105		40 - 135
13C-2,3,4,7,8-PeCDF	101		40 - 135
13C-2,3,7,8-TCDD	89		40 - 135
13C-2,3,7,8-TCDF	90		40 - 135
13C-OCDD	107		40 - 135
13C-OCDF	111		40 - 135

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-654085/1-A ^2

Matrix: Solid

Analysis Batch: 656408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 654085

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.40	0.13	mg/Kg		06/09/25 06:10	06/11/25 17:55	2
Copper	ND		0.40	0.18	mg/Kg		06/09/25 06:10	06/11/25 17:55	2

Lab Sample ID: LCS 410-654085/2-A ^2

Matrix: Solid

Analysis Batch: 656408

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 654085

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	50.0	52.4		mg/Kg		105	87 - 114
Copper	50.0	52.9		mg/Kg		106	84 - 115

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 410-676632/1-A

Matrix: Solid

Analysis Batch: 678370

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 676632

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.40	0.13	mg/Kg		07/29/25 22:00	07/30/25 11:08	2
Copper	ND		0.40	0.18	mg/Kg		07/29/25 22:00	07/30/25 11:08	2

Lab Sample ID: LCS 410-676632/2-A

Matrix: Solid

Analysis Batch: 678370

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 676632

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	50.0	50.7		mg/Kg		101	87 - 114
Copper	50.0	50.5		mg/Kg		101	84 - 115

Lab Sample ID: MB 410-665894/1-A

Matrix: Water

Analysis Batch: 672375

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 665894

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		07/16/25 10:10	07/16/25 17:42	1
Copper	ND		1.0	0.85	ug/L		07/16/25 10:10	07/16/25 17:42	1

Lab Sample ID: LCS 410-665894/2-A

Matrix: Water

Analysis Batch: 672375

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 665894

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	458		ug/L		92	90 - 109
Copper	500	459		ug/L		92	90 - 110

Lab Sample ID: MB 410-674868/1-A

Matrix: Water

Analysis Batch: 675265

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 674868

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		07/22/25 22:15	07/23/25 09:48	1
Copper	ND		1.0	0.85	ug/L		07/22/25 22:15	07/23/25 09:48	1

Lab Sample ID: LCS 410-674868/2-A

Matrix: Water

Analysis Batch: 675265

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 674868

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	471		ug/L		94	90 - 109
Copper	500	471		ug/L		94	90 - 110

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Method: 2540G - SM 2540G

Lab Sample ID: 180-190963-1 DU
Matrix: Solid
Analysis Batch: 496948

Client Sample ID: SOIL #1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	22.0		22.9		%		4	10
Percent Solids	78.0		77.1		%		1	10

QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

GC/MS Semi VOA

Prep Batch: 497037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-2 - DL	SOIL #2	Total/NA	Solid	3541	
180-190963-2	SOIL #2	Total/NA	Solid	3541	
MB 180-497037/1-A	Method Blank	Total/NA	Solid	3541	
LCS 180-497037/2-A	Lab Control Sample	Total/NA	Solid	3541	
180-190963-2 MS	SOIL #2	Total/NA	Solid	3541	
180-190963-2 MSD	SOIL #2	Total/NA	Solid	3541	

Analysis Batch: 497051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-2	SOIL #2	Total/NA	Solid	EPA 8270E LL	497037
MB 180-497037/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	497037
LCS 180-497037/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	497037
180-190963-2 MS	SOIL #2	Total/NA	Solid	EPA 8270E LL	497037
180-190963-2 MSD	SOIL #2	Total/NA	Solid	EPA 8270E LL	497037

Analysis Batch: 497053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-2 - DL	SOIL #2	Total/NA	Solid	EPA 8270E LL	497037

Leach Batch: 498327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-8	SOIL #2 L/S 10.0	Leach	Solid	1316	
180-190963-9	SOIL #2 L/S 5.0	Leach	Solid	1316	
180-190963-10	SOIL #2 L/S 2.0	Leach	Solid	1316	
180-190963-11	SOIL #2 L/S 1.0	Leach	Solid	1316	
180-190963-12	SOIL #2 L/S 0.5	Leach	Solid	1316	
180-190963-13	MB	Leach	Solid	1316	

Prep Batch: 498831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-8	SOIL #2 L/S 10.0	Leach	Solid	3520C	498327
180-190963-9	SOIL #2 L/S 5.0	Leach	Solid	3520C	498327
180-190963-10	SOIL #2 L/S 2.0	Leach	Solid	3520C	498327
180-190963-11	SOIL #2 L/S 1.0	Leach	Solid	3520C	498327
180-190963-12	SOIL #2 L/S 0.5	Leach	Solid	3520C	498327
180-190963-13	MB	Leach	Solid	3520C	498327
MB 180-498831/1-A	Method Blank	Total/NA	Solid	3520C	
LCS 180-498831/2-A	Lab Control Sample	Total/NA	Solid	3520C	
LCSD 180-498831/3-A	Lab Control Sample Dup	Total/NA	Solid	3520C	

Analysis Batch: 498978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-8	SOIL #2 L/S 10.0	Leach	Solid	EPA 8270E LL	498831
180-190963-9	SOIL #2 L/S 5.0	Leach	Solid	EPA 8270E LL	498831
180-190963-10	SOIL #2 L/S 2.0	Leach	Solid	EPA 8270E LL	498831
180-190963-11	SOIL #2 L/S 1.0	Leach	Solid	EPA 8270E LL	498831
180-190963-13	MB	Leach	Solid	EPA 8270E LL	498831
MB 180-498831/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	498831
LCS 180-498831/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	498831
LCSD 180-498831/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 8270E LL	498831

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QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

GC/MS Semi VOA

Analysis Batch: 499057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-12	SOIL #2 L/S 0.5	Leach	Solid	EPA 8270E LL	498831

Specialty Organics

Prep Batch: 673529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-19 - DL	SOIL #2 L/S 10.0	Total/NA	Water	8290A	
180-190963-19	SOIL #2 L/S 10.0	Total/NA	Water	8290A	
180-190963-20	SOIL #2 L/S 5.0	Total/NA	Water	8290A	
180-190963-21	SOIL #2 L/S 2.0	Total/NA	Water	8290A	
180-190963-22 - DL	SOIL #2 L/S 1.0	Total/NA	Water	8290A	
180-190963-22	SOIL #2 L/S 1.0	Total/NA	Water	8290A	
180-190963-23 - DL	SOIL #2 L/S 0.5	Total/NA	Water	8290A	
180-190963-23	SOIL #2 L/S 0.5	Total/NA	Water	8290A	
180-190963-24	MB	Total/NA	Water	8290A	
MB 410-673529/1-A	Method Blank	Total/NA	Water	8290A	
LCS 410-673529/2-A	Lab Control Sample	Total/NA	Water	8290A	

Analysis Batch: 675453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-673529/1-A	Method Blank	Total/NA	Water	8290A	673529
LCS 410-673529/2-A	Lab Control Sample	Total/NA	Water	8290A	673529

Analysis Batch: 675873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-19	SOIL #2 L/S 10.0	Total/NA	Water	8290A	673529
180-190963-22	SOIL #2 L/S 1.0	Total/NA	Water	8290A	673529
180-190963-23	SOIL #2 L/S 0.5	Total/NA	Water	8290A	673529
180-190963-24	MB	Total/NA	Water	8290A	673529

Analysis Batch: 676725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-19 - DL	SOIL #2 L/S 10.0	Total/NA	Water	8290A	673529
180-190963-20	SOIL #2 L/S 5.0	Total/NA	Water	8290A	673529
180-190963-21	SOIL #2 L/S 2.0	Total/NA	Water	8290A	673529
180-190963-22 - DL	SOIL #2 L/S 1.0	Total/NA	Water	8290A	673529
180-190963-23 - DL	SOIL #2 L/S 0.5	Total/NA	Water	8290A	673529

Metals

Prep Batch: 654085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-1	SOIL #1	Total/NA	Solid	3050B	
MB 410-654085/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 410-654085/2-A ^2	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 656408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-654085/1-A ^2	Method Blank	Total/NA	Solid	6020B	654085
LCS 410-654085/2-A ^2	Lab Control Sample	Total/NA	Solid	6020B	654085

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QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Metals

Analysis Batch: 656432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-1	SOIL #1	Total/NA	Solid	6020B	654085

Prep Batch: 665894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-15	SOIL #1 L/S 5.0	Total Recoverable	Water	3005A	
180-190963-16	SOIL #1 L/S 2.0	Total Recoverable	Water	3005A	
180-190963-17	SOIL #1 L/S 1.0	Total Recoverable	Water	3005A	
180-190963-18	SOIL #1 L/S 0.5	Total Recoverable	Water	3005A	
180-190963-19	SOIL #2 L/S 10.0	Total Recoverable	Water	3005A	
180-190963-20	SOIL #2 L/S 5.0	Total Recoverable	Water	3005A	
180-190963-21	SOIL #2 L/S 2.0	Total Recoverable	Water	3005A	
180-190963-22	SOIL #2 L/S 1.0	Total Recoverable	Water	3005A	
180-190963-23	SOIL #2 L/S 0.5	Total Recoverable	Water	3005A	
180-190963-24	MB	Total Recoverable	Water	3005A	
MB 410-665894/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-665894/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 672375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-15	SOIL #1 L/S 5.0	Total Recoverable	Water	6020B	665894
180-190963-16	SOIL #1 L/S 2.0	Total Recoverable	Water	6020B	665894
180-190963-17	SOIL #1 L/S 1.0	Total Recoverable	Water	6020B	665894
180-190963-18	SOIL #1 L/S 0.5	Total Recoverable	Water	6020B	665894
180-190963-19	SOIL #2 L/S 10.0	Total Recoverable	Water	6020B	665894
180-190963-20	SOIL #2 L/S 5.0	Total Recoverable	Water	6020B	665894
180-190963-21	SOIL #2 L/S 2.0	Total Recoverable	Water	6020B	665894
180-190963-22	SOIL #2 L/S 1.0	Total Recoverable	Water	6020B	665894
180-190963-23	SOIL #2 L/S 0.5	Total Recoverable	Water	6020B	665894
180-190963-24	MB	Total Recoverable	Water	6020B	665894
MB 410-665894/1-A	Method Blank	Total Recoverable	Water	6020B	665894
LCS 410-665894/2-A	Lab Control Sample	Total Recoverable	Water	6020B	665894

Prep Batch: 674868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-14	SOIL #1 L/S 10.0	Total Recoverable	Water	3005A	
MB 410-674868/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-674868/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 675265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-14	SOIL #1 L/S 10.0	Total Recoverable	Water	6020B	674868
MB 410-674868/1-A	Method Blank	Total Recoverable	Water	6020B	674868
LCS 410-674868/2-A	Lab Control Sample	Total Recoverable	Water	6020B	674868

Prep Batch: 676632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-2	SOIL #2	Total/NA	Solid	3050B	
MB 410-676632/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 410-676632/2-A	Lab Control Sample	Total/NA	Solid	3050B	

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QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-1

Metals

Analysis Batch: 678370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-2	SOIL #2	Total/NA	Solid	6020B	676632
MB 410-676632/1-A	Method Blank	Total/NA	Solid	6020B	676632
LCS 410-676632/2-A	Lab Control Sample	Total/NA	Solid	6020B	676632

Analysis Batch: 678529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-2	SOIL #2	Total/NA	Solid	6020B	676632

General Chemistry

Analysis Batch: 496948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-1	SOIL #1	Total/NA	Solid	2540G	
180-190963-2	SOIL #2	Total/NA	Solid	2540G	
180-190963-1 DU	SOIL #1	Total/NA	Solid	2540G	

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Chain of Custody Record

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Pittsburgh, PA 15238

Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-541115.1			
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Washington		Page: Page 1 of 2			
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-190963-1			
Address: 2425 New Holland Pike, City: Lancaster State, Zip: PA, 17601 Phone: 717-656-2300(Tel) Email: N/A		Due Date Requested: 7/21/2025 TAT Requested (days): N/A		Analysis Requested						Preservation Codes:	
Project Name: Glacier NW ISS Treatability Study REVISE		Project #: 18029834		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6020B/3005AArsenic and Copper by ICPMS 1316 8290A/8290_P_SepDioxins/Furans: 17 Isomers 1316						Other: N/A	
Site: N/A		SSOW#: N/A								Total Number of containers	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, B=solid, O=waste/oil, BT=Tissue, A=Air)		Special Instructions/Note:	
SOIL #1 L/S 10.0 (180-190963-14)		6/25/25		06:40 Pacific		G		Water		1	
SOIL #1 L/S 5.0 (180-190963-15)		6/25/25		06:40 Pacific		G		Water		1	
SOIL #1 L/S 2.0 (180-190963-16)		6/25/25		06:40 Pacific		G		Water		1	
SOIL #1 L/S 1.0 (180-190963-17)		6/25/25		06:40 Pacific		G		Water		1	
SOIL #1 L/S 0.5 (180-190963-18)		6/25/25		06:40 Pacific		G		Water		1	
SOIL #2 L/S 10.0 (180-190963-19)		6/25/25		07:40 Pacific		G		Water		2	
SOIL #2 L/S 5.0 (180-190963-20)		6/25/25		07:40 Pacific		G		Water		2	
SOIL #2 L/S 2.0 (180-190963-21)		6/25/25		07:40 Pacific		G		Water		2	
SOIL #2 L/S 1.0 (180-190963-22)		6/25/25		07:40 Pacific		G		Water		2	
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed						☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months					
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:					
Primary Deliverable Rank: 2											
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:			
Relinquished by: <i>AR</i>				Date/Time: 6-26-25 1400		Company: EPI/HNE		Received by: <i>[Signature]</i>			
Relinquished by: <i>[Signature]</i>				Date/Time: 6/26/25 1812		Company: ELLF		Received by: <i>[Signature]</i>			
Relinquished by: <i>[Signature]</i>				Date/Time: <i>[Signature]</i>		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>			
Custody Seals Intact: ☒ Yes ☐ No				Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.7/1.7					

301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Environment Testing

[illegible]



13

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-190963-1

Login Number: 190963

List Source: Eurofins Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

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

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Pittsburgh

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-190963-1

Login Number: 190963

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 2

List Creation: 05/30/25 06:43 AM

Creator: Cyms, Carolyn M

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Pittsburgh

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-190963-1

Login Number: 190963

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 3

List Creation: 06/27/25 04:14 PM

Creator: Wrye, Shaun

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Pittsburgh



ANALYTICAL REPORT

PREPARED FOR

Attn: Rory Kilkenny
ENTACT, LLC
701 Fifth Ave.
Suite 4200
Seattle, Washington 98104

Generated 6/13/2025 7:37:46 AM

JOB DESCRIPTION

Glacier NW ISS Treatability Study REVISE

JOB NUMBER

180-190963-2

Eurofins Pittsburgh

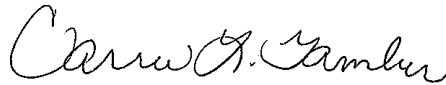
Job Notes

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

PA Lab ID: 02-00416

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

Authorization



Generated
6/13/2025 7:37:46 AM

Authorized for release by
Carrie Gamber, Senior Project Manager
Carrie.Gamber@et.eurofinsus.com
(412)963-2428

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Case Narrative

Client: ENTACT, LLC
Project: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Job ID: 180-190963-2

Eurofins Pittsburgh

CASE NARRATIVE

Client: ENTACT, LLC

Project: Glacier NW ISS Treatability Study REVISE

Report Number: 180-190963-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 05/27/2025; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.2 C.

DIOXINS

Due to the matrix, the initial volume used for the following sample deviated from the standard procedure: SOIL #2 (180-190963-2). The reporting limits (RLs) have been adjusted proportionately.

The following sample was diluted due to the nature of the sample matrix: SOIL #2 (180-190963-2). Elevated reporting limits (RLs) are provided.

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Definitions/Glossary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Qualifiers

Dioxin

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Accreditation/Certification Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-25
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-25
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-25
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-25
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-25
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-26
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	01-10-26
New Jersey	NELAP	PA011	06-30-25
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-25
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-25
Oregon	NELAP	PA200001	09-11-25
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-25
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-25
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

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Accreditation/Certification Summary

Client: ENTACT, LLC

Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-25
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

Sample Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-190963-2	SOIL #2	Solid	05/27/25 13:00	05/27/25 16:38

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	ELLE
HRMS-Soxtherm	Soxtherm Extraction	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Client Sample ID: SOIL #2

Lab Sample ID: 180-190963-2

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Soxtherm			0.13 g	20 uL	655139	06/09/25 19:36	SA8Q	ELLE
Total/NA	Analysis	8290A		10	20 uL	0 mL	655639	06/11/25 08:02	TJK2	ELLE
		Instrument ID: DF17611B								
Total/NA	Prep	HRMS-Soxtherm	DL		0.13 g	20 uL	655139	06/09/25 19:36	SA8Q	ELLE
Total/NA	Analysis	8290A	DL	40	20 uL	0 mL	656147	06/12/25 03:13	TJK2	ELLE
		Instrument ID: DF17611B								

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Analyst References:

Lab: ELLE

Batch Type: Prep

SA8Q = Erik Greavison

Batch Type: Analysis

TJK2 = Brandon Jensen

Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Client Sample ID: SOIL #2

Lab Sample ID: 180-190963-2

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Percent Solids: 79.1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	34000		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,4,6,7,8-HpCDF	18000		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,4,7,8-HxCDD	ND		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,4,7,8-HxCDF	5400		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,4,7,8,9-HpCDF	2800 J		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,6,7,8-HxCDD	ND		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,6,7,8-HxCDF	ND		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,7,8-PeCDD	ND		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,7,8-PeCDF	ND		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,7,8,9-HxCDD	ND		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
1,2,3,7,8,9-HxCDF	ND		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
2,3,4,6,7,8-HxCDF	ND		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
2,3,4,7,8-PeCDF	ND		4900	1900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
2,3,7,8-TCDD	ND		970	190	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
2,3,7,8-TCDF	ND		970	580	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10
OCDF	110000		9700	4900	ng/Kg	☆	06/09/25 19:36	06/11/25 08:02	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	94		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,4,6,7,8-HpCDF	103		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,4,7,8-HxCDD	80		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,4,7,8-HxCDF	86		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,4,7,8,9-HpCDF	95		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,6,7,8-HxCDD	87		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,6,7,8-HxCDF	91		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,7,8-PeCDD	72		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,7,8-PeCDF	78		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,7,8,9-HxCDD	86		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-1,2,3,7,8,9-HxCDF	96		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-2,3,4,6,7,8-HxCDF	88		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-2,3,4,7,8-PeCDF	87		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-2,3,7,8-TCDD	59		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-2,3,7,8-TCDF	69		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-OCDD	115		40 - 135	06/09/25 19:36	06/11/25 08:02	10
13C-OCDF	106		40 - 135	06/09/25 19:36	06/11/25 08:02	10

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	11000000		58000	51000	ng/Kg	☼	06/09/25 19:36	06/12/25 03:13	40
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	77	I	40 - 135				06/09/25 19:36	06/12/25 03:13	40
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135				06/09/25 19:36	06/12/25 03:13	40
13C-1,2,3,4,7,8-HxCDD	77		40 - 135				06/09/25 19:36	06/12/25 03:13	40
13C-1,2,3,4,7,8-HxCDF	77		40 - 135				06/09/25 19:36	06/12/25 03:13	40
13C-1,2,3,4,7,8,9-HpCDF	92		40 - 135				06/09/25 19:36	06/12/25 03:13	40
13C-1,2,3,6,7,8-HxCDD	72		40 - 135				06/09/25 19:36	06/12/25 03:13	40
13C-1,2,3,6,7,8-HxCDF	92	I	40 - 135				06/09/25 19:36	06/12/25 03:13	40
13C-1,2,3,7,8-PeCDD	70	I	40 - 135				06/09/25 19:36	06/12/25 03:13	40
13C-1,2,3,7,8-PeCDF	85	I	40 - 135				06/09/25 19:36	06/12/25 03:13	40
13C-1,2,3,7,8,9-HxCDD	77		40 - 135				06/09/25 19:36	06/12/25 03:13	40

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Client Sample ID: SOIL #2

Lab Sample ID: 180-190963-2

Date Collected: 05/27/25 13:00

Matrix: Solid

Date Received: 05/27/25 16:38

Percent Solids: 79.1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) - DL (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	86		40 - 135	06/09/25 19:36	06/12/25 03:13	40
13C-2,3,4,6,7,8-HxCDF	62		40 - 135	06/09/25 19:36	06/12/25 03:13	40
13C-2,3,4,7,8-PeCDF	88	I	40 - 135	06/09/25 19:36	06/12/25 03:13	40
13C-2,3,7,8-TCDD	78		40 - 135	06/09/25 19:36	06/12/25 03:13	40
13C-2,3,7,8-TCDF	74	I	40 - 135	06/09/25 19:36	06/12/25 03:13	40
13C-OCDD	93	I	40 - 135	06/09/25 19:36	06/12/25 03:13	40
13C-OCDF	98		40 - 135	06/09/25 19:36	06/12/25 03:13	40

QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 410-655139/1-A

Matrix: Solid

Analysis Batch: 655639

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 655139

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,4,7,8-HxCDD	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,4,7,8-HxCDF	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,6,7,8-HxCDD	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,6,7,8-HxCDF	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,7,8-PeCDD	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,7,8-PeCDF	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,7,8,9-HxCDD	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
1,2,3,7,8,9-HxCDF	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
2,3,4,6,7,8-HxCDF	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
2,3,4,7,8-PeCDF	ND		5.0	2.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
2,3,7,8-TCDD	ND		1.0	0.20	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
2,3,7,8-TCDF	ND		1.0	0.60	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
OCDD	ND		15	13	ng/Kg		06/09/25 19:36	06/11/25 04:30	1
OCDF	ND		10	5.0	ng/Kg		06/09/25 19:36	06/11/25 04:30	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	91		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,4,6,7,8-HpCDF	102		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,4,7,8-HxCDD	77		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,4,7,8-HxCDF	92		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,4,7,8,9-HpCDF	99		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,6,7,8-HxCDD	89		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,6,7,8-HxCDF	94		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,7,8-PeCDD	78		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,7,8-PeCDF	82		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,7,8,9-HxCDD	86		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-1,2,3,7,8,9-HxCDF	94		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-2,3,4,6,7,8-HxCDF	93		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-2,3,4,7,8-PeCDF	88		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-2,3,7,8-TCDD	71		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-2,3,7,8-TCDF	81		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-OCDD	92		40 - 135	06/09/25 19:36	06/11/25 04:30	1
13C-OCDF	96		40 - 135	06/09/25 19:36	06/11/25 04:30	1

Lab Sample ID: LCS 410-655139/2-A

Matrix: Solid

Analysis Batch: 655639

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 655139

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,4,6,7,8-HpCDD	100	111		ng/Kg		111	74 - 120
1,2,3,4,6,7,8-HpCDF	100	117		ng/Kg		117	72 - 120
1,2,3,4,7,8-HxCDD	100	116		ng/Kg		116	77 - 120
1,2,3,4,7,8-HxCDF	100	114		ng/Kg		114	76 - 120
1,2,3,4,7,8,9-HpCDF	100	114		ng/Kg		114	73 - 120
1,2,3,6,7,8-HxCDD	100	116		ng/Kg		116	77 - 120
1,2,3,6,7,8-HxCDF	100	114		ng/Kg		114	76 - 120

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-655139/2-A

Matrix: Solid

Analysis Batch: 655639

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 655139

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,7,8-PeCDD	100	116		ng/Kg		116	80 - 128
1,2,3,7,8-PeCDF	100	120		ng/Kg		120	75 - 127
1,2,3,7,8,9-HxCDD	100	117		ng/Kg		117	77 - 121
1,2,3,7,8,9-HxCDF	100	113		ng/Kg		113	75 - 120
2,3,4,6,7,8-HxCDF	100	112		ng/Kg		112	75 - 120
2,3,4,7,8-PeCDF	100	120		ng/Kg		120	74 - 120
2,3,7,8-TCDD	20.0	22.3		ng/Kg		112	66 - 120
2,3,7,8-TCDF	20.0	21.3		ng/Kg		106	69 - 127
OCDD	200	233		ng/Kg		117	75 - 120
OCDF	200	223		ng/Kg		112	75 - 123

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,4,6,7,8-HpCDD	91		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	100		40 - 135
13C-1,2,3,4,7,8-HxCDD	77		40 - 135
13C-1,2,3,4,7,8-HxCDF	90		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	100		40 - 135
13C-1,2,3,6,7,8-HxCDD	85		40 - 135
13C-1,2,3,6,7,8-HxCDF	89		40 - 135
13C-1,2,3,7,8-PeCDD	81		40 - 135
13C-1,2,3,7,8-PeCDF	84		40 - 135
13C-1,2,3,7,8,9-HxCDD	90		40 - 135
13C-1,2,3,7,8,9-HxCDF	93		40 - 135
13C-2,3,4,6,7,8-HxCDF	89		40 - 135
13C-2,3,4,7,8-PeCDF	88		40 - 135
13C-2,3,7,8-TCDD	73		40 - 135
13C-2,3,7,8-TCDF	83		40 - 135
13C-OCDD	93		40 - 135
13C-OCDF	100		40 - 135

QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study REVISE

Job ID: 180-190963-2

Specialty Organics

Prep Batch: 655139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-2	SOIL #2	Total/NA	Solid	HRMS-Soxtherm	
180-190963-2 - DL	SOIL #2	Total/NA	Solid	HRMS-Soxtherm	
MB 410-655139/1-A	Method Blank	Total/NA	Solid	HRMS-Soxtherm	
LCS 410-655139/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Soxtherm	

Analysis Batch: 655639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-2	SOIL #2	Total/NA	Solid	8290A	655139
MB 410-655139/1-A	Method Blank	Total/NA	Solid	8290A	655139
LCS 410-655139/2-A	Lab Control Sample	Total/NA	Solid	8290A	655139

Analysis Batch: 656147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190963-2 - DL	SOIL #2	Total/NA	Solid	8290A	655139

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-190963-2

Login Number: 190963

List Source: Eurofins Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

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

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Pittsburgh

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-190963-2

Login Number: 190963

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 2

List Creation: 05/30/25 06:43 AM

Creator: Cyms, Carolyn M

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

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ATTACHMENT 5
ISS MIX EPA LEAF 1315 ANALYTICAL REPORT – SOIL #1 &
WATER



ANALYTICAL REPORT

PREPARED FOR

Attn: Rory Kilkenny
ENTACT, LLC
701 Fifth Ave.
Suite 4200
Seattle, Washington 98104

Generated 11/18/2025 1:24:05 PM

JOB DESCRIPTION

Glacier NW ISS Treatability Study

JOB NUMBER

180-194461-1

Eurofins Pittsburgh

Job Notes

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

PA Lab ID: 02-00416

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

Authorization



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11/18/2025 1:24:05 PM

Authorized for release by
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Case Narrative

Client: ENTACT, LLC
Project: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Job ID: 180-194461-1

Eurofins Pittsburgh

CASE NARRATIVE

Client: ENTACT, LLC

Project: Glacier NW ISS Treatability Study

Report Number: 180-194461-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 08/14/2025; the samples arrived in good condition. The temperature of the coolers at receipt was 28.5 C. Thermal preservation not required.

METALS

Arsenic and Copper exceeded the RPD limit for the duplicate of sample S1-10PC T02DU (180-194461-39). Arsenic and Copper exceeded the RPD limit for the duplicate of sample S1-10PC T03DU (180-194461-40).

GENERAL CHEMSITRY

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

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Definitions/Glossary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Qualifiers

Metals

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Accreditation/Certification Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00690	06-28-25 *
California	State	2891	04-30-26
Connecticut	State	PH-0820	09-30-26
Florida	NELAP	E871008	06-30-25 *
Georgia	State	PA 02-00416	04-30-26
Illinois	NELAP	200005	07-31-25 *
Kansas	NELAP	E-10350	01-31-26
Kentucky (UST)	State	162013	04-30-26
Kentucky (WW)	State	KY98043	12-31-25
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25 *
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-25
New Hampshire	NELAP	2030	04-04-26
New Jersey	NELAP	PA005	06-30-25 *
New York	NELAP	11182	03-31-26
North Carolina (WW/SW)	State	434	12-31-25
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-26
Pennsylvania	NELAP	02-00416	04-30-26
Rhode Island	State	LAO00375	12-30-25
South Carolina	State	89014	04-30-25 *
Texas	NELAP	T104704528	03-31-26
US Fish & Wildlife	US Federal Programs	A21930	04-30-26
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	03-31-24 *
Virginia	NELAP	460189	11-09-25
West Virginia DEP	State	142	01-31-26
Wisconsin	State	998027800	08-31-26

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-26
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-26
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-26
Connecticut	State	PH-0746	06-30-27
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	07-01-26
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

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Accreditation/Certification Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-26
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-26
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-26
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-26
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-26
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	01-10-26
New Jersey	NELAP	PA011	06-30-26
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-26
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Ohio	State	87787	01-31-26
Oklahoma	NELAP	9804	12-31-25
Oregon	NELAP	PA200001	09-11-26
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-26
USDA	US Federal Programs	525-22-298-19481	01-23-26
Vermont	State	VT - 36037	10-28-26
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-26
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Pittsburgh

Sample Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
180-194461-1	WATER #3 LAB ANAEROBIC DEIONIZED	Water	09/03/25 07:00	08/14/25 14:25	Puerto Rico
180-194461-2	S1-10PC T01	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-3	S1-10PC T02	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-4	S1-10PC T03	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-5	S1-10PC T04	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-6	S1-10PC T05	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-7	S1-10PC T06	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-8	S1-10PC T07	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-9	S1-10PC T08	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-10	S1-10PC T09	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-11	S1-3PC-7BFS T01	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-12	S1-3PC-7BFS T02	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-13	S1-3PC-7BFS T03	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-14	S1-3PC-7BFS T04	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-15	S1-3PC-7BFS T05	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-16	S1-3PC-7BFS T06	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-17	S1-3PC-7BFS T07	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-18	S1-3PC-7BFS T08	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-19	S1-3PC-7BFS T09	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-194461-38	S1-10PC T01	Water	09/03/25 09:55	08/14/25 14:25	Puerto Rico
180-194461-39	S1-10PC T02	Water	09/04/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-40	S1-10PC T03	Water	09/05/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-41	S1-10PC T04	Water	09/10/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-42	S1-10PC T05	Water	09/17/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-43	S1-10PC T06	Water	10/01/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-44	S1-10PC T07	Water	10/15/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-45	S1-10PC T08	Water	10/22/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-46	S1-10PC T09	Water	11/05/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-47	S1-3PC-7BFS T01	Water	09/03/25 09:55	08/14/25 14:25	Puerto Rico
180-194461-48	S1-3PC-7BFS T02	Water	09/04/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-49	S1-3PC-7BFS T03	Water	09/05/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-50	S1-3PC-7BFS T04	Water	09/10/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-51	S1-3PC-7BFS T05	Water	09/17/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-52	S1-3PC-7BFS T06	Water	10/01/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-53	S1-3PC-7BFS T07	Water	10/15/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-54	S1-3PC-7BFS T08	Water	10/22/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-55	S1-3PC-7BFS T09	Water	11/05/25 07:55	08/14/25 14:25	Puerto Rico
180-194461-74	MB T01	Solid	08/27/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-75	MB T02	Solid	08/27/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-76	MB T03	Solid	08/27/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-77	MB T04	Solid	08/27/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-78	MB T05	Solid	08/27/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-79	MB T06	Solid	08/27/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-80	MB T07	Solid	08/27/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-81	MB T08	Solid	08/27/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-82	MB T09	Solid	08/27/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-83	MB T01	Water	09/03/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-84	MB T02	Water	09/04/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-85	MB T03	Water	09/05/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-86	MB T04	Water	09/10/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-87	MB T05	Water	09/17/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-88	MB T06	Water	10/01/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-89	MB T07	Water	10/15/25 00:00	08/14/25 14:25	Puerto Rico

Eurofins Pittsburgh

Sample Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
180-194461-90	MB T08	Water	10/22/25 00:00	08/14/25 14:25	Puerto Rico
180-194461-91	MB T09	Water	11/05/25 00:00	08/14/25 14:25	Puerto Rico

- 1
- 2
- 3
- 4
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- 7
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- 10
- 11
- 12
- 13

Method Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	ELLE
4500-O G-2016	Oxygen, Dissolved	SM	EET PIT
EPA 180.1	Turbidity, Nephelometric	EPA	EET PIT
EPA 9040C	pH	SW846	EET PIT
SM 2510B	Conductivity, Specific Conductance	SM	EET PIT
SM 2580B	Reduction-Oxidation (REDOX) Potential	SM	EET PIT
1315	Semi-Dynamic Tank Leaching Procedure	SW846	EET PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: WATER #3 LAB ANAEROBIC DEIONIZED

Lab Sample ID: 180-194461-1

Date Collected: 09/03/25 07:00

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	4500-O G-2016		1	300 mL	300 mL	502311	09/03/25 10:16	ELS	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 180.1		1			502304	09/03/25 08:21	RSK	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	EPA 9040C		1			502409	09/04/25 10:14	BAB	EET PIT
		Instrument ID: OZ								
Total/NA	Analysis	SM 2510B		1			502407	09/04/25 12:52	A1K	EET PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	SM 2580B		1			502324	09/03/25 13:22	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-10PC T01

Lab Sample ID: 180-194461-2

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			359.3 g	1800 mL	502302	09/03/25 06:55	LWM	EET PIT
Leach	Analysis	EPA 9040C		1			502462	09/05/25 11:31	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			359.3 g	1800 mL	502302	09/03/25 06:55	LWM	EET PIT
Leach	Analysis	SM 2580B		1			502324	09/03/25 13:35	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-10PC T02

Lab Sample ID: 180-194461-3

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			364.5 g	1800 mL	502334	09/03/25 08:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			502462	09/05/25 11:15	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			364.5 g	1800 mL	502334	09/03/25 08:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			502417	09/04/25 16:13	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-10PC T03

Lab Sample ID: 180-194461-4

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			364.3 g	1800 mL	502335	09/04/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			502462	09/05/25 11:17	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Analysis	SM 2580B		1			502463	09/05/25 11:21	ELS	EET PIT
		Instrument ID: NOEQUIP								

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-10PC T04

Lab Sample ID: 180-194461-5

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			364.7 g	1800 mL	502337	09/05/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			502697	09/10/25 12:21	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			364.7 g	1800 mL	502337	09/05/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			502691	09/10/25 11:46	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-10PC T05

Lab Sample ID: 180-194461-6

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			365.2 g	1800 mL	502339	09/10/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503088	09/17/25 11:09	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			365.2 g	1800 mL	502339	09/10/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503154	09/18/25 10:58	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-10PC T06

Lab Sample ID: 180-194461-7

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			365.3 g	1800 mL	502340	09/17/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503939	10/02/25 13:38	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			365.3 g	1800 mL	502340	09/17/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503863	10/01/25 16:14	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-10PC T07

Lab Sample ID: 180-194461-8

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			365.2 g	1800 mL	502341	10/01/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			504622	10/15/25 17:05	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			365.2 g	1800 mL	502341	10/01/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			504699	10/17/25 11:48	ELS	EET PIT
		Instrument ID: NOEQUIP								

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-10PC T08

Lab Sample ID: 180-194461-9

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			365.2 g	1800 mL	502342	10/15/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505124	10/23/25 13:53	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			365.2 g	1800 mL	502342	10/15/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505051	10/22/25 16:28	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-10PC T09

Lab Sample ID: 180-194461-10

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			365.5 g	1800 mL	502343	10/22/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505848	11/05/25 16:12	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			365.5 g	1800 mL	502343	10/22/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505842	11/05/25 14:50	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-3PC-7BFS T01

Lab Sample ID: 180-194461-11

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			357.9 g	1800 mL	502302	09/03/25 06:55	LWM	EET PIT
Leach	Analysis	EPA 9040C		1			502462	09/05/25 11:30	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			357.9 g	1800 mL	502302	09/03/25 06:55	LWM	EET PIT
Leach	Analysis	SM 2580B		1			502324	09/03/25 13:41	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-3PC-7BFS T02

Lab Sample ID: 180-194461-12

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			362.7 g	1800 mL	502334	09/03/25 08:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			502462	09/05/25 11:14	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			362.7 g	1800 mL	502334	09/03/25 08:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			502417	09/04/25 16:30	ELS	EET PIT
		Instrument ID: NOEQUIP								

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-3PC-7BFS T03

Lab Sample ID: 180-194461-13

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			362.1 g	1800 mL	502335	09/04/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			502462	09/05/25 11:18	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			362.1 g	1800 mL	502335	09/04/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			502463	09/05/25 11:39	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-3PC-7BFS T04

Lab Sample ID: 180-194461-14

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			363.2 g	1800 mL	502337	09/05/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			502697	09/10/25 12:24	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			363.2 g	1800 mL	502337	09/05/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			502691	09/10/25 12:04	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-3PC-7BFS T05

Lab Sample ID: 180-194461-15

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			363.0 g	1800 mL	502339	09/10/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503088	09/17/25 11:10	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			363.0 g	1800 mL	502339	09/10/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503154	09/18/25 11:16	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-3PC-7BFS T06

Lab Sample ID: 180-194461-16

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			363.0 g	1800 mL	502340	09/17/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503939	10/02/25 13:37	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			363.0 g	1800 mL	502340	09/17/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503863	10/01/25 16:20	ELS	EET PIT
		Instrument ID: NOEQUIP								

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-3PC-7BFS T07

Lab Sample ID: 180-194461-17

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			363.8 g	1800 mL	502341	10/01/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			504622	10/15/25 17:02	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			363.8 g	1800 mL	502341	10/01/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			504699	10/17/25 11:54	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-3PC-7BFS T08

Lab Sample ID: 180-194461-18

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			363.2 g	1800 mL	502342	10/15/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505124	10/23/25 13:54	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			363.2 g	1800 mL	502342	10/15/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505051	10/22/25 16:40	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-3PC-7BFS T09

Lab Sample ID: 180-194461-19

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			363.5 g	1800 mL	502343	10/22/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505848	11/05/25 16:13	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			363.5 g	1800 mL	502343	10/22/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505842	11/05/25 14:55	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: S1-10PC T01

Lab Sample ID: 180-194461-38

Date Collected: 09/03/25 09:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 20:28	I9IN	ELLE
		Instrument ID: E08 - 30647								

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-10PC T02

Lab Sample ID: 180-194461-39

Date Collected: 09/04/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	696321	09/11/25 07:00	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			698233	09/11/25 17:29	LHF4	ELLE
Instrument ID: E10										

Client Sample ID: S1-10PC T03

Lab Sample ID: 180-194461-40

Date Collected: 09/05/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 20:32	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S1-10PC T04

Lab Sample ID: 180-194461-41

Date Collected: 09/10/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	730319	11/16/25 20:30	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			731012	11/17/25 13:28	F7JF	ELLE
Instrument ID: E09 - 30921										

Client Sample ID: S1-10PC T05

Lab Sample ID: 180-194461-42

Date Collected: 09/17/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 20:43	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S1-10PC T06

Lab Sample ID: 180-194461-43

Date Collected: 10/01/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	712518	10/21/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			718449	10/22/25 19:26	I9IN	ELLE
Instrument ID: E08 - 30647										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-10PC T07

Lab Sample ID: 180-194461-44

Date Collected: 10/15/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	719868	10/26/25 21:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			720552	10/27/25 18:41	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S1-10PC T08

Lab Sample ID: 180-194461-45

Date Collected: 10/22/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	728523	11/12/25 11:30	RFN5	ELLE
Total Recoverable	Analysis	6020B		1			729473	11/13/25 15:09	SAM2	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S1-10PC T09

Lab Sample ID: 180-194461-46

Date Collected: 11/05/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	726876	11/10/25 06:22	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			727683	11/10/25 19:03	LHF4	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S1-3PC-7BFS T01

Lab Sample ID: 180-194461-47

Date Collected: 09/03/25 09:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 20:52	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S1-3PC-7BFS T02

Lab Sample ID: 180-194461-48

Date Collected: 09/04/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	696321	09/11/25 07:00	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			698233	09/11/25 17:39	LHF4	ELLE
Instrument ID: E10										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-3PC-7BFS T03

Lab Sample ID: 180-194461-49

Date Collected: 09/05/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 21:05	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S1-3PC-7BFS T04

Lab Sample ID: 180-194461-50

Date Collected: 09/10/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	730319	11/16/25 20:30	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			731012	11/17/25 13:24	F7JF	ELLE
Instrument ID: E09 - 30921										

Client Sample ID: S1-3PC-7BFS T05

Lab Sample ID: 180-194461-51

Date Collected: 09/17/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 21:10	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S1-3PC-7BFS T06

Lab Sample ID: 180-194461-52

Date Collected: 10/01/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	712518	10/21/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			718449	10/22/25 19:24	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S1-3PC-7BFS T07

Lab Sample ID: 180-194461-53

Date Collected: 10/15/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	719868	10/26/25 21:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			720552	10/27/25 18:32	I9IN	ELLE
Instrument ID: E08 - 30647										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-3PC-7BFS T08

Lab Sample ID: 180-194461-54

Date Collected: 10/22/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	726014	11/10/25 06:42	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			727667	11/10/25 21:35	LHF4	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: S1-3PC-7BFS T09

Lab Sample ID: 180-194461-55

Date Collected: 11/05/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	726876	11/10/25 06:22	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			727683	11/10/25 19:08	LHF4	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: MB T01

Lab Sample ID: 180-194461-74

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502302	09/03/25 06:55	LWM	EET PIT
Leach	Analysis	EPA 9040C		1			502462	09/05/25 11:26	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	502302	09/03/25 06:55	LWM	EET PIT
Leach	Analysis	SM 2580B		1			502324	09/03/25 14:00	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: MB T02

Lab Sample ID: 180-194461-75

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502334	09/03/25 08:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			502462	09/05/25 11:09	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	502334	09/03/25 08:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			502417	09/04/25 16:56	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: MB T03

Lab Sample ID: 180-194461-76

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502335	09/04/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			502462	09/05/25 11:23	BAB	EET PIT
Instrument ID: NOEQUIP										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: MB T03

Lab Sample ID: 180-194461-76

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502335	09/04/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			502463	09/05/25 12:06	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: MB T04

Lab Sample ID: 180-194461-77

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502337	09/05/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			502697	09/10/25 12:33	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	502337	09/05/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			502691	09/10/25 12:31	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: MB T05

Lab Sample ID: 180-194461-78

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502339	09/10/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503088	09/17/25 11:11	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	502339	09/10/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503154	09/18/25 11:25	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: MB T06

Lab Sample ID: 180-194461-79

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502340	09/17/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503939	10/02/25 13:36	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	502340	09/17/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503863	10/01/25 16:26	ELS	EET PIT
Instrument ID: NOEQUIP										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: MB T07

Date Collected: 08/27/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-80

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502341	10/01/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			504622	10/15/25 17:00	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			1.0 g	1800 mL	502341	10/01/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			504699	10/17/25 12:01	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: MB T08

Date Collected: 08/27/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-81

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502342	10/15/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505124	10/23/25 13:55	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			1.0 g	1800 mL	502342	10/15/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505051	10/22/25 16:45	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: MB T09

Date Collected: 08/27/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-82

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502343	10/22/25 06:55	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505848	11/05/25 16:14	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			1.0 g	1800 mL	502343	10/22/25 06:55	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505842	11/05/25 15:00	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: MB T01

Date Collected: 09/03/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-83

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	704644	09/25/25 21:30	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			705480	09/26/25 17:48	I9IN	ELLE
		Instrument ID: E08 - 30647								

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: MB T02

Date Collected: 09/04/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-84

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	696321	09/11/25 07:00	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			698233	09/11/25 17:43	LHF4	ELLE
Instrument ID: E10										

Client Sample ID: MB T03

Date Collected: 09/05/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-85

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	702289	09/21/25 21:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			703048	09/22/25 17:57	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: MB T04

Date Collected: 09/10/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-86

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 21:14	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: MB T05

Date Collected: 09/17/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-87

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 21:16	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: MB T06

Date Collected: 10/01/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-88

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	712518	10/21/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			718449	10/22/25 19:09	I9IN	ELLE
Instrument ID: E08 - 30647										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: MB T07

Date Collected: 10/15/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-89

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	719868	10/26/25 21:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			720552	10/27/25 18:30	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: MB T08

Date Collected: 10/22/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-90

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	726014	11/10/25 06:42	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			727667	11/10/25 21:39	LHF4	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: MB T09

Date Collected: 11/05/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-91

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	726876	11/10/25 06:22	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			727683	11/10/25 19:12	LHF4	ELLE
Instrument ID: E08 - 30647										

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Analyst References:

Lab: EET PIT

Batch Type: Leach

LWM = Larry Matko

TCS = Thomas Say

Batch Type: Analysis

A1K = Agnes Komlos

BAB = Brooke Batyi

ELS = Edwin Shireman

RSK = Robert Kurtz

Lab: ELLE

Batch Type: Prep

RFN5 = Aniyah Oxendine

UAMX = Annamaria Kuhns

UJL8 = James Mertz

Batch Type: Analysis

F7JF = Dennis Dick

I9IN = Miles Yiengst

LHF4 = Diamond Boyer

SAM2 = Matthew Olley

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: WATER #3 LAB ANAEROBIC DEIONIZED

Lab Sample ID: 180-194461-1

Date Collected: 09/03/25 07:00

Matrix: Water

Date Received: 08/14/25 14:25

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity (EPA 180.1)	ND		0.85	0.05	NTU			09/03/25 08:21	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oxygen, Dissolved (SM 4500-O G-2016)	3.5	HF	2.0	2.0	mg/L			09/03/25 10:16	1
pH (SW846 EPA 9040C)	5.4	HF	0.1	0.1	SU			09/04/25 10:14	1
Specific Conductance (SM 2510B)	1.0		1.0	1.0	umhos/cm			09/04/25 12:52	1
Electrical Conductivity (SM 2510B)	1.0		1.0	1.0	umhos/cm			09/04/25 12:52	1
Temperature (SM 2510B)	20	^2	1.0	1.0	Degrees C			09/04/25 12:52	1
Oxidation Reduction Potential (SM 2580B)	220		10	10	millivolts			09/03/25 13:22	1

Client Sample ID: S1-10PC T01

Lab Sample ID: 180-194461-2

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.1	H H3	0.1	0.1	SU			09/05/25 11:31	1
Oxidation Reduction Potential (SM 2580B)	180		10	10	millivolts			09/03/25 13:35	1

Client Sample ID: S1-10PC T02

Lab Sample ID: 180-194461-3

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.7	H H3	0.1	0.1	SU			09/05/25 11:15	1
Oxidation Reduction Potential (SM 2580B)	180		10	10	millivolts			09/04/25 16:13	1

Client Sample ID: S1-10PC T03

Lab Sample ID: 180-194461-4

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.6	H H3	0.1	0.1	SU			09/05/25 11:17	1
Oxidation Reduction Potential (SM 2580B)	99	H H3	10	10	millivolts			09/05/25 11:21	1

Client Sample ID: S1-10PC T04

Lab Sample ID: 180-194461-5

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.9	H H3	0.1	0.1	SU			09/10/25 12:21	1
Oxidation Reduction Potential (SM 2580B)	80		10	10	millivolts			09/10/25 11:46	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-10PC T05

Lab Sample ID: 180-194461-6

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.9	H H3	0.1	0.1	SU			09/17/25 11:09	1
Oxidation Reduction Potential (SM 2580B)	90		10	10	millivolts			09/18/25 10:58	1

Client Sample ID: S1-10PC T06

Lab Sample ID: 180-194461-7

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	12.1	H H3	0.1	0.1	SU			10/02/25 13:38	1
Oxidation Reduction Potential (SM 2580B)	78		10	10	millivolts			10/01/25 16:14	1

Client Sample ID: S1-10PC T07

Lab Sample ID: 180-194461-8

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	12.0	H H3	0.1	0.1	SU			10/15/25 17:05	1
Oxidation Reduction Potential (SM 2580B)	32	H	10	10	millivolts			10/17/25 11:48	1

Client Sample ID: S1-10PC T08

Lab Sample ID: 180-194461-9

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.8	H H3	0.1	0.1	SU			10/23/25 13:53	1
Oxidation Reduction Potential (SM 2580B)	48		10	10	millivolts			10/22/25 16:28	1

Client Sample ID: S1-10PC T09

Lab Sample ID: 180-194461-10

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.8	H H3	0.1	0.1	SU			11/05/25 16:12	1
Oxidation Reduction Potential (SM 2580B)	70		10	10	millivolts			11/05/25 14:50	1

Client Sample ID: S1-3PC-7BFS T01

Lab Sample ID: 180-194461-11

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.6	H H3	0.1	0.1	SU			09/05/25 11:30	1
Oxidation Reduction Potential (SM 2580B)	170		10	10	millivolts			09/03/25 13:41	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-3PC-7BFS T02

Lab Sample ID: 180-194461-12

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.3	H H3	0.1	0.1	SU			09/05/25 11:14	1
Oxidation Reduction Potential (SM 2580B)	180		10	10	millivolts			09/04/25 16:30	1

Client Sample ID: S1-3PC-7BFS T03

Lab Sample ID: 180-194461-13

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.1	H H3	0.1	0.1	SU			09/05/25 11:18	1
Oxidation Reduction Potential (SM 2580B)	84		10	10	millivolts			09/05/25 11:39	1

Client Sample ID: S1-3PC-7BFS T04

Lab Sample ID: 180-194461-14

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.6	H H3	0.1	0.1	SU			09/10/25 12:24	1
Oxidation Reduction Potential (SM 2580B)	60		10	10	millivolts			09/10/25 12:04	1

Client Sample ID: S1-3PC-7BFS T05

Lab Sample ID: 180-194461-15

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.6	H H3	0.1	0.1	SU			09/17/25 11:10	1
Oxidation Reduction Potential (SM 2580B)	81		10	10	millivolts			09/18/25 11:16	1

Client Sample ID: S1-3PC-7BFS T06

Lab Sample ID: 180-194461-16

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.7	H H3	0.1	0.1	SU			10/02/25 13:37	1
Oxidation Reduction Potential (SM 2580B)	62		10	10	millivolts			10/01/25 16:20	1

Client Sample ID: S1-3PC-7BFS T07

Lab Sample ID: 180-194461-17

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.7	H H3	0.1	0.1	SU			10/15/25 17:02	1
Oxidation Reduction Potential (SM 2580B)	42	H	10	10	millivolts			10/17/25 11:54	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-3PC-7BFS T08

Lab Sample ID: 180-194461-18

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.5	H H3	0.1	0.1	SU			10/23/25 13:54	1
Oxidation Reduction Potential (SM 2580B)	58		10	10	millivolts			10/22/25 16:40	1

Client Sample ID: S1-3PC-7BFS T09

Lab Sample ID: 180-194461-19

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.5	H H3	0.1	0.1	SU			11/05/25 16:13	1
Oxidation Reduction Potential (SM 2580B)	80		10	10	millivolts			11/05/25 14:55	1

Client Sample ID: S1-10PC T01

Lab Sample ID: 180-194461-38

Date Collected: 09/03/25 09:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 20:28	1
Copper	2.3		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 20:28	1

Client Sample ID: S1-10PC T02

Lab Sample ID: 180-194461-39

Date Collected: 09/04/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	39		2.0	0.68	ug/L		09/11/25 07:00	09/11/25 17:29	1
Copper	7.5		1.0	0.85	ug/L		09/11/25 07:00	09/11/25 17:29	1

Client Sample ID: S1-10PC T03

Lab Sample ID: 180-194461-40

Date Collected: 09/05/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	24		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 20:32	1
Copper	5.5		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 20:32	1

Client Sample ID: S1-10PC T04

Lab Sample ID: 180-194461-41

Date Collected: 09/10/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	75		2.0	0.68	ug/L		11/16/25 20:30	11/17/25 13:28	1
Copper	25		1.0	0.85	ug/L		11/16/25 20:30	11/17/25 13:28	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-10PC T05

Lab Sample ID: 180-194461-42

Date Collected: 09/17/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	38		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 20:43	1
Copper	21		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 20:43	1

Client Sample ID: S1-10PC T06

Lab Sample ID: 180-194461-43

Date Collected: 10/01/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	31		2.0	0.68	ug/L		10/21/25 22:00	10/22/25 19:26	1
Copper	33		1.0	0.85	ug/L		10/21/25 22:00	10/22/25 19:26	1

Client Sample ID: S1-10PC T07

Lab Sample ID: 180-194461-44

Date Collected: 10/15/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	25		2.0	0.68	ug/L		10/26/25 21:00	10/27/25 18:41	1
Copper	30		1.0	0.85	ug/L		10/26/25 21:00	10/27/25 18:41	1

Client Sample ID: S1-10PC T08

Lab Sample ID: 180-194461-45

Date Collected: 10/22/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	17		2.0	0.68	ug/L		11/12/25 11:30	11/13/25 15:09	1
Copper	14		1.0	0.85	ug/L		11/12/25 11:30	11/13/25 15:09	1

Client Sample ID: S1-10PC T09

Lab Sample ID: 180-194461-46

Date Collected: 11/05/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	18		2.0	0.68	ug/L		11/10/25 06:22	11/10/25 19:03	1
Copper	16		1.0	0.85	ug/L		11/10/25 06:22	11/10/25 19:03	1

Client Sample ID: S1-3PC-7BFS T01

Lab Sample ID: 180-194461-47

Date Collected: 09/03/25 09:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.8		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 20:52	1
Copper	0.90 J		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 20:52	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-3PC-7BFS T02

Lab Sample ID: 180-194461-48

Date Collected: 09/04/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	51		2.0	0.68	ug/L		09/11/25 07:00	09/11/25 17:39	1
Copper	4.2		1.0	0.85	ug/L		09/11/25 07:00	09/11/25 17:39	1

Client Sample ID: S1-3PC-7BFS T03

Lab Sample ID: 180-194461-49

Date Collected: 09/05/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	42		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 21:05	1
Copper	2.1		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 21:05	1

Client Sample ID: S1-3PC-7BFS T04

Lab Sample ID: 180-194461-50

Date Collected: 09/10/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	130		2.0	0.68	ug/L		11/16/25 20:30	11/17/25 13:24	1
Copper	9.0		1.0	0.85	ug/L		11/16/25 20:30	11/17/25 13:24	1

Client Sample ID: S1-3PC-7BFS T05

Lab Sample ID: 180-194461-51

Date Collected: 09/17/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	110		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 21:10	1
Copper	16		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 21:10	1

Client Sample ID: S1-3PC-7BFS T06

Lab Sample ID: 180-194461-52

Date Collected: 10/01/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	120		2.0	0.68	ug/L		10/21/25 22:00	10/22/25 19:24	1
Copper	25		1.0	0.85	ug/L		10/21/25 22:00	10/22/25 19:24	1

Client Sample ID: S1-3PC-7BFS T07

Lab Sample ID: 180-194461-53

Date Collected: 10/15/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	100		2.0	0.68	ug/L		10/26/25 21:00	10/27/25 18:32	1
Copper	27		1.0	0.85	ug/L		10/26/25 21:00	10/27/25 18:32	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: S1-3PC-7BFS T08

Lab Sample ID: 180-194461-54

Date Collected: 10/22/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	67		2.0	0.68	ug/L		11/10/25 06:42	11/10/25 21:35	1
Copper	10		1.0	0.85	ug/L		11/10/25 06:42	11/10/25 21:35	1

Client Sample ID: S1-3PC-7BFS T09

Lab Sample ID: 180-194461-55

Date Collected: 11/05/25 07:55

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	84		2.0	0.68	ug/L		11/10/25 06:22	11/10/25 19:08	1
Copper	16		1.0	0.85	ug/L		11/10/25 06:22	11/10/25 19:08	1

Client Sample ID: MB T01

Lab Sample ID: 180-194461-74

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.1	H	0.1	0.1	SU			09/05/25 11:26	1
Oxidation Reduction Potential (SM 2580B)	170		10	10	millivolts			09/03/25 14:00	1

Client Sample ID: MB T02

Lab Sample ID: 180-194461-75

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.3	H	0.1	0.1	SU			09/05/25 11:09	1
Oxidation Reduction Potential (SM 2580B)	160		10	10	millivolts			09/04/25 16:56	1

Client Sample ID: MB T03

Lab Sample ID: 180-194461-76

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.2	H	0.1	0.1	SU			09/05/25 11:23	1
Oxidation Reduction Potential (SM 2580B)	140		10	10	millivolts			09/05/25 12:06	1

Client Sample ID: MB T04

Lab Sample ID: 180-194461-77

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.9	H	0.1	0.1	SU			09/10/25 12:33	1
Oxidation Reduction Potential (SM 2580B)	160		10	10	millivolts			09/10/25 12:31	1

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: MB T05

Lab Sample ID: 180-194461-78

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.9	H	0.1	0.1	SU			09/17/25 11:11	1
Oxidation Reduction Potential (SM 2580B)	160		10	10	millivolts			09/18/25 11:25	1

Client Sample ID: MB T06

Lab Sample ID: 180-194461-79

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.9	H	0.1	0.1	SU			10/02/25 13:36	1
Oxidation Reduction Potential (SM 2580B)	140		10	10	millivolts			10/01/25 16:26	1

Client Sample ID: MB T07

Lab Sample ID: 180-194461-80

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.9	H	0.1	0.1	SU			10/15/25 17:00	1
Oxidation Reduction Potential (SM 2580B)	440	H	10	10	millivolts			10/17/25 12:01	1

Client Sample ID: MB T08

Lab Sample ID: 180-194461-81

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.9	H	0.1	0.1	SU			10/23/25 13:55	1
Oxidation Reduction Potential (SM 2580B)	220		10	10	millivolts			10/22/25 16:45	1

Client Sample ID: MB T09

Lab Sample ID: 180-194461-82

Date Collected: 08/27/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.8	H	0.1	0.1	SU			11/05/25 16:14	1
Oxidation Reduction Potential (SM 2580B)	220		10	10	millivolts			11/05/25 15:00	1

Client Sample ID: MB T01

Lab Sample ID: 180-194461-83

Date Collected: 09/03/25 00:00

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		2.0	0.68	ug/L		09/25/25 21:30	09/26/25 17:48	1
Copper	ND		1.0	0.85	ug/L		09/25/25 21:30	09/26/25 17:48	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: MB T02

Date Collected: 09/04/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-84

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		09/11/25 07:00	09/11/25 17:43	1
Copper	ND		1.0	0.85	ug/L		09/11/25 07:00	09/11/25 17:43	1

Client Sample ID: MB T03

Date Collected: 09/05/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-85

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8	J	2.0	0.68	ug/L		09/21/25 21:00	09/22/25 17:57	1
Copper	ND		1.0	0.85	ug/L		09/21/25 21:00	09/22/25 17:57	1

Client Sample ID: MB T04

Date Collected: 09/10/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-86

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 21:14	1
Copper	ND		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 21:14	1

Client Sample ID: MB T05

Date Collected: 09/17/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-87

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.88	J	2.0	0.68	ug/L		10/06/25 06:45	10/08/25 21:16	1
Copper	ND		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 21:16	1

Client Sample ID: MB T06

Date Collected: 10/01/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-88

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.73	J	2.0	0.68	ug/L		10/21/25 22:00	10/22/25 19:09	1
Copper	ND		1.0	0.85	ug/L		10/21/25 22:00	10/22/25 19:09	1

Client Sample ID: MB T07

Date Collected: 10/15/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-89

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/26/25 21:00	10/27/25 18:30	1
Copper	ND		1.0	0.85	ug/L		10/26/25 21:00	10/27/25 18:30	1

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Client Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Client Sample ID: MB T08

Date Collected: 10/22/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-90

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.77	J	2.0	0.68	ug/L		11/10/25 06:42	11/10/25 21:39	1
Copper	ND		1.0	0.85	ug/L		11/10/25 06:42	11/10/25 21:39	1

Client Sample ID: MB T09

Date Collected: 11/05/25 00:00

Date Received: 08/14/25 14:25

Lab Sample ID: 180-194461-91

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/10/25 06:22	11/10/25 19:12	1
Copper	ND		1.0	0.85	ug/L		11/10/25 06:22	11/10/25 19:12	1

QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-696321/1-A

Matrix: Water

Analysis Batch: 698233

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 696321

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		09/11/25 07:00	09/11/25 16:42	1
Copper	ND		1.0	0.85	ug/L		09/11/25 07:00	09/11/25 16:42	1

Lab Sample ID: LCS 410-696321/2-A

Matrix: Water

Analysis Batch: 698233

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 696321

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	509		ug/L		102	86 - 111
Copper	500	519		ug/L		104	86 - 111

Lab Sample ID: MB 410-702289/1-A

Matrix: Water

Analysis Batch: 703048

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 702289

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		09/21/25 21:00	09/22/25 16:17	1
Copper	ND		1.0	0.85	ug/L		09/21/25 21:00	09/22/25 16:17	1

Lab Sample ID: LCS 410-702289/2-A

Matrix: Water

Analysis Batch: 703048

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 702289

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	498		ug/L		100	86 - 111
Copper	500	506		ug/L		101	86 - 111

Lab Sample ID: MB 410-704644/1-A

Matrix: Water

Analysis Batch: 705480

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 704644

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		09/25/25 21:30	09/26/25 17:06	1
Copper	ND		1.0	0.85	ug/L		09/25/25 21:30	09/26/25 17:06	1

Lab Sample ID: LCS 410-704644/2-A

Matrix: Water

Analysis Batch: 705480

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 704644

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	493		ug/L		99	86 - 111
Copper	500	496		ug/L		99	86 - 111

Lab Sample ID: MB 410-706337/1-A

Matrix: Water

Analysis Batch: 711173

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 16:22	1
Copper	ND		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 16:22	1

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCS 410-706337/2-A

Matrix: Water

Analysis Batch: 711173

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	485		ug/L		97	86 - 111
Copper	500	494		ug/L		99	86 - 111

Lab Sample ID: 180-194461-38 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: S1-10PC T01

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	12		11.6		ug/L		0.3	20
Copper	2.3		2.38		ug/L		2	20

Lab Sample ID: 180-194461-39 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: S1-10PC T02

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	39		53.8	F3	ug/L		32	20
Copper	7.5		10.8	F3	ug/L		36	20

Lab Sample ID: 180-194461-40 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: S1-10PC T03

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	24		31.0	F3	ug/L		27	20
Copper	5.5		7.48	F3	ug/L		30	20

Lab Sample ID: 180-194461-42 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: S1-10PC T05

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	38		43.3		ug/L		14	20
Copper	21		24.6		ug/L		14	20

Lab Sample ID: 180-194461-47 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: S1-3PC-7BFS T01

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	9.8		10.0		ug/L		3	20
Copper	0.90	J	ND		ug/L		NC	20

Lab Sample ID: 180-194461-48 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: S1-3PC-7BFS T02

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	51		58.3		ug/L		14	20
Copper	4.2		4.13		ug/L		3	20

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: 180-194461-49 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: S1-3PC-7BFS T03

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	42		50.7		ug/L		18	20
Copper	2.1		2.36		ug/L		12	20

Lab Sample ID: 180-194461-51 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: S1-3PC-7BFS T05

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	110		110		ug/L		1	20
Copper	16		16.1		ug/L		2	20

Lab Sample ID: MB 410-712518/1-A

Matrix: Water

Analysis Batch: 718449

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 712518

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/21/25 22:00	10/22/25 16:00	1
Copper	ND		1.0	0.85	ug/L		10/21/25 22:00	10/22/25 16:00	1

Lab Sample ID: LCS 410-712518/2-A

Matrix: Water

Analysis Batch: 718449

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 712518

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	505		ug/L		101	86 - 111
Copper	500	511		ug/L		102	86 - 111

Lab Sample ID: 180-194461-43 DU

Matrix: Water

Analysis Batch: 718449

Client Sample ID: S1-10PC T06

Prep Type: Total Recoverable

Prep Batch: 712518

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	31		31.4		ug/L		2	20
Copper	33		34.9		ug/L		6	20

Lab Sample ID: 180-194461-52 DU

Matrix: Water

Analysis Batch: 718449

Client Sample ID: S1-3PC-7BFS T06

Prep Type: Total Recoverable

Prep Batch: 712518

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	120		124		ug/L		4	20
Copper	25		26.0		ug/L		3	20

Lab Sample ID: MB 410-719868/1-A

Matrix: Water

Analysis Batch: 720552

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 719868

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/26/25 21:00	10/27/25 16:35	1
Copper	ND		1.0	0.85	ug/L		10/26/25 21:00	10/27/25 16:35	1

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCS 410-719868/2-A
Matrix: Water
Analysis Batch: 720552

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 719868

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	498		ug/L		100	86 - 111
Copper	500	514		ug/L		103	86 - 111

Lab Sample ID: 180-194461-44 DU
Matrix: Water
Analysis Batch: 720552

Client Sample ID: S1-10PC T07
Prep Type: Total Recoverable
Prep Batch: 719868

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	25		25.5		ug/L		1	20
Copper	30		29.5		ug/L		0.1	20

Lab Sample ID: 180-194461-53 DU
Matrix: Water
Analysis Batch: 720552

Client Sample ID: S1-3PC-7BFS T07
Prep Type: Total Recoverable
Prep Batch: 719868

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	100		102		ug/L		2	20
Copper	27		27.9		ug/L		2	20

Lab Sample ID: MB 410-726014/1-A
Matrix: Water
Analysis Batch: 727667

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 726014

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/10/25 06:42	11/10/25 20:34	1
Copper	ND		1.0	0.85	ug/L		11/10/25 06:42	11/10/25 20:34	1

Lab Sample ID: LCS 410-726014/2-A
Matrix: Water
Analysis Batch: 727667

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 726014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	498		ug/L		100	86 - 111
Copper	500	503		ug/L		101	86 - 111

Lab Sample ID: 180-194461-54 DU
Matrix: Water
Analysis Batch: 727667

Client Sample ID: S1-3PC-7BFS T08
Prep Type: Total Recoverable
Prep Batch: 726014

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	67		68.4		ug/L		2	20
Copper	10		10.7		ug/L		2	20

Lab Sample ID: MB 410-726876/1-A
Matrix: Water
Analysis Batch: 727683

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 726876

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/10/25 06:22	11/10/25 18:11	1
Copper	ND		1.0	0.85	ug/L		11/10/25 06:22	11/10/25 18:11	1

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCS 410-726876/2-A
Matrix: Water
Analysis Batch: 727683

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 726876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	503		ug/L		101	86 - 111
Copper	500	500		ug/L		100	86 - 111

Lab Sample ID: 180-194461-46 DU
Matrix: Water
Analysis Batch: 727683

Client Sample ID: S1-10PC T09
Prep Type: Total Recoverable
Prep Batch: 726876

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	18		18.6		ug/L		2	20
Copper	16		15.3		ug/L		2	20

Lab Sample ID: 180-194461-55 DU
Matrix: Water
Analysis Batch: 727683

Client Sample ID: S1-3PC-7BFS T09
Prep Type: Total Recoverable
Prep Batch: 726876

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	84		83.1		ug/L		0.7	20
Copper	16		15.7		ug/L		1	20

Lab Sample ID: MB 410-728523/1-A
Matrix: Water
Analysis Batch: 729473

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 728523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/12/25 11:30	11/13/25 14:05	1
Copper	ND		1.0	0.85	ug/L		11/12/25 11:30	11/13/25 14:05	1

Lab Sample ID: LCS 410-728523/2-A
Matrix: Water
Analysis Batch: 729473

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 728523

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	497		ug/L		99	86 - 111
Copper	500	499		ug/L		100	86 - 111

Lab Sample ID: 180-194461-45 DU
Matrix: Water
Analysis Batch: 729473

Client Sample ID: S1-10PC T08
Prep Type: Total Recoverable
Prep Batch: 728523

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	17		17.7		ug/L		6	20
Copper	14		14.1		ug/L		2	20

Lab Sample ID: MB 410-730319/1-A
Matrix: Water
Analysis Batch: 731012

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 730319

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/16/25 20:30	11/17/25 12:37	1
Copper	ND		1.0	0.85	ug/L		11/16/25 20:30	11/17/25 12:37	1

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCS 410-730319/2-A
Matrix: Water
Analysis Batch: 731012

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 730319

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	499		ug/L		100	86 - 111
Copper	500	491		ug/L		98	86 - 111

Lab Sample ID: 180-194461-41 DU
Matrix: Water
Analysis Batch: 731012

Client Sample ID: S1-10PC T04
Prep Type: Total Recoverable
Prep Batch: 730319

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	75		75.2		ug/L		0	20
Copper	25		24.9		ug/L		0.9	20

Lab Sample ID: 180-194461-50 DU
Matrix: Water
Analysis Batch: 731012

Client Sample ID: S1-3PC-7BFS T04
Prep Type: Total Recoverable
Prep Batch: 730319

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	130		130		ug/L		2	20
Copper	9.0		9.38		ug/L		4	20

Method: 4500-O G-2016 - Oxygen, Dissolved

Lab Sample ID: 180-194461-1 DU
Matrix: Water
Analysis Batch: 502311

Client Sample ID: WATER #3 LAB ANAEROBIC DEIONIZED
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxygen, Dissolved	3.5	HF	3.38		mg/L		3	20

Method: EPA 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 180-502304/7
Matrix: Water
Analysis Batch: 502304

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	ND		0.85	0.05	NTU			09/03/25 08:19	1

Lab Sample ID: LCS 180-502304/8
Matrix: Water
Analysis Batch: 502304

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Turbidity	0.850	0.80	J	NTU		94	90 - 110

Lab Sample ID: 180-194461-1 DU
Matrix: Water
Analysis Batch: 502304

Client Sample ID: WATER #3 LAB ANAEROBIC DEIONIZED
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	ND		ND		NTU		NC	20

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-502409/1
Matrix: Water
Analysis Batch: 502409

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-502462/1
Matrix: Solid
Analysis Batch: 502462

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-502697/24
Matrix: Solid
Analysis Batch: 502697

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-503088/24
Matrix: Solid
Analysis Batch: 503088

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-503939/24
Matrix: Solid
Analysis Batch: 503939

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	6.9		SU		99	99 - 101

Lab Sample ID: LCS 180-504622/47
Matrix: Solid
Analysis Batch: 504622

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-505124/1
Matrix: Solid
Analysis Batch: 505124

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-505848/1
Matrix: Solid
Analysis Batch: 505848

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		99	99 - 101

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: EPA 9040C - pH

Lab Sample ID: 180-194461-75 DU

Matrix: Solid

Analysis Batch: 502462

Client Sample ID: MB T02

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	6.3	H	6.2		SU		0.5	2

Lab Sample ID: 180-194461-76 DU

Matrix: Solid

Analysis Batch: 502462

Client Sample ID: MB T03

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	6.2	H	6.2		SU		0.5	2

Lab Sample ID: 180-194461-6 DU

Matrix: Solid

Analysis Batch: 503088

Client Sample ID: S1-10PC T05

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	11.9	H H3	11.9		SU		0.2	2

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 180-502407/2

Matrix: Water

Analysis Batch: 502407

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			09/04/25 12:17	1
Electrical Conductivity	ND		1.0	1.0	umhos/cm			09/04/25 12:17	1
Temperature	23.0		1.0	1.0	Degrees C			09/04/25 12:17	1

Lab Sample ID: LCS 180-502407/1

Matrix: Water

Analysis Batch: 502407

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	84.0	84.5		umhos/cm		101	90 - 110
Electrical Conductivity	84.0	84.5		umhos/cm		101	90 - 110

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

Lab Sample ID: LCS 180-502324/1

Matrix: Solid

Analysis Batch: 502324

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	470		millivolts		99	98 - 102

Lab Sample ID: 180-194461-1 DU

Matrix: Water

Analysis Batch: 502324

Client Sample ID: WATER #3 LAB ANAEROBIC DEIONIZED

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Oxidation Reduction Potential	220		252		millivolts		16	20

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential (Continued)

Lab Sample ID: LCS 180-502417/1

Matrix: Solid

Analysis Batch: 502417

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	476		millivolts		100	98 - 102

Lab Sample ID: LCS 180-502463/1

Matrix: Solid

Analysis Batch: 502463

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	467		millivolts		98	98 - 102

Lab Sample ID: LCS 180-502691/1

Matrix: Solid

Analysis Batch: 502691

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	470		millivolts		99	98 - 102

Lab Sample ID: LCS 180-503154/1

Matrix: Solid

Analysis Batch: 503154

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	474		millivolts		100	98 - 102

Lab Sample ID: LCS 180-503863/1

Matrix: Solid

Analysis Batch: 503863

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	479		millivolts		101	98 - 102

Lab Sample ID: LCS 180-504699/1

Matrix: Solid

Analysis Batch: 504699

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	466		millivolts		98	98 - 102

Lab Sample ID: LCS 180-505051/1

Matrix: Solid

Analysis Batch: 505051

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	465		millivolts		98	98 - 102

Lab Sample ID: LCS 180-505842/1

Matrix: Solid

Analysis Batch: 505842

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	467		millivolts		98	98 - 102

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QC Sample Results

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

Lab Sample ID: 180-194461-3 DU

Matrix: Solid

Analysis Batch: 502417

Client Sample ID: S1-10PC T02

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	180		199		millivolts		9	20

Lab Sample ID: LB 180-502376/1-A

Matrix: Solid

Analysis Batch: 502463

Client Sample ID: Method Blank

Prep Type: Leach

Analyte	LB Result	LB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oxidation Reduction Potential	213		10	10	millivolts			09/05/25 12:15	1

Lab Sample ID: 180-194461-4 DU

Matrix: Solid

Analysis Batch: 502463

Client Sample ID: S1-10PC T03

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	99	H H3	90.0		millivolts		10	20

Lab Sample ID: 180-194461-5 DU

Matrix: Solid

Analysis Batch: 502691

Client Sample ID: S1-10PC T04

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	80		83.0		millivolts		4	20

Lab Sample ID: 180-194461-6 DU

Matrix: Solid

Analysis Batch: 503154

Client Sample ID: S1-10PC T05

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	90		82.0		millivolts		9	20

Lab Sample ID: 180-194461-9 DU

Matrix: Solid

Analysis Batch: 505051

Client Sample ID: S1-10PC T08

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	48		41.0		millivolts		16	20

QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Metals

Prep Batch: 696321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-39	S1-10PC T02	Total Recoverable	Water	3005A	
180-194461-48	S1-3PC-7BFS T02	Total Recoverable	Water	3005A	
180-194461-84	MB T02	Total Recoverable	Water	3005A	
MB 410-696321/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-696321/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 698233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-39	S1-10PC T02	Total Recoverable	Water	6020B	696321
180-194461-48	S1-3PC-7BFS T02	Total Recoverable	Water	6020B	696321
180-194461-84	MB T02	Total Recoverable	Water	6020B	696321
MB 410-696321/1-A	Method Blank	Total Recoverable	Water	6020B	696321
LCS 410-696321/2-A	Lab Control Sample	Total Recoverable	Water	6020B	696321

Prep Batch: 702289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-85	MB T03	Total Recoverable	Water	3005A	
MB 410-702289/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-702289/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 703048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-85	MB T03	Total Recoverable	Water	6020B	702289
MB 410-702289/1-A	Method Blank	Total Recoverable	Water	6020B	702289
LCS 410-702289/2-A	Lab Control Sample	Total Recoverable	Water	6020B	702289

Prep Batch: 704644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-83	MB T01	Total Recoverable	Water	3005A	
MB 410-704644/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-704644/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 705480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-83	MB T01	Total Recoverable	Water	6020B	704644
MB 410-704644/1-A	Method Blank	Total Recoverable	Water	6020B	704644
LCS 410-704644/2-A	Lab Control Sample	Total Recoverable	Water	6020B	704644

Prep Batch: 706337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-38	S1-10PC T01	Total Recoverable	Water	3005A	
180-194461-40	S1-10PC T03	Total Recoverable	Water	3005A	
180-194461-42	S1-10PC T05	Total Recoverable	Water	3005A	
180-194461-47	S1-3PC-7BFS T01	Total Recoverable	Water	3005A	
180-194461-49	S1-3PC-7BFS T03	Total Recoverable	Water	3005A	
180-194461-51	S1-3PC-7BFS T05	Total Recoverable	Water	3005A	
180-194461-86	MB T04	Total Recoverable	Water	3005A	
180-194461-87	MB T05	Total Recoverable	Water	3005A	
MB 410-706337/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-706337/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-194461-38 DU	S1-10PC T01	Total Recoverable	Water	3005A	

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QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Metals (Continued)

Prep Batch: 706337 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-39 DU	S1-10PC T02	Total Recoverable	Water	3005A	
180-194461-40 DU	S1-10PC T03	Total Recoverable	Water	3005A	
180-194461-42 DU	S1-10PC T05	Total Recoverable	Water	3005A	
180-194461-47 DU	S1-3PC-7BFS T01	Total Recoverable	Water	3005A	
180-194461-48 DU	S1-3PC-7BFS T02	Total Recoverable	Water	3005A	
180-194461-49 DU	S1-3PC-7BFS T03	Total Recoverable	Water	3005A	
180-194461-51 DU	S1-3PC-7BFS T05	Total Recoverable	Water	3005A	

Analysis Batch: 711173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-38	S1-10PC T01	Total Recoverable	Water	6020B	706337
180-194461-40	S1-10PC T03	Total Recoverable	Water	6020B	706337
180-194461-42	S1-10PC T05	Total Recoverable	Water	6020B	706337
180-194461-47	S1-3PC-7BFS T01	Total Recoverable	Water	6020B	706337
180-194461-49	S1-3PC-7BFS T03	Total Recoverable	Water	6020B	706337
180-194461-51	S1-3PC-7BFS T05	Total Recoverable	Water	6020B	706337
180-194461-86	MB T04	Total Recoverable	Water	6020B	706337
180-194461-87	MB T05	Total Recoverable	Water	6020B	706337
MB 410-706337/1-A	Method Blank	Total Recoverable	Water	6020B	706337
LCS 410-706337/2-A	Lab Control Sample	Total Recoverable	Water	6020B	706337
180-194461-38 DU	S1-10PC T01	Total Recoverable	Water	6020B	706337
180-194461-39 DU	S1-10PC T02	Total Recoverable	Water	6020B	706337
180-194461-40 DU	S1-10PC T03	Total Recoverable	Water	6020B	706337
180-194461-42 DU	S1-10PC T05	Total Recoverable	Water	6020B	706337
180-194461-47 DU	S1-3PC-7BFS T01	Total Recoverable	Water	6020B	706337
180-194461-48 DU	S1-3PC-7BFS T02	Total Recoverable	Water	6020B	706337
180-194461-49 DU	S1-3PC-7BFS T03	Total Recoverable	Water	6020B	706337
180-194461-51 DU	S1-3PC-7BFS T05	Total Recoverable	Water	6020B	706337

Prep Batch: 712518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-43	S1-10PC T06	Total Recoverable	Water	3005A	
180-194461-52	S1-3PC-7BFS T06	Total Recoverable	Water	3005A	
180-194461-88	MB T06	Total Recoverable	Water	3005A	
MB 410-712518/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-712518/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-194461-43 DU	S1-10PC T06	Total Recoverable	Water	3005A	
180-194461-52 DU	S1-3PC-7BFS T06	Total Recoverable	Water	3005A	

Analysis Batch: 718449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-43	S1-10PC T06	Total Recoverable	Water	6020B	712518
180-194461-52	S1-3PC-7BFS T06	Total Recoverable	Water	6020B	712518
180-194461-88	MB T06	Total Recoverable	Water	6020B	712518
MB 410-712518/1-A	Method Blank	Total Recoverable	Water	6020B	712518
LCS 410-712518/2-A	Lab Control Sample	Total Recoverable	Water	6020B	712518
180-194461-43 DU	S1-10PC T06	Total Recoverable	Water	6020B	712518
180-194461-52 DU	S1-3PC-7BFS T06	Total Recoverable	Water	6020B	712518

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QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Metals

Prep Batch: 719868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-44	S1-10PC T07	Total Recoverable	Water	3005A	
180-194461-53	S1-3PC-7BFS T07	Total Recoverable	Water	3005A	
180-194461-89	MB T07	Total Recoverable	Water	3005A	
MB 410-719868/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-719868/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-194461-44 DU	S1-10PC T07	Total Recoverable	Water	3005A	
180-194461-53 DU	S1-3PC-7BFS T07	Total Recoverable	Water	3005A	

Analysis Batch: 720552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-44	S1-10PC T07	Total Recoverable	Water	6020B	719868
180-194461-53	S1-3PC-7BFS T07	Total Recoverable	Water	6020B	719868
180-194461-89	MB T07	Total Recoverable	Water	6020B	719868
MB 410-719868/1-A	Method Blank	Total Recoverable	Water	6020B	719868
LCS 410-719868/2-A	Lab Control Sample	Total Recoverable	Water	6020B	719868
180-194461-44 DU	S1-10PC T07	Total Recoverable	Water	6020B	719868
180-194461-53 DU	S1-3PC-7BFS T07	Total Recoverable	Water	6020B	719868

Prep Batch: 726014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-54	S1-3PC-7BFS T08	Total Recoverable	Water	3005A	
180-194461-90	MB T08	Total Recoverable	Water	3005A	
MB 410-726014/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-726014/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-194461-54 DU	S1-3PC-7BFS T08	Total Recoverable	Water	3005A	

Prep Batch: 726876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-46	S1-10PC T09	Total Recoverable	Water	3005A	
180-194461-55	S1-3PC-7BFS T09	Total Recoverable	Water	3005A	
180-194461-91	MB T09	Total Recoverable	Water	3005A	
MB 410-726876/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-726876/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-194461-46 DU	S1-10PC T09	Total Recoverable	Water	3005A	
180-194461-55 DU	S1-3PC-7BFS T09	Total Recoverable	Water	3005A	

Analysis Batch: 727667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-54	S1-3PC-7BFS T08	Total Recoverable	Water	6020B	726014
180-194461-90	MB T08	Total Recoverable	Water	6020B	726014
MB 410-726014/1-A	Method Blank	Total Recoverable	Water	6020B	726014
LCS 410-726014/2-A	Lab Control Sample	Total Recoverable	Water	6020B	726014
180-194461-54 DU	S1-3PC-7BFS T08	Total Recoverable	Water	6020B	726014

Analysis Batch: 727683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-46	S1-10PC T09	Total Recoverable	Water	6020B	726876
180-194461-55	S1-3PC-7BFS T09	Total Recoverable	Water	6020B	726876
180-194461-91	MB T09	Total Recoverable	Water	6020B	726876
MB 410-726876/1-A	Method Blank	Total Recoverable	Water	6020B	726876
LCS 410-726876/2-A	Lab Control Sample	Total Recoverable	Water	6020B	726876

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QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

Metals (Continued)

Analysis Batch: 727683 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-46 DU	S1-10PC T09	Total Recoverable	Water	6020B	726876
180-194461-55 DU	S1-3PC-7BFS T09	Total Recoverable	Water	6020B	726876

Prep Batch: 728523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-45	S1-10PC T08	Total Recoverable	Water	3005A	
MB 410-728523/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-728523/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-194461-45 DU	S1-10PC T08	Total Recoverable	Water	3005A	

Analysis Batch: 729473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-45	S1-10PC T08	Total Recoverable	Water	6020B	728523
MB 410-728523/1-A	Method Blank	Total Recoverable	Water	6020B	728523
LCS 410-728523/2-A	Lab Control Sample	Total Recoverable	Water	6020B	728523
180-194461-45 DU	S1-10PC T08	Total Recoverable	Water	6020B	728523

Prep Batch: 730319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-41	S1-10PC T04	Total Recoverable	Water	3005A	
180-194461-50	S1-3PC-7BFS T04	Total Recoverable	Water	3005A	
MB 410-730319/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-730319/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-194461-41 DU	S1-10PC T04	Total Recoverable	Water	3005A	
180-194461-50 DU	S1-3PC-7BFS T04	Total Recoverable	Water	3005A	

Analysis Batch: 731012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-41	S1-10PC T04	Total Recoverable	Water	6020B	730319
180-194461-50	S1-3PC-7BFS T04	Total Recoverable	Water	6020B	730319
MB 410-730319/1-A	Method Blank	Total Recoverable	Water	6020B	730319
LCS 410-730319/2-A	Lab Control Sample	Total Recoverable	Water	6020B	730319
180-194461-41 DU	S1-10PC T04	Total Recoverable	Water	6020B	730319
180-194461-50 DU	S1-3PC-7BFS T04	Total Recoverable	Water	6020B	730319

General Chemistry

Leach Batch: 502302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-2	S1-10PC T01	Leach	Solid	1315	
180-194461-11	S1-3PC-7BFS T01	Leach	Solid	1315	
180-194461-74	MB T01	Leach	Solid	1315	

Analysis Batch: 502304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-1	WATER #3 LAB ANAEROBIC DEIONIZED	Total/NA	Water	EPA 180.1	
MB 180-502304/7	Method Blank	Total/NA	Water	EPA 180.1	
LCS 180-502304/8	Lab Control Sample	Total/NA	Water	EPA 180.1	
180-194461-1 DU	WATER #3 LAB ANAEROBIC DEIONIZED	Total/NA	Water	EPA 180.1	

Eurofins Pittsburgh

QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

General Chemistry

Analysis Batch: 502311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-1	WATER #3 LAB ANAEROBIC DEIONIZED	Total/NA	Water	4500-O G-2016	
180-194461-1 DU	WATER #3 LAB ANAEROBIC DEIONIZED	Total/NA	Water	4500-O G-2016	

Analysis Batch: 502324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-1	WATER #3 LAB ANAEROBIC DEIONIZED	Total/NA	Water	SM 2580B	
180-194461-2	S1-10PC T01	Leach	Solid	SM 2580B	502302
180-194461-11	S1-3PC-7BFS T01	Leach	Solid	SM 2580B	502302
180-194461-74	MB T01	Leach	Solid	SM 2580B	502302
LCS 180-502324/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-194461-1 DU	WATER #3 LAB ANAEROBIC DEIONIZED	Total/NA	Water	SM 2580B	

Leach Batch: 502334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-3	S1-10PC T02	Leach	Solid	1315	
180-194461-12	S1-3PC-7BFS T02	Leach	Solid	1315	
180-194461-75	MB T02	Leach	Solid	1315	
180-194461-3 DU	S1-10PC T02	Leach	Solid	1315	
180-194461-75 DU	MB T02	Leach	Solid	1315	

Leach Batch: 502335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-4	S1-10PC T03	Leach	Solid	1315	
180-194461-13	S1-3PC-7BFS T03	Leach	Solid	1315	
180-194461-76	MB T03	Leach	Solid	1315	
180-194461-4 DU	S1-10PC T03	Leach	Solid	1315	
180-194461-76 DU	MB T03	Leach	Solid	1315	

Leach Batch: 502337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-5	S1-10PC T04	Leach	Solid	1315	
180-194461-14	S1-3PC-7BFS T04	Leach	Solid	1315	
180-194461-77	MB T04	Leach	Solid	1315	
180-194461-5 DU	S1-10PC T04	Leach	Solid	1315	

Leach Batch: 502339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-6	S1-10PC T05	Leach	Solid	1315	
180-194461-15	S1-3PC-7BFS T05	Leach	Solid	1315	
180-194461-78	MB T05	Leach	Solid	1315	
180-194461-6 DU	S1-10PC T05	Leach	Solid	1315	

Leach Batch: 502340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-7	S1-10PC T06	Leach	Solid	1315	
180-194461-16	S1-3PC-7BFS T06	Leach	Solid	1315	
180-194461-79	MB T06	Leach	Solid	1315	

Leach Batch: 502341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-8	S1-10PC T07	Leach	Solid	1315	

Eurofins Pittsburgh

QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

General Chemistry (Continued)

Leach Batch: 502341 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-17	S1-3PC-7BFS T07	Leach	Solid	1315	
180-194461-80	MB T07	Leach	Solid	1315	

Leach Batch: 502342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-9	S1-10PC T08	Leach	Solid	1315	
180-194461-18	S1-3PC-7BFS T08	Leach	Solid	1315	
180-194461-81	MB T08	Leach	Solid	1315	
180-194461-9 DU	S1-10PC T08	Leach	Solid	1315	

Leach Batch: 502343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-10	S1-10PC T09	Leach	Solid	1315	
180-194461-19	S1-3PC-7BFS T09	Leach	Solid	1315	
180-194461-82	MB T09	Leach	Solid	1315	

Leach Batch: 502376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 180-502376/1-A	Method Blank	Leach	Solid	D3987-85	

Analysis Batch: 502407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-1	WATER #3 LAB ANAEROBIC DEIONIZED	Total/NA	Water	SM 2510B	
MB 180-502407/2	Method Blank	Total/NA	Water	SM 2510B	
LCS 180-502407/1	Lab Control Sample	Total/NA	Water	SM 2510B	

Analysis Batch: 502409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-1	WATER #3 LAB ANAEROBIC DEIONIZED	Total/NA	Water	EPA 9040C	
LCS 180-502409/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 502417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-3	S1-10PC T02	Leach	Solid	SM 2580B	502334
180-194461-12	S1-3PC-7BFS T02	Leach	Solid	SM 2580B	502334
180-194461-75	MB T02	Leach	Solid	SM 2580B	502334
LCS 180-502417/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-194461-3 DU	S1-10PC T02	Leach	Solid	SM 2580B	502334

Analysis Batch: 502462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-2	S1-10PC T01	Leach	Solid	EPA 9040C	502302
180-194461-3	S1-10PC T02	Leach	Solid	EPA 9040C	502334
180-194461-4	S1-10PC T03	Leach	Solid	EPA 9040C	502335
180-194461-11	S1-3PC-7BFS T01	Leach	Solid	EPA 9040C	502302
180-194461-12	S1-3PC-7BFS T02	Leach	Solid	EPA 9040C	502334
180-194461-13	S1-3PC-7BFS T03	Leach	Solid	EPA 9040C	502335
180-194461-74	MB T01	Leach	Solid	EPA 9040C	502302
180-194461-75	MB T02	Leach	Solid	EPA 9040C	502334
180-194461-76	MB T03	Leach	Solid	EPA 9040C	502335
LCS 180-502462/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Eurofins Pittsburgh

QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

General Chemistry (Continued)

Analysis Batch: 502462 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-75 DU	MB T02	Leach	Solid	EPA 9040C	502334
180-194461-76 DU	MB T03	Leach	Solid	EPA 9040C	502335

Analysis Batch: 502463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-4	S1-10PC T03	Leach	Solid	SM 2580B	
180-194461-13	S1-3PC-7BFS T03	Leach	Solid	SM 2580B	502335
180-194461-76	MB T03	Leach	Solid	SM 2580B	502335
LB 180-502376/1-A	Method Blank	Leach	Solid	SM 2580B	502376
LCS 180-502463/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-194461-4 DU	S1-10PC T03	Leach	Solid	SM 2580B	502335

Analysis Batch: 502691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-5	S1-10PC T04	Leach	Solid	SM 2580B	502337
180-194461-14	S1-3PC-7BFS T04	Leach	Solid	SM 2580B	502337
180-194461-77	MB T04	Leach	Solid	SM 2580B	502337
LCS 180-502691/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-194461-5 DU	S1-10PC T04	Leach	Solid	SM 2580B	502337

Analysis Batch: 502697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-5	S1-10PC T04	Leach	Solid	EPA 9040C	502337
180-194461-14	S1-3PC-7BFS T04	Leach	Solid	EPA 9040C	502337
180-194461-77	MB T04	Leach	Solid	EPA 9040C	502337
LCS 180-502697/24	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 503088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-6	S1-10PC T05	Leach	Solid	EPA 9040C	502339
180-194461-15	S1-3PC-7BFS T05	Leach	Solid	EPA 9040C	502339
180-194461-78	MB T05	Leach	Solid	EPA 9040C	502339
LCS 180-503088/24	Lab Control Sample	Total/NA	Solid	EPA 9040C	
180-194461-6 DU	S1-10PC T05	Leach	Solid	EPA 9040C	502339

Analysis Batch: 503154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-6	S1-10PC T05	Leach	Solid	SM 2580B	502339
180-194461-15	S1-3PC-7BFS T05	Leach	Solid	SM 2580B	502339
180-194461-78	MB T05	Leach	Solid	SM 2580B	502339
LCS 180-503154/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-194461-6 DU	S1-10PC T05	Leach	Solid	SM 2580B	502339

Analysis Batch: 503863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-7	S1-10PC T06	Leach	Solid	SM 2580B	502340
180-194461-16	S1-3PC-7BFS T06	Leach	Solid	SM 2580B	502340
180-194461-79	MB T06	Leach	Solid	SM 2580B	502340
LCS 180-503863/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Eurofins Pittsburgh

QC Association Summary

Client: ENTACT, LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-194461-1

General Chemistry

Analysis Batch: 503939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-7	S1-10PC T06	Leach	Solid	EPA 9040C	502340
180-194461-16	S1-3PC-7BFS T06	Leach	Solid	EPA 9040C	502340
180-194461-79	MB T06	Leach	Solid	EPA 9040C	502340
LCS 180-503939/24	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 504622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-8	S1-10PC T07	Leach	Solid	EPA 9040C	502341
180-194461-17	S1-3PC-7BFS T07	Leach	Solid	EPA 9040C	502341
180-194461-80	MB T07	Leach	Solid	EPA 9040C	502341
LCS 180-504622/47	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 504699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-8	S1-10PC T07	Leach	Solid	SM 2580B	502341
180-194461-17	S1-3PC-7BFS T07	Leach	Solid	SM 2580B	502341
180-194461-80	MB T07	Leach	Solid	SM 2580B	502341
LCS 180-504699/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 505051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-9	S1-10PC T08	Leach	Solid	SM 2580B	502342
180-194461-18	S1-3PC-7BFS T08	Leach	Solid	SM 2580B	502342
180-194461-81	MB T08	Leach	Solid	SM 2580B	502342
LCS 180-505051/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-194461-9 DU	S1-10PC T08	Leach	Solid	SM 2580B	502342

Analysis Batch: 505124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-9	S1-10PC T08	Leach	Solid	EPA 9040C	502342
180-194461-18	S1-3PC-7BFS T08	Leach	Solid	EPA 9040C	502342
180-194461-81	MB T08	Leach	Solid	EPA 9040C	502342
LCS 180-505124/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 505842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-10	S1-10PC T09	Leach	Solid	SM 2580B	502343
180-194461-19	S1-3PC-7BFS T09	Leach	Solid	SM 2580B	502343
180-194461-82	MB T09	Leach	Solid	SM 2580B	502343
LCS 180-505842/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 505848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-194461-10	S1-10PC T09	Leach	Solid	EPA 9040C	502343
180-194461-19	S1-3PC-7BFS T09	Leach	Solid	EPA 9040C	502343
180-194461-82	MB T09	Leach	Solid	EPA 9040C	502343
LCS 180-505848/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Eurofins Pittsburgh

301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

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180-194461 Chain of Custody

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Eurofins Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-544655.1																																																										
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1																																																										
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-194461-1																																																										
Address: 2425 New Holland Pike,		Due Date Requested: 9/16/2025		Analysis Requested						Preservation Codes:																																																								
City: Lancaster		TAT Requested (days): N/A		<table border="1"><tr><td rowspan="5">Field Filtered Sample (Yes or No)</td><td rowspan="5">Perform MS/MSD (Yes or No)</td><td rowspan="5">602DB3005A (MOD) Copy Analyses</td><td rowspan="5">8290A/8290_P_Sep8290 17 Isomers</td><td colspan="10"></td><td rowspan="5">Total Number of containers</td></tr><tr><td colspan="10"></td></tr><tr><td colspan="10"></td></tr><tr><td colspan="10"></td></tr><tr><td colspan="10"></td></tr></table>						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	602DB3005A (MOD) Copy Analyses	8290A/8290_P_Sep8290 17 Isomers											Total Number of containers																																									Other: N/A	
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	602DB3005A (MOD) Copy Analyses	8290A/8290_P_Sep8290 17 Isomers																						Total Number of containers																																									
State, Zip: PA, 17601		PO #: N/A		WO #: N/A		Project #: 18030470		SSOW#: N/A																																																										
Phone: 717-656-2300(Tel)		Email: N/A		Project Name: Glacier NW ISS Treatability Study		Site: N/A																																																												
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=Air)		Special Instructions/Note:																																																								
S1-10PC T01 (180-194461-38)		9/3/25		09:55 Atlantic		G		Water		1																																																								
S1-10PC T01 (180-194461-38DU)		9/3/25		09:55 Atlantic		G		Water		1																																																								
S1-3PC-7BFS T01 (180-194461-47)		9/3/25		09:55 Atlantic		G		Water		1																																																								
S1-3PC-7BFS T01 (180-194461-47DU)		9/3/25		09:55 Atlantic		G		Water		1																																																								
S2-10PC T01 (180-194461-56)		9/3/25		09:55 Atlantic		G		Water		2																																																								
S2-10PC T01 (180-194461-56DU)		9/3/25		09:55 Atlantic		G		Water		1																																																								
S1-3PC-7BFS T01 (180-194461-65)		9/3/25		09:55 Atlantic		G		Water		2																																																								
S1-3PC-7BFS T01 (180-194461-65DU)		9/3/25		09:55 Atlantic		G		Water		1																																																								
MB T01 (180-194461-83)		9/3/25		Atlantic		G		Water		2																																																								
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.																																																																		
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																																																												
Unconfirmed						☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months																																																												
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:																																																												
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Empty Kit Relinquished by:						Method of Shipment:																																																												
Relinquished by:						Received by:																																																												
Date/Time: 9/3/25 1300						Date/Time: 9/3/25 1300																																																												
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Date/Time: 9/3/25 1850						Date/Time: 9/3/25 1850																																																												
Custody Seals Intact: ☒ Yes ☐ No						Cooler Temperature(s) °C and Other Remarks: 2.2 (2.1)																																																												
Custody Seal No.:																																																																		

Eurofins Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record



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Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-544727.1															
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1															
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-194461-1															
Address: 2425 New Holland Pike,		Due Date Requested: 9/16/2025		Analysis Requested						Preservation Codes:													
City: Lancaster		TAT Requested (days): N/A		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6020B/3005A (MOD) Copy Analyses 8290A/8290_P_Sep8290 17 Isomers						Total Number of Containers		Other: N/A											
State, Zip: PA, 17601		PO #: N/A																					
Phone: 717-656-2300(Tel)		WO #: N/A																					
Email: N/A		Project #: 18030470																					
Project Name: Glacier NW ISS Treatability Study		SSOW#: N/A																					
Site: N/A																							
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		6020B/3005A (MOD) Copy Analyses		8290A/8290_P_Sep8290 17 Isomers		Total Number of Containers		Special Instructions/Note:			
S1-10PC T02 (180-194461-39)		9/4/25		07:55 Atlantic		G		Water				X						1					
S1-10PC T02 (180-194461-39DU)		9/4/25		07:55 Atlantic		G		Water				X						1					
S1-3PC-7BFS T02 (180-194461-48)		9/4/25		07:55 Atlantic		G		Water				X						1					
S2-10PC T02 (180-194461-57)		9/4/25		07:55 Atlantic		G		Water				X		X				2					
S2-10PC T02 (180-194461-57DU)		9/4/25		07:55 Atlantic		G		Water				X						1					
S1-3PC-7BFS T02 (180-194461-66)		9/4/25		07:55 Atlantic		G		Water				X		X				2					
S1-3PC-7BFS T02 (180-194461-66DU)		9/4/25		07:55 Atlantic		G		Water				X						1					
MB T02 (180-194461-84)		9/4/25		Atlantic		G		Water				X		X				2					
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.																							
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)													
Unconfirmed										☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months													
Deliverable Requested: I, II, III, IV, Other (specify)										Primary Deliverable Rank: 2													
										Special Instructions/QC Requirements:													
Empty Kit Relinquished by:										Date:		Time:		Method of Shipment:									
Relinquished by: <i>Rick D Kell</i>										Date/Time: 9/4/25 19:30		Company: ECLL		Received by: <i>[Signature]</i>									
Relinquished by: <i>[Signature]</i>										Date/Time:		Company:		Received by: <i>[Signature]</i>									
Relinquished by: <i>Shelby Walters</i>										Date/Time: 9/4/25 13:30		Company: EP: #NE		Received by: <i>Rick D Kell</i>									
Custody Seal Intact: ☒ Yes ☐ No										Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: R 2.1 (2.0)											

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Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-544818.1													
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1													
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-194461-1													
Address: 2425 New Holland Pike,		Due Date Requested: 9/16/2025		Analysis Requested						Preservation Codes:											
City: Lancaster		TAT Requested (days): N/A		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6020B/3005A(MOD) Copy Analyses 8290A/8290_P_Sep8290 17 Isomers Total Number of containers						Other: N/A											
State, Zip: PA, 17601		PO #: N/A																			
Phone: 717-656-2300(Tel)		WO #: N/A																			
Email: N/A		Project #: 18030470																			
Project Name: Glacier NW ISS Treatability Study		SSOW#: N/A																			
Site: N/A																					
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		6020B/3005A(MOD) Copy Analyses		8290A/8290_P_Sep8290 17 Isomers		Total Number of containers		Special Instructions/Note:	
S1-10PC T03 (180-194461-40)		9/5/25		07:55 Atlantic		G		Water				X								1	
S1-10PC T03 (180-194461-40DU)		9/5/25		07:55 Atlantic		G		Water				X								1	
S1-3PC-7BFS T03 (180-194461-49)		9/5/25		07:55 Atlantic		G		Water				X								1	
S1-3PC-7BFS T03 (180-194461-49DU)		9/5/25		07:55 Atlantic		G		Water				X								1	
S2-10PC T03 (180-194461-58)		9/5/25		07:55 Atlantic		G		Water				X		X						2	
S2-10PC T03 (180-194461-58DU)		9/5/25		07:55 Atlantic		G		Water				X								1	
S1-3PC-7BFS T03 (180-194461-67)		9/5/25		07:55 Atlantic		G		Water				X		X						2	
S1-3PC-7BFS T03 (180-194461-67DU)		9/5/25		07:55 Atlantic		G		Water				X								1	
MB T03 (180-194461-85)		9/5/25		Atlantic		G		Water				X		X						2	
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.																					
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)											
Unconfirmed										☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months											
Deliverable Requested: I, II, III, IV, Other (specify)										Primary Deliverable Rank: 2											
Empty Kit Relinquished by:										Special Instructions/QC Requirements:											
Relinquished by:										Date: 9/5/25 1700 Company: E/IE											
Relinquished by:										Date: 9/5/25 1846 Company: E/IE											
Relinquished by:										Date: 9/5/25 1846 Company: E/IE											
Custody Seals Intact: ☒ Yes ☐ No										Custody Seal No.: R 2.4 C 2.3											

Figure 1

- 1
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Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-545461.1			
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1			
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-194461-1			
Address: 2425 New Holland Pike, City: Lancaster State, Zip: PA, 17601		Due Date Requested: 9/30/2025 TAT Requested (days): N/A		Analysis Requested						Preservation Codes: -	
Phone: 717-656-2300(Tel)		PO #: N/A		Total Number of containers						Other: N/A	
Email: N/A		WO #: N/A									
Project Name: Glacier NW ISS Treatability Study		Project #: 18030470									
Site: N/A		SSOW#: N/A									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soils/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3005A (MOO) Copy Analytes	Special Instructions/Note:		
S1-10PC T05 (180-194461-42)		9/17/25	07:55 Atlantic	G	Water		X			1	
S1-10PC T05 (180-194461-42DU)		9/17/25	07:55 Atlantic	G	Water		X			1	
S1-3PC-7BFS T05 (180-194461-51)		9/17/25	07:55 Atlantic	G	Water		X			1	
S1-3PC-7BFS T05 (180-194461-51DU)		9/17/25	07:55 Atlantic	G	Water		X			1	
MB T05 (180-194461-87)		9/17/25	Atlantic	G	Water		X			1	
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed						☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:					
Primary Deliverable Rank: 2											
Empty Kit Relinquished by:						Date:		Time:		Method of Shipment:	
Relinquished by: <i>[Signature]</i>						Date/Time: 9/17/25 1300		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>	
Relinquished by: <i>[Signature]</i>						Date/Time: 9/17/25 1830		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>	
Relinquished by: <i>[Signature]</i>						Date/Time: 9/17/25 1830		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>	
Custody Seals Intact: ☐ Yes ☐ No						Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 15.2 C, 2 S			

Ver: 10/10/2024
11/18/2025

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Chain of Custody Record



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Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-546903.1	
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1	
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-194461-1	
Address: 2425 New Holland Pike,		Due Date Requested: 10/28/2025		Analysis Requested				Preservation Codes: -	
City: Lancaster		TAT Requested (days): N/A							
State, Zip: PA, 17601		PO #: N/A		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6020B3005A (MOD) Copy Analytes		Total Number of containers		Other: N/A	
Phone: 717-656-2300(Tel)		WO #: N/A							
Email: N/A		Project #: 18030470							
Project Name: Glacier NW ISS Treatability Study		SSOW#: N/A							
Site: N/A									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, ST=Tissue, A=Air)	Special Instructions/Note:			
				Preservation Code:					
S1-10PC T07 (180-194461-44)		10/15/25	07:55 Atlantic	G	Water	X			1
S1-10PC T07 (180-194461-44DU)		10/15/25	07:55 Atlantic	G	Water	X			1
S1-3PC-7BFS T07 (180-194461-53)		10/15/25	07:55 Atlantic	G	Water	X			1
S1-3PC-7BFS T07 (180-194461-53DU)		10/15/25	07:55 Atlantic	G	Water	X			1
MB T07 (180-194461-89)		10/15/25	Atlantic	G	Water	X			1
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.									
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
Unconfirmed					☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:				
Primary Deliverable Rank: 2									
Empty Kit Relinquished by:			Date:	Time:	Method of Shipment:				
Relinquished by: James J. Hinkelman			Date/Time: 10/15/25 13:00	Company: EPH/NE	Received by: MGA			Date/Time: 10/15/25 1330	Company: E/IE
Relinquished by: MGA			Date/Time: 10/15/25 1800	Company: E/IE	Received by: [Signature]			Date/Time: 10/15/25 1800	Company: [Signature]
Relinquished by:			Date/Time:	Company:	Received by:			Date/Time:	Company:
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: B: 15.8 C: 15.8					

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Chain of Custody Record



Environmental Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-547381.1			
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1			
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-194461-1			
Address: 2425 New Holland Pike,		Due Date Requested: 11/4/2025		Analysis Requested						Preservation Codes:	
City: Lancaster		TAT Requested (days): N/A									
State, Zip: PA, 17601											
Phone: 717-656-2300(Tel)		PO #: N/A									
Email: N/A		WO #: N/A									
Project Name: Glacier NW ISS Treatability Study		Project #: 18030470									
Site: N/A		SSOW#: N/A								Other: N/A	
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3005A (MOD) Copy Analytes	Total Number of containers	Special Instructions/Note:	
S1-10PC T08 (180-194461-45)		10/22/25	07:55 Atlantic	G	Water		X		1		
S1-10PC T08 (180-194461-45DU)		10/22/25	07:55 Atlantic	G	Water		X		1		
S1-3PC-7BFS T08 (180-194461-54)		10/22/25	07:55 Atlantic	G	Water		X		1		
S1-3PC-7BFS T08 (180-194461-54DU)		10/22/25	07:55 Atlantic	G	Water		X		1		
MB T08 (180-194461-90)		10/22/25	Atlantic	G	Water		X		1		
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed						☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months					
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:					
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:			
Relinquished by: James J. Hinkelmann				Date/Time: 10/23/25 13:00		Company: EPI/HNE		Received by: [Signature]		Date/Time: 10/23/25 1300	
Relinquished by: [Signature]				Date/Time: 10/23/25 1919		Company: ELLCE		Received by: [Signature]		Date/Time: 10/23/25 1919	
Relinquished by: [Signature]				Date/Time: [Blank]		Company: [Blank]		Received by: [Signature]		Date/Time: 10/23/25 1919	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.1/1.9							

Eurofins Pittsburgh

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Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-548224.1							
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1							
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-194461-1							
Address: 2425 New Holland Pike, City: Lancaster State, Zip: PA, 17601 Phone: 717-656-2300(Tel) Email: N/A Project Name: Glacier NW ISS Treatability Study Site: N/A		Due Date Requested: 11/18/2025 TAT Requested (days): N/A		Analysis Requested						Preservation Codes: -					
		PO #: N/A WO #: N/A Project #: 18030470 SSOW#: N/A		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6020B3005A (MOD) Copy Analytes						Total Number of containers		Other: N/A			
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=sewage, A=Air) BT=Tissue, AA=Air		Preservation Code:		Special Instructions/Note:			
S1-10PC T09 (180-194461-46)		11/5/25		07:55 Atlantic		G		Water		X		1			
S1-10PC T09 (180-194461-46DU)		11/5/25		07:55 Atlantic		G		Water		X		1			
S1-3PC-7BFS T09 (180-194461-55)		11/5/25		07:55 Atlantic		G		Water		X		1			
S1-3PC-7BFS T09 (180-194461-55DU)		11/5/25		07:55 Atlantic		G		Water		X		1			
MB T09 (180-194461-91)		11/5/25		Atlantic		G		Water		X		1			
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.															
Possible Hazard Identification Unconfirmed						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months									
Deliverable Requested: I, II, III, IV, Other (specify)						Primary Deliverable Rank: 2						Special Instructions/QC Requirements:			
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:							
Relinquished by: James J. Hinkelmann				Date/Time: 11/5/25 13:00		Company: EPA/HME		Received by: MGA				Date/Time: 11/5/25 1330		Company: ENE	
Relinquished by: MGA				Date/Time: 11/5/25 1740		Company: ENE		Received by:				Date/Time:		Company:	
Relinquished by:				Date/Time:		Company:		Received by:				Date/Time: 11/5/25 1740		Company: OLW	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:													
		Cooler Temperature(s) °C and Other Remarks: R:1.6/C:1.6													

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Number: 1

Creator: Say, Thomas C

List Source: Eurofins Pittsburgh

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

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 2

List Creation: 09/04/25 09:56 AM

Creator: Trzos, Hazel

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 3

List Creation: 09/04/25 10:27 AM

Creator: Cyms, Carolyn M

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 4

List Creation: 09/05/25 10:11 PM

Creator: Cyms, Carolyn M

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 5

List Creation: 09/12/25 11:26 AM

Creator: Trzos, Hazel

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 6

List Creation: 09/17/25 10:41 PM

Creator: McDonald, Teigan

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 7

List Creation: 10/01/25 01:52 PM

Creator: Cyms, Carolyn M

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 8

List Creation: 10/15/25 09:46 PM

Creator: McDonald, Teigan

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 9

List Creation: 10/24/25 09:41 AM

Creator: McCaskey, Jonathan

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT, LLC

Job Number: 180-194461-1

Login Number: 194461

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 10

List Creation: 11/06/25 12:31 AM

Creator: Onate, Maggie

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

ATTACHMENT 6
ISS MIX EPA LEAF 1315 ANALYTICAL REPORT – SOIL #2



ANALYTICAL REPORT

PREPARED FOR

Attn: Rory Kilkenney
ENTACT LLC
701 Fifth Ave.
Suite 4200
Seattle, Washington 98104

Generated 12/19/2025 11:46:04 AM

JOB DESCRIPTION

Glacier NW ISS Treatability Study

JOB NUMBER

180-195596-1

Eurofins Pittsburgh

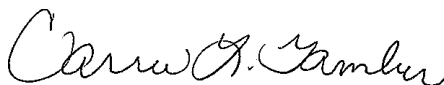
Job Notes

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

PA Lab ID: 02-00416

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

Authorization



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Authorized for release by
Carrie Gamber, Senior Project Manager
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(412)963-2428

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Case Narrative

Client: ENTACT LLC
Project: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Job ID: 180-195596-1

Eurofins Pittsburgh

CASE NARRATIVE

Client: ENTACT LLC

Project: Glacier NW ISS Treatability Study

Report Number: 180-195596-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 08/14/2025; the samples arrived in good condition. The temperature of the coolers at receipt was 28.5 C. Thermal preservation not required.

RECEIPT EXCEPTIONS

Limited volume received for the following containers due to the limited volume generated during leaching: S2-10PC T04 (180-195596-13), S2-10PC T04 (180-195596-13[DU]), S2-3PC-7BFS T04 (180-195596-31) and S2-3PC-7BFS T04 (180-195596-31[DU]) due to the limited volume

SEMIVOLATILES

Pentachlorophenol exceeded the RPD limit for the duplicate of sample S2-3PC-7BFS T08DU (180-195596-26).

The continuing calibration verification (CCV) analyzed in 180-504141 was outside the method criteria for the following analyte: Benzo[k]fluoranthene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The continuing calibration verification (CCV) analyzed in 180-505749 was outside the method criteria for the following analyte(s): N-Nitrosodimethylamine and Pentachlorophenol. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The continuing calibration verification (CCV) associated with batch 180-505741 recovered outside acceptance criteria, low biased, for Pentachlorophenol. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

The continuing calibration verification (CCV) analyzed in 180-505827 was outside the method criteria for the following analyte: Pentachlorophenol. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The continuing calibration verification (CCV) analyzed in 180-507135 was outside the method criteria for the following analyte(s): 4-Nitrophenol and N-Nitrosodimethylamine. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

DIOXINS

The bracketing continuing calibration verification (CCV) associated with batch 410-709013 has analytes with percent difference values that are outside the method criteria. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate the Isotope Dilution Analyte (IDA) recovery in the associated samples.

The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: S2-3PC-7BFS T05 (180-195596-32). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

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Case Narrative

Client: ENTACT LLC
Project: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Job ID: 180-195596-1 (Continued)

Eurofins Pittsburgh

The bracketing continuing calibration verification (CCV) associated with batch 410-716163 has analyte(s) with percent difference values that are between the method criteria of 20% to 25% deviation from the initial calibration curve. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate any positive results in the associated samples for the affected analytes.

The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: BLANK T04 (180-195596-49). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

The bracketing continuing calibration verification (CCV) associated with batch 410-742291 has analytes with percent difference values that are outside the method criteria. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate the Isotope Dilution Analyte (IDA) recovery in the associated samples.

METALS

Copper exceeded the RPD limit for the duplicate of sample S2-3PC-7BFS T08DU (180-195596-35).

GENERAL CHEMSITRY

Several samples for pH and ORP were analyzed past the holding time, due to the limited holding time on these analyses. The data was reported and flagged.

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Definitions/Glossary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.

Glossary

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

Accreditation/Certification Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00690	06-28-25 *
California	State	2891	04-30-26
Connecticut	State	PH-0820	09-30-26
Florida	NELAP	E871008	06-30-25 *
Georgia	State	PA 02-00416	04-30-26
Illinois	NELAP	200005	07-31-25 *
Kansas	NELAP	E-10350	01-31-26
Kentucky (UST)	State	162013	04-30-26
Kentucky (WW)	State	KY98043	12-31-25
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25 *
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-25
New Hampshire	NELAP	2030	04-04-26
New Jersey	NELAP	PA005	06-30-25 *
New York	NELAP	11182	03-31-26
North Carolina (WW/SW)	State	434	12-31-25
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-26
Pennsylvania	NELAP	02-00416	04-30-26
Rhode Island	State	LAO00375	12-30-25
South Carolina	State	89014	04-30-25 *
Texas	NELAP	T104704528	03-31-26
US Fish & Wildlife	US Federal Programs	A21930	04-30-26
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	03-31-24 *
Virginia	NELAP	460189	09-30-26
West Virginia DEP	State	142	01-31-26
Wisconsin	State	998027800	08-31-26

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-26
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-26
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-26
Connecticut	State	PH-0746	06-30-27
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	06-30-26
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Pittsburgh

Accreditation/Certification Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-26
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-26
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-26
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-26
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	12-31-25
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	01-10-26
New Jersey	NELAP	PA011	06-30-26
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-26
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Ohio	State	87787	01-31-26
Oklahoma	NELAP	9804	12-31-25
Oregon	NELAP	PA200001	09-11-26
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-26
USDA	US Federal Programs	525-22-298-19481	01-23-26
Vermont	State	VT - 36037	10-28-26
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-26
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

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Sample Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
180-195596-1	S2-10PC T01	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-2	S2-10PC T02	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-3	S2-10PC T03	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-4	S2-10PC T04	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-5	S2-10PC T05	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-6	S2-10PC T06	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-7	S2-10PC T07	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-8	S2-10PC T08	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-9	S2-10PC T09	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-10	S2-10PC T01	Water	09/17/25 09:50	08/14/25 14:25	Puerto Rico
180-195596-11	S2-10PC T02	Water	09/18/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-12	S2-10PC T03	Water	09/19/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-13	S2-10PC T04	Water	09/24/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-14	S2-10PC T05	Water	10/01/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-15	S2-10PC T06	Water	10/15/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-16	S2-10PC T07	Water	10/29/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-17	S2-10PC T08	Water	11/05/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-18	S2-10PC T09	Water	11/19/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-19	S2-3PC-7BFS T01	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-20	S2-3PC-7BFS T02	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-21	S2-3PC-7BFS T03	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-22	S2-3PC-7BFS T04	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-23	S2-3PC-7BFS T05	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-24	S2-3PC-7BFS T06	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-25	S2-3PC-7BFS T07	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-26	S2-3PC-7BFS T08	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-27	S2-3PC-7BFS T09	Solid	05/30/25 12:00	08/14/25 14:25	Puerto Rico
180-195596-28	S2-3PC-7BFS T01	Water	09/17/25 09:50	08/14/25 14:25	Puerto Rico
180-195596-29	S2-3PC-7BFS T02	Water	09/18/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-30	S2-3PC-7BFS T03	Water	09/19/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-31	S2-3PC-7BFS T04	Water	09/24/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-32	S2-3PC-7BFS T05	Water	10/01/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-33	S2-3PC-7BFS T06	Water	10/15/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-34	S2-3PC-7BFS T07	Water	10/29/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-35	S2-3PC-7BFS T08	Water	11/05/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-36	S2-3PC-7BFS T09	Water	11/19/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-37	BLANK T01	Solid	05/30/25 00:00	08/14/25 14:25	Puerto Rico
180-195596-38	BLANK T02	Solid	05/30/25 00:00	08/14/25 14:25	Puerto Rico
180-195596-39	BLANK T03	Solid	05/30/25 00:00	08/14/25 14:25	Puerto Rico
180-195596-40	BLANK T04	Solid	05/30/25 00:00	08/14/25 14:25	Puerto Rico
180-195596-41	BLANK T05	Solid	05/30/25 00:00	08/14/25 14:25	Puerto Rico
180-195596-42	BLANK T06	Solid	05/30/25 00:00	08/14/25 14:25	Puerto Rico
180-195596-43	BLANK T07	Solid	05/30/25 00:00	08/14/25 14:25	Puerto Rico
180-195596-44	BLANK T08	Solid	05/30/25 00:00	08/14/25 14:25	Puerto Rico
180-195596-45	BLANK T09	Solid	05/30/25 00:00	08/14/25 14:25	Puerto Rico
180-195596-46	BLANK T01	Water	09/17/25 09:50	08/14/25 14:25	Puerto Rico
180-195596-47	BLANK T02	Water	09/18/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-48	BLANK T03	Water	09/19/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-49	BLANK T04	Water	09/24/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-50	BLANK T05	Water	10/01/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-51	BLANK T06	Water	10/15/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-52	BLANK T07	Water	10/29/25 07:50	08/14/25 14:25	Puerto Rico
180-195596-53	BLANK T08	Water	11/05/25 07:50	08/14/25 14:25	Puerto Rico

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Sample Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
180-195596-54	BLANK T09	Water	11/19/25 07:50	08/14/25 14:25	Puerto Rico

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method	Method Description	Protocol	Laboratory
EPA 8270E LL	Semivolatile Organic Compounds (GC/MS)	SW846	EET PIT
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
EPA 9040C	pH	SW846	EET PIT
SM 2580B	Reduction-Oxidation (REDOX) Potential	SM	EET PIT
1315	Semi-Dynamic Tank Leaching Procedure	SW846	EET PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PIT
8290A	Separatory Funnel (Liquid-Liquid) Extraction of Dioxins and Furans	SW846	ELLE

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T01

Lab Sample ID: 180-195596-1

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			373.1 g	1800 mL	502925	09/17/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	503414	09/23/25 13:30	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	503539	09/25/25 20:34	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			373.1 g	1800 mL	502925	09/17/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503088	09/17/25 11:12	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			373.1 g	1800 mL	502925	09/17/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503154	09/18/25 11:34	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-10PC T02

Lab Sample ID: 180-195596-2

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			377.6 g	1800 mL	503070	09/17/25 08:50	TCS	EET PIT
Leach	Prep	3520C			250 mL	250 uL	503476	09/24/25 11:19	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	503759	09/30/25 20:36	VVP	EET PIT
Instrument ID: CH731										
Leach	Leach	1315			377.6 g	1800 mL	503070	09/17/25 08:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503160	09/18/25 10:54	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			377.6 g	1800 mL	503070	09/17/25 08:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503154	09/18/25 12:01	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-10PC T03

Lab Sample ID: 180-195596-3

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			378.0 g	1800 mL	503071	09/18/25 06:50	TCS	EET PIT
Leach	Prep	3520C			260 mL	250 uL	503545	09/25/25 11:52	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	503757	09/30/25 16:14	VVP	EET PIT
Instrument ID: CH751										
Leach	Leach	1315			378.0 g	1800 mL	503071	09/18/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503244	09/19/25 12:44	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			378.0 g	1800 mL	503071	09/18/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503426	09/23/25 16:30	ELS	EET PIT
Instrument ID: NOEQUIP										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T04

Lab Sample ID: 180-195596-4

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			378.3 g	1800 mL	503072	09/19/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	0.25 mL	503874	10/01/25 15:23	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	504141	10/07/25 13:14	VVP	EET PIT
Instrument ID: CH733										
Leach	Leach	1315			378.3 g	1800 mL	503072	09/19/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503466	09/24/25 10:22	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			378.3 g	1800 mL	503072	09/19/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503506	09/24/25 13:10	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-10PC T05

Lab Sample ID: 180-195596-5

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			378.6 g	1800 mL	503073	09/24/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	504169	10/07/25 14:56	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	504355	10/10/25 22:23	VVP	EET PIT
Instrument ID: CH731										
Leach	Leach	1315			378.6 g	1800 mL	503073	09/24/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503939	10/02/25 13:45	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			378.6 g	1800 mL	503073	09/24/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503863	10/01/25 15:56	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-10PC T06

Lab Sample ID: 180-195596-6

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			378.1 g	1800 mL	503074	10/01/25 06:50	TCS	EET PIT
Leach	Prep	3520C			240 mL	250 uL	504959	10/21/25 15:44	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	505101	10/23/25 22:55	VVP	EET PIT
Instrument ID: CH751										
Leach	Leach	1315			378.1 g	1800 mL	503074	10/01/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			504622	10/15/25 16:27	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			378.1 g	1800 mL	503074	10/01/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			504699	10/17/25 12:13	ELS	EET PIT
Instrument ID: NOEQUIP										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T07

Lab Sample ID: 180-195596-7

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			378.7 g	1800 mL	503075	10/15/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	505614	10/31/25 15:26	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	505749	11/04/25 21:58	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			378.7 g	1800 mL	503075	10/15/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505616	10/31/25 16:24	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			378.7 g	1800 mL	503075	10/15/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505434	10/29/25 12:10	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-10PC T08

Lab Sample ID: 180-195596-8

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			379.1 g	1800 mL	503076	10/29/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	506196	11/11/25 15:41	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	506320	11/13/25 15:17	VVP	EET PIT
Instrument ID: CH751										
Leach	Leach	1315			379.1 g	1800 mL	503076	10/29/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505848	11/05/25 16:23	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			379.1 g	1800 mL	503076	10/29/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505842	11/05/25 14:29	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-10PC T09

Lab Sample ID: 180-195596-9

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			379.1 g	1800 mL	503077	11/05/25 06:50	TCS	EET PIT
Leach	Prep	3520C			250 mL	0.25 mL	506806	11/23/25 10:16	VJC	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	507135	12/01/25 19:02	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			379.1 g	1800 mL	503077	11/05/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			506723	11/20/25 17:51	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			379.1 g	1800 mL	503077	11/05/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			506656	11/19/25 10:52	ELS	EET PIT
Instrument ID: NOEQUIP										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T01

Lab Sample ID: 180-195596-10

Date Collected: 09/17/25 09:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			968.1 mL	20 uL	708550	10/03/25 21:47	UBKG	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	709624	10/07/25 19:36	UMA9	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 21:18	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S2-10PC T02

Lab Sample ID: 180-195596-11

Date Collected: 09/18/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			994.3 mL	20 uL	708550	10/03/25 21:47	UBKG	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	709624	10/07/25 20:28	UMA9	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	707074	09/30/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			707557	10/01/25 11:07	F7JF	ELLE
Instrument ID: E09 - 30921										

Client Sample ID: S2-10PC T03

Lab Sample ID: 180-195596-12

Date Collected: 09/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			1013 mL	20 uL	708550	10/03/25 21:47	UBKG	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	709624	10/07/25 21:19	UMA9	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	706341	10/02/25 06:06	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			708461	10/02/25 16:24	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S2-10PC T04

Lab Sample ID: 180-195596-13

Date Collected: 09/24/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			975.1 mL	20 uL	708550	10/03/25 21:47	UBKG	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	709624	10/07/25 22:10	UMA9	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	712510	10/13/25 06:52	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			713404	10/13/25 18:52	I9IN	ELLE
Instrument ID: E07 - 27813										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T05

Lab Sample ID: 180-195596-14

Date Collected: 10/01/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			1028.3 mL	20 uL	708550	10/03/25 21:47	UBKG	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	710446	10/08/25 10:21	ABB4	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	712518	10/21/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			718449	10/22/25 19:20	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S2-10PC T06

Lab Sample ID: 180-195596-15

Date Collected: 10/15/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			958.9 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742203	12/11/25 09:04	ABB4	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	719868	10/26/25 21:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			720552	10/27/25 18:35	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S2-10PC T07

Lab Sample ID: 180-195596-16

Date Collected: 10/29/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			1012.9 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742203	12/11/25 09:55	ABB4	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	726014	11/10/25 06:42	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			727683	11/10/25 22:58	LHF4	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S2-10PC T08

Lab Sample ID: 180-195596-17

Date Collected: 11/05/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			1003.4 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742203	12/11/25 10:46	ABB4	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	728523	11/12/25 11:30	RFN5	ELLE
Total Recoverable	Analysis	6020B		1			729473	11/13/25 14:50	SAM2	ELLE
Instrument ID: E08 - 30647										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T09

Lab Sample ID: 180-195596-18

Date Collected: 11/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			983.2 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742203	12/11/25 11:38	ABB4	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	735790	11/30/25 20:30	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			737143	12/01/25 12:29	F7JF	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: S2-3PC-7BFS T01

Lab Sample ID: 180-195596-19

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			369.8 g	1800 mL	502925	09/17/25 06:50	TCS	EET PIT
Leach	Prep	3520C			240 mL	250 uL	503414	09/23/25 13:30	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	503539	09/25/25 21:19	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			369.8 g	1800 mL	502925	09/17/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503088	09/17/25 11:13	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			369.8 g	1800 mL	502925	09/17/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503154	09/18/25 11:43	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-3PC-7BFS T02

Lab Sample ID: 180-195596-20

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			373.8 g	1800 mL	503070	09/17/25 08:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	503476	09/24/25 11:19	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	503759	09/30/25 21:20	VVP	EET PIT
Instrument ID: CH731										
Leach	Leach	1315			373.8 g	1800 mL	503070	09/17/25 08:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503160	09/18/25 10:55	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			373.8 g	1800 mL	503070	09/17/25 08:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503154	09/18/25 12:10	ELS	EET PIT
Instrument ID: NOEQUIP										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T03

Lab Sample ID: 180-195596-21

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			374.4 g	1800 mL	503071	09/18/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	503545	09/25/25 11:52	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	503757	09/30/25 19:54	VVP	EET PIT
Instrument ID: CH751										
Leach	Leach	1315			374.4 g	1800 mL	503071	09/18/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503244	09/19/25 12:47	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			374.4 g	1800 mL	503071	09/18/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503426	09/23/25 16:45	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-3PC-7BFS T04

Lab Sample ID: 180-195596-22

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			374.0 g	1800 mL	503072	09/19/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	0.25 mL	503874	10/01/25 15:23	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	504141	10/07/25 13:57	VVP	EET PIT
Instrument ID: CH733										
Leach	Leach	1315			374.0 g	1800 mL	503072	09/19/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503466	09/24/25 10:23	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			374.0 g	1800 mL	503072	09/19/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503506	09/24/25 13:17	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-3PC-7BFS T05

Lab Sample ID: 180-195596-23

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			374.0 g	1800 mL	503073	09/24/25 06:50	TCS	EET PIT
Leach	Prep	3520C			240 mL	250 uL	504169	10/07/25 15:00	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	504426	10/13/25 15:38	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			374.0 g	1800 mL	503073	09/24/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503939	10/02/25 13:47	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			374.0 g	1800 mL	503073	09/24/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503863	10/01/25 16:02	ELS	EET PIT
Instrument ID: NOEQUIP										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T06

Lab Sample ID: 180-195596-24

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			374.6 g	1800 mL	503074	10/01/25 06:50	TCS	EET PIT
Leach	Prep	3520C			240 mL	250 uL	504959	10/21/25 15:44	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	505174	10/24/25 21:00	VVP	EET PIT
Instrument ID: CH751										
Leach	Leach	1315			374.6 g	1800 mL	503074	10/01/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			504622	10/15/25 16:30	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			374.6 g	1800 mL	503074	10/01/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			504699	10/17/25 12:19	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-3PC-7BFS T07

Lab Sample ID: 180-195596-25

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			373.0 g	1800 mL	503075	10/15/25 06:50	TCS	EET PIT
Leach	Prep	3520C			220 mL	250 uL	505614	10/31/25 15:26	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	505749	11/04/25 22:43	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			373.0 g	1800 mL	503075	10/15/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505616	10/31/25 16:23	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			373.0 g	1800 mL	503075	10/15/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505434	10/29/25 12:15	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-3PC-7BFS T08

Lab Sample ID: 180-195596-26

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			374.4 g	1800 mL	503076	10/29/25 06:50	TCS	EET PIT
Leach	Prep	3520C			240 mL	250 uL	506196	11/11/25 15:41	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	506320	11/13/25 15:55	VVP	EET PIT
Instrument ID: CH751										
Leach	Leach	1315			374.4 g	1800 mL	503076	10/29/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505848	11/05/25 16:22	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			374.4 g	1800 mL	503076	10/29/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505842	11/05/25 14:34	ELS	EET PIT
Instrument ID: NOEQUIP										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T09

Lab Sample ID: 180-195596-27

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			374.1 g	1800 mL	503077	11/05/25 06:50	TCS	EET PIT
Leach	Prep	3520C			250 mL	0.25 mL	506806	11/23/25 10:16	VJC	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	507135	12/01/25 19:45	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			374.1 g	1800 mL	503077	11/05/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			506723	11/20/25 17:52	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			374.1 g	1800 mL	503077	11/05/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			506656	11/19/25 11:09	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: S2-3PC-7BFS T01

Lab Sample ID: 180-195596-28

Date Collected: 09/17/25 09:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			971.4 mL	20 uL	708550	10/03/25 21:47	UBKG	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	710264	10/08/25 19:30	UC8F	ELLE
Instrument ID: DF17611B										
Total Recoverable	Prep	3005A			50 mL	50 mL	706341	10/02/25 06:06	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			708461	10/02/25 16:13	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S2-3PC-7BFS T02

Lab Sample ID: 180-195596-29

Date Collected: 09/18/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			988.4 mL	20 uL	713366	10/13/25 20:49	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	716048	10/19/25 17:12	AQ46	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	707074	09/30/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			707557	10/01/25 11:20	F7JF	ELLE
Instrument ID: E09 - 30921										

Client Sample ID: S2-3PC-7BFS T03

Lab Sample ID: 180-195596-30

Date Collected: 09/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			1022.7 mL	20 uL	713366	10/13/25 20:49	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	716048	10/19/25 18:03	AQ46	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	706341	10/02/25 06:06	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			708461	10/02/25 16:18	I9IN	ELLE
Instrument ID: E08 - 30647										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T04

Lab Sample ID: 180-195596-31

Date Collected: 09/24/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			974 mL	20 uL	713366	10/13/25 20:49	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	716048	10/19/25 18:54	AQ46	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	712510	10/13/25 06:52	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			713404	10/13/25 19:03	I9IN	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: S2-3PC-7BFS T05

Lab Sample ID: 180-195596-32

Date Collected: 10/01/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			988.6 mL	20 uL	713366	10/13/25 20:49	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	716048	10/19/25 19:45	AQ46	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	712518	10/21/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			718449	10/22/25 19:18	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S2-3PC-7BFS T06

Lab Sample ID: 180-195596-33

Date Collected: 10/15/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			955.1 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742203	12/11/25 12:29	ABB4	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	719868	10/26/25 21:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			720552	10/27/25 18:46	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S2-3PC-7BFS T07

Lab Sample ID: 180-195596-34

Date Collected: 10/29/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			994.7 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742203	12/11/25 13:21	ABB4	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	726014	11/10/25 06:42	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			727667	11/10/25 21:16	LHF4	ELLE
Instrument ID: E07 - 27813										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T08

Lab Sample ID: 180-195596-35

Date Collected: 11/05/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			1019 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742203	12/11/25 14:12	ABB4	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	728523	11/12/25 11:30	RFN5	ELLE
Total Recoverable	Analysis	6020B		1			729473	11/13/25 14:54	SAM2	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: S2-3PC-7BFS T09

Lab Sample ID: 180-195596-36

Date Collected: 11/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			980.6 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742291	12/11/25 00:12	TJK2	ELLE
Instrument ID: DF17280B										
Total Recoverable	Prep	3005A			50 mL	50 mL	735790	11/30/25 20:30	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			737143	12/01/25 12:42	F7JF	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: BLANK T01

Lab Sample ID: 180-195596-37

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	502925	09/17/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	503414	09/23/25 13:30	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	503539	09/25/25 22:04	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			1.0 g	1800 mL	502925	09/17/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503088	09/17/25 11:14	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	502925	09/17/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503154	09/18/25 11:52	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: BLANK T02

Lab Sample ID: 180-195596-38

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	503070	09/17/25 08:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	503476	09/24/25 11:19	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	503759	09/30/25 22:04	VVP	EET PIT
Instrument ID: CH731										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T02

Lab Sample ID: 180-195596-38

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	503070	09/17/25 08:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503160	09/18/25 10:57	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			1.0 g	1800 mL	503070	09/17/25 08:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503154	09/18/25 12:19	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: BLANK T03

Lab Sample ID: 180-195596-39

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	503071	09/18/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	503545	09/25/25 11:52	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	503757	09/30/25 17:28	VVP	EET PIT
		Instrument ID: CH751								
Leach	Leach	1315			1.0 g	1800 mL	503071	09/18/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503244	09/19/25 12:49	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			1.0 g	1800 mL	503071	09/18/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503426	09/23/25 16:52	ELS	EET PIT
		Instrument ID: NOEQUIP								

Client Sample ID: BLANK T04

Lab Sample ID: 180-195596-40

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	503072	09/19/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	0.25 mL	503874	10/01/25 15:23	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	504141	10/07/25 14:40	VVP	EET PIT
		Instrument ID: CH733								
Leach	Leach	1315			1.0 g	1800 mL	503072	09/19/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503466	09/24/25 10:24	BAB	EET PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1315			1.0 g	1800 mL	503072	09/19/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503506	09/24/25 13:24	ELS	EET PIT
		Instrument ID: NOEQUIP								

Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T05

Lab Sample ID: 180-195596-41

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	503073	09/24/25 06:50	TCS	EET PIT
Leach	Prep	3520C			230 mL	250 uL	504169	10/07/25 15:00	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	504426	10/13/25 16:22	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			1.0 g	1800 mL	503073	09/24/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			503939	10/02/25 13:46	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	503073	09/24/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			503863	10/01/25 16:08	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: BLANK T06

Lab Sample ID: 180-195596-42

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	503074	10/01/25 06:50	TCS	EET PIT
Leach	Prep	3520C			250 mL	250 uL	504959	10/21/25 15:44	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	505101	10/23/25 23:43	VVP	EET PIT
Instrument ID: CH751										
Leach	Leach	1315			1.0 g	1800 mL	503074	10/01/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			504622	10/15/25 16:32	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	503074	10/01/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			504699	10/17/25 12:25	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: BLANK T07

Lab Sample ID: 180-195596-43

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	503075	10/15/25 06:50	TCS	EET PIT
Leach	Prep	3520C			220 mL	250 uL	505614	10/31/25 15:26	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	505827	11/05/25 15:58	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			1.0 g	1800 mL	503075	10/15/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505616	10/31/25 16:26	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	503075	10/15/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505434	10/29/25 12:20	ELS	EET PIT
Instrument ID: NOEQUIP										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T08

Lab Sample ID: 180-195596-44

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	503076	10/29/25 06:50	TCS	EET PIT
Leach	Prep	3520C			240 mL	250 uL	506196	11/11/25 15:41	BJT	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	506320	11/13/25 16:33	VVP	EET PIT
Instrument ID: CH751										
Leach	Leach	1315			1.0 g	1800 mL	503076	10/29/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			505848	11/05/25 16:21	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	503076	10/29/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			505842	11/05/25 14:39	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: BLANK T09

Lab Sample ID: 180-195596-45

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1315			1.0 g	1800 mL	503077	11/05/25 06:50	TCS	EET PIT
Leach	Prep	3520C			250 mL	0.25 mL	506806	11/23/25 10:16	VJC	EET PIT
Leach	Analysis	EPA 8270E LL		1	1 mL	1 mL	507135	12/01/25 20:28	VVP	EET PIT
Instrument ID: CHMSD7										
Leach	Leach	1315			1.0 g	1800 mL	503077	11/05/25 06:50	TCS	EET PIT
Leach	Analysis	EPA 9040C		1			506723	11/20/25 17:53	BAB	EET PIT
Instrument ID: NOEQUIP										
Leach	Leach	1315			1.0 g	1800 mL	503077	11/05/25 06:50	TCS	EET PIT
Leach	Analysis	SM 2580B		1			506656	11/19/25 11:17	ELS	EET PIT
Instrument ID: NOEQUIP										

Client Sample ID: BLANK T01

Lab Sample ID: 180-195596-46

Date Collected: 09/17/25 09:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			928 mL	20 uL	713366	10/13/25 20:49	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	716163	10/20/25 03:15	RGA5	ELLE
Instrument ID: DF17611B										
Total Recoverable	Prep	3005A			50 mL	50 mL	706337	10/06/25 06:45	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			711173	10/08/25 20:19	I9IN	ELLE
Instrument ID: E08 - 30647										

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T02

Lab Sample ID: 180-195596-47

Date Collected: 09/18/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			973.5 mL	20 uL	713366	10/13/25 20:49	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	716230	10/20/25 17:39	AQ46	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	707074	09/30/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			707557	10/01/25 11:24	F7JF	ELLE
Instrument ID: E09 - 30921										

Client Sample ID: BLANK T03

Lab Sample ID: 180-195596-48

Date Collected: 09/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			995 mL	20 uL	713366	10/13/25 20:49	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	716163	10/20/25 01:32	RGA5	ELLE
Instrument ID: DF17611B										
Total Recoverable	Prep	3005A			50 mL	50 mL	706341	10/02/25 06:06	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			708461	10/02/25 16:22	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: BLANK T04

Lab Sample ID: 180-195596-49

Date Collected: 09/24/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			927.6 mL	20 uL	713366	10/13/25 20:49	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	716230	10/20/25 18:30	AQ46	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	712510	10/13/25 06:52	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			713404	10/13/25 19:01	I9IN	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: BLANK T05

Lab Sample ID: 180-195596-50

Date Collected: 10/01/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			995.5 mL	20 uL	713366	10/13/25 20:49	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	716230	10/20/25 19:21	AQ46	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	712518	10/21/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			718449	10/22/25 19:13	I9IN	ELLE
Instrument ID: E08 - 30647										

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Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T06

Lab Sample ID: 180-195596-51

Date Collected: 10/15/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			1012 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742291	12/11/25 01:04	TJK2	ELLE
Instrument ID: DF17280B										
Total Recoverable	Prep	3005A			50 mL	50 mL	719868	10/26/25 21:00	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			720552	10/27/25 18:28	I9IN	ELLE
Instrument ID: E08 - 30647										

Client Sample ID: BLANK T07

Lab Sample ID: 180-195596-52

Date Collected: 10/29/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			999.5 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742291	12/11/25 01:55	TJK2	ELLE
Instrument ID: DF17280B										
Total Recoverable	Prep	3005A			50 mL	50 mL	726014	11/10/25 06:42	UJL8	ELLE
Total Recoverable	Analysis	6020B		1			727667	11/10/25 21:28	LHF4	ELLE
Instrument ID: E07 - 27813										

Client Sample ID: BLANK T08

Lab Sample ID: 180-195596-53

Date Collected: 11/05/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			1030.6 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	743257	12/13/25 09:34	UC8F	ELLE
Instrument ID: DF19780B										
Total Recoverable	Prep	3005A			50 mL	50 mL	729282	11/13/25 11:51	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			730303	11/14/25 21:48	LHF4	ELLE
Instrument ID: E09 - 30921										

Client Sample ID: BLANK T09

Lab Sample ID: 180-195596-54

Date Collected: 11/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			995.2 mL	20 uL	739401	12/04/25 21:26	SJ7Z	ELLE
Total/NA	Analysis	8290A		1	20 uL	20 uL	742291	12/11/25 03:38	TJK2	ELLE
Instrument ID: DF17280B										
Total Recoverable	Prep	3005A			50 mL	50 mL	735790	11/30/25 20:30	UAMX	ELLE
Total Recoverable	Analysis	6020B		1			737143	12/01/25 12:46	F7JF	ELLE
Instrument ID: E07 - 27813										

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Pittsburgh

Lab Chronicle

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Analyst References:

- Lab: EET PIT
- Batch Type: Leach
 - TCS = Thomas Say
 - Batch Type: Prep
 - BJT = Bill Trout
 - VJC = Vincent Cervone
 - Batch Type: Analysis
 - BAB = Brooke Batyi
 - ELS = Edwin Shireman
 - VVP = Vincent Piccolino
- Lab: ELLE
- Batch Type: Prep
 - RFN5 = Aniyah Oxendine
 - SJ7Z = Christopher Albaugh
 - UAMX = Annamaria Kuhns
 - UBKG = Brian Graham
 - UJL8 = James Mertz
 - Batch Type: Analysis
 - ABB4 = Francis Licopoli
 - AQ46 = Joel Denlinger
 - F7JF = Dennis Dick
 - I9IN = Miles Yiengst
 - LHF4 = Diamond Boyer
 - RGA5 = Luke Timcik
 - SAM2 = Matthew Olley
 - TJK2 = Brandon Jensen
 - UC8F = Nayeli News
 - UMA9 = Michael Ziegler

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T01

Lab Sample ID: 180-195596-1

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		09/23/25 13:30	09/25/25 20:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	45		23 - 128				09/23/25 13:30	09/25/25 20:34	1
2-Fluorophenol (Surr)	60		20 - 105				09/23/25 13:30	09/25/25 20:34	1
Phenol-d5 (Surr)	53		20 - 106				09/23/25 13:30	09/25/25 20:34	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.9	H H3	0.1	0.1	SU			09/17/25 11:12	1
Oxidation Reduction Potential (SM 2580B)	150		10	10	millivolts			09/18/25 11:34	1

Client Sample ID: S2-10PC T02

Lab Sample ID: 180-195596-2

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		09/24/25 11:19	09/30/25 20:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	42		23 - 128				09/24/25 11:19	09/30/25 20:36	1
2-Fluorophenol (Surr)	40		20 - 105				09/24/25 11:19	09/30/25 20:36	1
Phenol-d5 (Surr)	43		20 - 106				09/24/25 11:19	09/30/25 20:36	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.3	H H3	0.1	0.1	SU			09/18/25 10:54	1
Oxidation Reduction Potential (SM 2580B)	140		10	10	millivolts			09/18/25 12:01	1

Client Sample ID: S2-10PC T03

Lab Sample ID: 180-195596-3

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		4.8	0.81	ug/L		09/25/25 11:52	09/30/25 16:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	39		23 - 128				09/25/25 11:52	09/30/25 16:14	1
2-Fluorophenol (Surr)	49		20 - 105				09/25/25 11:52	09/30/25 16:14	1
Phenol-d5 (Surr)	55		20 - 106				09/25/25 11:52	09/30/25 16:14	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.0	H H3	0.1	0.1	SU			09/19/25 12:44	1
Oxidation Reduction Potential (SM 2580B)	150		10	10	millivolts			09/23/25 16:30	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T04

Lab Sample ID: 180-195596-4

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	1.3	J	5.4	0.92	ug/L		10/01/25 15:23	10/07/25 13:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	37		23 - 128				10/01/25 15:23	10/07/25 13:14	1
2-Fluorophenol (Surr)	37		20 - 105				10/01/25 15:23	10/07/25 13:14	1
Phenol-d5 (Surr)	39		20 - 106				10/01/25 15:23	10/07/25 13:14	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.3	H H3	0.1	0.1	SU			09/24/25 10:22	1
Oxidation Reduction Potential (SM 2580B)	160		10	10	millivolts			09/24/25 13:10	1

Client Sample ID: S2-10PC T05

Lab Sample ID: 180-195596-5

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		10/07/25 14:56	10/10/25 22:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	24		23 - 128				10/07/25 14:56	10/10/25 22:23	1
2-Fluorophenol (Surr)	54		20 - 105				10/07/25 14:56	10/10/25 22:23	1
Phenol-d5 (Surr)	56		20 - 106				10/07/25 14:56	10/10/25 22:23	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.4	H H3	0.1	0.1	SU			10/02/25 13:45	1
Oxidation Reduction Potential (SM 2580B)	120		10	10	millivolts			10/01/25 15:56	1

Client Sample ID: S2-10PC T06

Lab Sample ID: 180-195596-6

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	4.1	J	5.2	0.88	ug/L		10/21/25 15:44	10/23/25 22:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	50		23 - 128				10/21/25 15:44	10/23/25 22:55	1
2-Fluorophenol (Surr)	29		20 - 105				10/21/25 15:44	10/23/25 22:55	1
Phenol-d5 (Surr)	34		20 - 106				10/21/25 15:44	10/23/25 22:55	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.4	H H3	0.1	0.1	SU			10/15/25 16:27	1
Oxidation Reduction Potential (SM 2580B)	92	H	10	10	millivolts			10/17/25 12:13	1

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T07

Lab Sample ID: 180-195596-7

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		10/31/25 15:26	11/04/25 21:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	67		23 - 128	10/31/25 15:26	11/04/25 21:58	1
2-Fluorophenol (Surr)	64		20 - 105	10/31/25 15:26	11/04/25 21:58	1
Phenol-d5 (Surr)	60		20 - 106	10/31/25 15:26	11/04/25 21:58	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.3	H H3	0.1	0.1	SU			10/31/25 16:24	1
Oxidation Reduction Potential (SM 2580B)	91		10	10	millivolts			10/29/25 12:10	1

Client Sample ID: S2-10PC T08

Lab Sample ID: 180-195596-8

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	7.5		5.4	0.92	ug/L		11/11/25 15:41	11/13/25 15:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	93		23 - 128	11/11/25 15:41	11/13/25 15:17	1
2-Fluorophenol (Surr)	79		20 - 105	11/11/25 15:41	11/13/25 15:17	1
Phenol-d5 (Surr)	92		20 - 106	11/11/25 15:41	11/13/25 15:17	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.1	H H3	0.1	0.1	SU			11/05/25 16:23	1
Oxidation Reduction Potential (SM 2580B)	130		10	10	millivolts			11/05/25 14:29	1

Client Sample ID: S2-10PC T09

Lab Sample ID: 180-195596-9

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	5.8		5.0	0.85	ug/L		11/23/25 10:16	12/01/25 19:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	59		23 - 128	11/23/25 10:16	12/01/25 19:02	1
2-Fluorophenol (Surr)	50		20 - 105	11/23/25 10:16	12/01/25 19:02	1
Phenol-d5 (Surr)	44		20 - 106	11/23/25 10:16	12/01/25 19:02	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.2	H H3	0.1	0.1	SU			11/20/25 17:51	1
Oxidation Reduction Potential (SM 2580B)	120		10	10	millivolts			11/19/25 10:52	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T01

Lab Sample ID: 180-195596-10

Date Collected: 09/17/25 09:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	390		26	12	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,4,6,7,8-HpCDF	250		26	4.5	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,4,7,8-HxCDD	ND		26	2.6	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,4,7,8-HxCDF	68		26	2.6	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,4,7,8,9-HpCDF	26		26	2.6	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,6,7,8-HxCDD	18	J	26	2.6	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,6,7,8-HxCDF	8.5	J	26	2.6	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,7,8-PeCDD	ND		26	3.3	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,7,8-PeCDF	ND		26	2.9	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,7,8,9-HxCDD	ND		26	2.6	pg/L		10/03/25 21:47	10/07/25 19:36	1
1,2,3,7,8,9-HxCDF	7.5	J I	26	3.6	pg/L		10/03/25 21:47	10/07/25 19:36	1
2,3,4,6,7,8-HxCDF	12	J	26	2.6	pg/L		10/03/25 21:47	10/07/25 19:36	1
2,3,4,7,8-PeCDF	6.8	J	26	2.6	pg/L		10/03/25 21:47	10/07/25 19:36	1
2,3,7,8-TCDD	ND		5.2	0.90	pg/L		10/03/25 21:47	10/07/25 19:36	1
2,3,7,8-TCDF	ND		5.2	2.4	pg/L		10/03/25 21:47	10/07/25 19:36	1
OCDD	19000		110	77	pg/L		10/03/25 21:47	10/07/25 19:36	1
OCDF	410		52	10	pg/L		10/03/25 21:47	10/07/25 19:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	80		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,4,6,7,8-HpCDF	81		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,4,7,8-HxCDF	80		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,4,7,8,9-HpCDF	80		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,6,7,8-HxCDD	83		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,6,7,8-HxCDF	81		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,7,8-PeCDD	89		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,7,8-PeCDF	92		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,7,8,9-HxCDD	82		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-1,2,3,7,8,9-HxCDF	77		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-2,3,4,6,7,8-HxCDF	80		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-2,3,4,7,8-PeCDF	104		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-2,3,7,8-TCDD	83		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-2,3,7,8-TCDF	78		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-OCDD	78		40 - 135	10/03/25 21:47	10/07/25 19:36	1
13C-OCDF	75		40 - 135	10/03/25 21:47	10/07/25 19:36	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.2	J	2.0	0.68	ug/L		10/06/25 06:45	10/08/25 21:18	1
Copper	2.4		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 21:18	1

Client Sample ID: S2-10PC T02

Lab Sample ID: 180-195596-11

Date Collected: 09/18/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	59		25	12	pg/L		10/03/25 21:47	10/07/25 20:28	1
1,2,3,4,6,7,8-HpCDF	39	I	25	4.4	pg/L		10/03/25 21:47	10/07/25 20:28	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		10/03/25 21:47	10/07/25 20:28	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T02

Lab Sample ID: 180-195596-11

Date Collected: 09/18/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDF	14	J	25	2.5	pg/L		10/03/25 21:47	10/07/25 20:28	1
1,2,3,4,7,8,9-HpCDF	5.3	J I	25	2.5	pg/L		10/03/25 21:47	10/07/25 20:28	1
1,2,3,6,7,8-HxCDD	2.9	J	25	2.5	pg/L		10/03/25 21:47	10/07/25 20:28	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		10/03/25 21:47	10/07/25 20:28	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		10/03/25 21:47	10/07/25 20:28	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		10/03/25 21:47	10/07/25 20:28	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		10/03/25 21:47	10/07/25 20:28	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		10/03/25 21:47	10/07/25 20:28	1
2,3,4,6,7,8-HxCDF	3.1	J I	25	2.5	pg/L		10/03/25 21:47	10/07/25 20:28	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		10/03/25 21:47	10/07/25 20:28	1
2,3,7,8-TCDD	ND		5.0	0.88	pg/L		10/03/25 21:47	10/07/25 20:28	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		10/03/25 21:47	10/07/25 20:28	1
OCDD	5200		110	75	pg/L		10/03/25 21:47	10/07/25 20:28	1
OCDF	70		50	10	pg/L		10/03/25 21:47	10/07/25 20:28	1

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	77		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,4,6,7,8-HpCDF	75		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,4,7,8-HxCDD	69		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,4,7,8-HxCDF	72		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,4,7,8,9-HpCDF	75		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,6,7,8-HxCDD	76		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,7,8-PeCDD	82		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,7,8-PeCDF	84		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,7,8,9-HxCDD	77		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-1,2,3,7,8,9-HxCDF	70		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-2,3,4,6,7,8-HxCDF	74		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-2,3,4,7,8-PeCDF	95		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-2,3,7,8-TCDD	77		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-2,3,7,8-TCDF	70		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-OCDD	81		40 - 135				10/03/25 21:47	10/07/25 20:28	1
13C-OCDF	78		40 - 135				10/03/25 21:47	10/07/25 20:28	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9	J	2.0	0.68	ug/L		09/30/25 22:00	10/01/25 11:07	1
Copper	5.3		1.0	0.85	ug/L		09/30/25 22:00	10/01/25 11:07	1

Client Sample ID: S2-10PC T03

Lab Sample ID: 180-195596-12

Date Collected: 09/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	110		25	12	pg/L		10/03/25 21:47	10/07/25 21:19	1
1,2,3,4,6,7,8-HpCDF	75		25	4.3	pg/L		10/03/25 21:47	10/07/25 21:19	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		10/03/25 21:47	10/07/25 21:19	1
1,2,3,4,7,8-HxCDF	26		25	2.5	pg/L		10/03/25 21:47	10/07/25 21:19	1
1,2,3,4,7,8,9-HpCDF	11	J I	25	2.5	pg/L		10/03/25 21:47	10/07/25 21:19	1
1,2,3,6,7,8-HxCDD	6.6	J	25	2.5	pg/L		10/03/25 21:47	10/07/25 21:19	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T03

Lab Sample ID: 180-195596-12

Date Collected: 09/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	3.5	J	25	2.5	pg/L		10/03/25 21:47	10/07/25 21:19	1
1,2,3,7,8-PeCDD	ND		25	3.1	pg/L		10/03/25 21:47	10/07/25 21:19	1
1,2,3,7,8-PeCDF	ND		25	2.7	pg/L		10/03/25 21:47	10/07/25 21:19	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		10/03/25 21:47	10/07/25 21:19	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		10/03/25 21:47	10/07/25 21:19	1
2,3,4,6,7,8-HxCDF	4.2	J	25	2.5	pg/L		10/03/25 21:47	10/07/25 21:19	1
2,3,4,7,8-PeCDF	3.5	J I	25	2.5	pg/L		10/03/25 21:47	10/07/25 21:19	1
2,3,7,8-TCDD	ND		4.9	0.86	pg/L		10/03/25 21:47	10/07/25 21:19	1
2,3,7,8-TCDF	ND		4.9	2.3	pg/L		10/03/25 21:47	10/07/25 21:19	1
OCDD	4700		110	74	pg/L		10/03/25 21:47	10/07/25 21:19	1
OCDF	110		49	9.9	pg/L		10/03/25 21:47	10/07/25 21:19	1

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	84		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,4,6,7,8-HpCDF	83		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,4,7,8-HxCDD	75		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,4,7,8,9-HpCDF	88		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,6,7,8-HxCDD	85		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,6,7,8-HxCDF	82		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,7,8-PeCDD	80		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,7,8-PeCDF	85		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,7,8,9-HxCDD	81		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-1,2,3,7,8,9-HxCDF	86		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-2,3,4,6,7,8-HxCDF	80		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-2,3,4,7,8-PeCDF	95		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-2,3,7,8-TCDD	76		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-2,3,7,8-TCDF	72		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-OCDD	89		40 - 135				10/03/25 21:47	10/07/25 21:19	1
13C-OCDF	86		40 - 135				10/03/25 21:47	10/07/25 21:19	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		2.0	0.68	ug/L		10/02/25 06:06	10/02/25 16:24	1
Copper	3.1		1.0	0.85	ug/L		10/02/25 06:06	10/02/25 16:24	1

Client Sample ID: S2-10PC T04

Lab Sample ID: 180-195596-13

Date Collected: 09/24/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	53		26	12	pg/L		10/03/25 21:47	10/07/25 22:10	1
1,2,3,4,6,7,8-HpCDF	35		26	4.5	pg/L		10/03/25 21:47	10/07/25 22:10	1
1,2,3,4,7,8-HxCDD	ND		26	2.6	pg/L		10/03/25 21:47	10/07/25 22:10	1
1,2,3,4,7,8-HxCDF	17	J	26	2.6	pg/L		10/03/25 21:47	10/07/25 22:10	1
1,2,3,4,7,8,9-HpCDF	4.2	J	26	2.6	pg/L		10/03/25 21:47	10/07/25 22:10	1
1,2,3,6,7,8-HxCDD	4.2	J I	26	2.6	pg/L		10/03/25 21:47	10/07/25 22:10	1
1,2,3,6,7,8-HxCDF	ND		26	2.6	pg/L		10/03/25 21:47	10/07/25 22:10	1
1,2,3,7,8-PeCDD	ND		26	3.2	pg/L		10/03/25 21:47	10/07/25 22:10	1
1,2,3,7,8-PeCDF	ND		26	2.8	pg/L		10/03/25 21:47	10/07/25 22:10	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T04

Lab Sample ID: 180-195596-13

Date Collected: 09/24/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		26	2.6	pg/L		10/03/25 21:47	10/07/25 22:10	1
1,2,3,7,8,9-HxCDF	ND		26	3.6	pg/L		10/03/25 21:47	10/07/25 22:10	1
2,3,4,6,7,8-HxCDF	2.8	J	26	2.6	pg/L		10/03/25 21:47	10/07/25 22:10	1
2,3,4,7,8-PeCDF	ND		26	2.6	pg/L		10/03/25 21:47	10/07/25 22:10	1
2,3,7,8-TCDD	ND		5.1	0.90	pg/L		10/03/25 21:47	10/07/25 22:10	1
2,3,7,8-TCDF	ND		5.1	2.4	pg/L		10/03/25 21:47	10/07/25 22:10	1
OCDD	1200		110	77	pg/L		10/03/25 21:47	10/07/25 22:10	1
OCDF	41	J	51	10	pg/L		10/03/25 21:47	10/07/25 22:10	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>13C-1,2,3,4,6,7,8-HpCDD</i>	81		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,4,6,7,8-HpCDF</i>	81		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,4,7,8-HxCDD</i>	75		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,4,7,8-HxCDF</i>	76		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,4,7,8,9-HpCDF</i>	81		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,6,7,8-HxCDD</i>	82		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,6,7,8-HxCDF</i>	78		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,7,8-PeCDD</i>	82		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,7,8-PeCDF</i>	86		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,7,8,9-HxCDD</i>	77		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-1,2,3,7,8,9-HxCDF</i>	76		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-2,3,4,6,7,8-HxCDF</i>	77		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-2,3,4,7,8-PeCDF</i>	95		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-2,3,7,8-TCDD</i>	78		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-2,3,7,8-TCDF</i>	71		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-OCDD</i>	87		40 - 135				10/03/25 21:47	10/07/25 22:10	1
<i>13C-OCDF</i>	83		40 - 135				10/03/25 21:47	10/07/25 22:10	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.7		2.0	0.68	ug/L		10/13/25 06:52	10/13/25 18:52	1
Copper	8.5		1.0	0.85	ug/L		10/13/25 06:52	10/13/25 18:52	1

Client Sample ID: S2-10PC T05

Lab Sample ID: 180-195596-14

Date Collected: 10/01/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	62		24	12	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,4,6,7,8-HpCDF	36		24	4.3	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,4,7,8-HxCDD	ND		24	2.4	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,4,7,8-HxCDF	20	J I	24	2.4	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,4,7,8,9-HpCDF	15	J	24	2.4	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,6,7,8-HxCDD	4.2	J	24	2.4	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,6,7,8-HxCDF	ND		24	2.4	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,7,8-PeCDD	ND		24	3.1	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,7,8-PeCDF	ND		24	2.7	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,7,8,9-HxCDD	ND		24	2.4	pg/L		10/03/25 21:47	10/08/25 10:21	1
1,2,3,7,8,9-HxCDF	32		24	3.4	pg/L		10/03/25 21:47	10/08/25 10:21	1
2,3,4,6,7,8-HxCDF	ND		24	2.4	pg/L		10/03/25 21:47	10/08/25 10:21	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T05

Lab Sample ID: 180-195596-14

Date Collected: 10/01/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,7,8-PeCDF	8.2	J I	24	2.4	pg/L		10/03/25 21:47	10/08/25 10:21	1
2,3,7,8-TCDD	ND		4.9	0.85	pg/L		10/03/25 21:47	10/08/25 10:21	1
2,3,7,8-TCDF	ND		4.9	2.2	pg/L		10/03/25 21:47	10/08/25 10:21	1
OCDD	1300		110	73	pg/L		10/03/25 21:47	10/08/25 10:21	1
OCDF	41	J I	49	9.7	pg/L		10/03/25 21:47	10/08/25 10:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	90		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,4,6,7,8-HpCDF	87		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,4,7,8-HxCDD	81		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,4,7,8-HxCDF	85		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,4,7,8,9-HpCDF	85		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,6,7,8-HxCDD	95		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,6,7,8-HxCDF	87		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,7,8-PeCDD	101		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,7,8-PeCDF	106		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,7,8,9-HxCDD	87		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-1,2,3,7,8,9-HxCDF	82		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-2,3,4,6,7,8-HxCDF	85		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-2,3,4,7,8-PeCDF	119		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-2,3,7,8-TCDD	91		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-2,3,7,8-TCDF	84		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-OCDD	96		40 - 135				10/03/25 21:47	10/08/25 10:21	1
13C-OCDF	94		40 - 135				10/03/25 21:47	10/08/25 10:21	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.8		2.0	0.68	ug/L		10/21/25 22:00	10/22/25 19:20	1
Copper	8.1		1.0	0.85	ug/L		10/21/25 22:00	10/22/25 19:20	1

Client Sample ID: S2-10PC T06

Lab Sample ID: 180-195596-15

Date Collected: 10/15/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	58		26	13	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,4,6,7,8-HpCDF	39		26	4.6	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,4,7,8-HxCDD	ND		26	2.6	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,4,7,8-HxCDF	37		26	2.6	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,4,7,8,9-HpCDF	2.8	J I	26	2.6	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,6,7,8-HxCDD	3.6	J	26	2.6	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,6,7,8-HxCDF	ND		26	2.6	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,7,8-PeCDD	ND		26	3.3	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,7,8-PeCDF	ND		26	2.9	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,7,8,9-HxCDD	ND		26	2.6	pg/L		12/04/25 21:26	12/11/25 09:04	1
1,2,3,7,8,9-HxCDF	8.8	J	26	3.7	pg/L		12/04/25 21:26	12/11/25 09:04	1
2,3,4,6,7,8-HxCDF	ND		26	2.6	pg/L		12/04/25 21:26	12/11/25 09:04	1
2,3,4,7,8-PeCDF	4.4	J	26	2.6	pg/L		12/04/25 21:26	12/11/25 09:04	1
2,3,7,8-TCDD	ND		5.2	0.91	pg/L		12/04/25 21:26	12/11/25 09:04	1
2,3,7,8-TCDF	ND		5.2	2.4	pg/L		12/04/25 21:26	12/11/25 09:04	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T06

Lab Sample ID: 180-195596-15

Date Collected: 10/15/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	1400		110	78	pg/L		12/04/25 21:26	12/11/25 09:04	1
OCDF	31	J	52	10	pg/L		12/04/25 21:26	12/11/25 09:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	50		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,4,6,7,8-HpCDF	47		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,4,7,8-HxCDD	53		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,4,7,8-HxCDF	50		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,4,7,8,9-HpCDF	46		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,6,7,8-HxCDD	52		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,6,7,8-HxCDF	50		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,7,8-PeCDD	49		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,7,8-PeCDF	51		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,7,8,9-HxCDD	54		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-1,2,3,7,8,9-HxCDF	47		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-2,3,4,6,7,8-HxCDF	51		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-2,3,4,7,8-PeCDF	53		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-2,3,7,8-TCDD	52		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-2,3,7,8-TCDF	51		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-OCDD	52		40 - 135				12/04/25 21:26	12/11/25 09:04	1
13C-OCDF	51		40 - 135				12/04/25 21:26	12/11/25 09:04	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.7		2.0	0.68	ug/L		10/26/25 21:00	10/27/25 18:35	1
Copper	12		1.0	0.85	ug/L		10/26/25 21:00	10/27/25 18:35	1

Client Sample ID: S2-10PC T07

Lab Sample ID: 180-195596-16

Date Collected: 10/29/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	44		25	12	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,4,6,7,8-HpCDF	31		25	4.3	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,4,7,8-HxCDF	28		25	2.5	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,7,8-PeCDD	ND		25	3.1	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,7,8-PeCDF	ND		25	2.7	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 09:55	1
1,2,3,7,8,9-HxCDF	7.6	J	25	3.5	pg/L		12/04/25 21:26	12/11/25 09:55	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 09:55	1
2,3,4,7,8-PeCDF	3.2	J	25	2.5	pg/L		12/04/25 21:26	12/11/25 09:55	1
2,3,7,8-TCDD	ND		4.9	0.86	pg/L		12/04/25 21:26	12/11/25 09:55	1
2,3,7,8-TCDF	ND		4.9	2.3	pg/L		12/04/25 21:26	12/11/25 09:55	1
OCDD	860		110	74	pg/L		12/04/25 21:26	12/11/25 09:55	1
OCDF	19	J	49	9.9	pg/L		12/04/25 21:26	12/11/25 09:55	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T07

Lab Sample ID: 180-195596-16

Date Collected: 10/29/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,4,7,8-HxCDD	80		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,4,7,8,9-HpCDF	73		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,6,7,8-HxCDD	79		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,6,7,8-HxCDF	74		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,7,8-PeCDD	78		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,7,8-PeCDF	83		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,7,8,9-HxCDD	84		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-1,2,3,7,8,9-HxCDF	75		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-2,3,4,6,7,8-HxCDF	75		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-2,3,4,7,8-PeCDF	84		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-2,3,7,8-TCDD	80		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-2,3,7,8-TCDF	76		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-OCDD	76		40 - 135	12/04/25 21:26	12/11/25 09:55	1
13C-OCDF	72		40 - 135	12/04/25 21:26	12/11/25 09:55	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.5		2.0	0.68	ug/L		11/10/25 06:42	11/10/25 22:58	1
Copper	8.3		1.0	0.85	ug/L		11/10/25 06:42	11/10/25 22:58	1

Client Sample ID: S2-10PC T08

Lab Sample ID: 180-195596-17

Date Collected: 11/05/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	21	J	25	12	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,4,6,7,8-HpCDF	13	J	25	4.4	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,4,7,8-HxCDF	6.9	J	25	2.5	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,7,8-PeCDD	ND		25	3.1	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 10:46	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		12/04/25 21:26	12/11/25 10:46	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 10:46	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 10:46	1
2,3,7,8-TCDD	ND		5.0	0.87	pg/L		12/04/25 21:26	12/11/25 10:46	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		12/04/25 21:26	12/11/25 10:46	1
OCDD	850		110	75	pg/L		12/04/25 21:26	12/11/25 10:46	1
OCDF	19	J	50	10	pg/L		12/04/25 21:26	12/11/25 10:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135				12/04/25 21:26	12/11/25 10:46	1
13C-1,2,3,4,6,7,8-HpCDF	76		40 - 135				12/04/25 21:26	12/11/25 10:46	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135				12/04/25 21:26	12/11/25 10:46	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135				12/04/25 21:26	12/11/25 10:46	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T08

Lab Sample ID: 180-195596-17

Date Collected: 11/05/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8,9-HpCDF	75		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-1,2,3,6,7,8-HxCDD	76		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-1,2,3,6,7,8-HxCDF	75		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-1,2,3,7,8-PeCDD	69		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-1,2,3,7,8-PeCDF	73		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-1,2,3,7,8,9-HxCDD	81		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-1,2,3,7,8,9-HxCDF	70		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-2,3,4,6,7,8-HxCDF	72		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-2,3,4,7,8-PeCDF	76		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-2,3,7,8-TCDD	73		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-2,3,7,8-TCDF	68		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-OCDD	78		40 - 135	12/04/25 21:26	12/11/25 10:46	1
13C-OCDF	76		40 - 135	12/04/25 21:26	12/11/25 10:46	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.4		2.0	0.68	ug/L		11/12/25 11:30	11/13/25 14:50	1
Copper	4.0		1.0	0.85	ug/L		11/12/25 11:30	11/13/25 14:50	1

Client Sample ID: S2-10PC T09

Lab Sample ID: 180-195596-18

Date Collected: 11/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	27		25	12	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,4,6,7,8-HpCDF	14	J	25	4.5	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,4,7,8-HxCDF	6.7	J	25	2.5	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 11:38	1
1,2,3,7,8,9-HxCDF	ND		25	3.6	pg/L		12/04/25 21:26	12/11/25 11:38	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 11:38	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 11:38	1
2,3,7,8-TCDD	ND		5.1	0.89	pg/L		12/04/25 21:26	12/11/25 11:38	1
2,3,7,8-TCDF	ND		5.1	2.3	pg/L		12/04/25 21:26	12/11/25 11:38	1
OCDD	4800		110	76	pg/L		12/04/25 21:26	12/11/25 11:38	1
OCDF	39	J	51	10	pg/L		12/04/25 21:26	12/11/25 11:38	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	82		40 - 135				12/04/25 21:26	12/11/25 11:38	1
13C-1,2,3,4,6,7,8-HpCDF	78		40 - 135				12/04/25 21:26	12/11/25 11:38	1
13C-1,2,3,4,7,8-HxCDD	85		40 - 135				12/04/25 21:26	12/11/25 11:38	1
13C-1,2,3,4,7,8-HxCDF	84		40 - 135				12/04/25 21:26	12/11/25 11:38	1
13C-1,2,3,4,7,8,9-HpCDF	73		40 - 135				12/04/25 21:26	12/11/25 11:38	1
13C-1,2,3,6,7,8-HxCDD	79		40 - 135				12/04/25 21:26	12/11/25 11:38	1
13C-1,2,3,6,7,8-HxCDF	79		40 - 135				12/04/25 21:26	12/11/25 11:38	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-10PC T09

Lab Sample ID: 180-195596-18

Date Collected: 11/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	81		40 - 135	12/04/25 21:26	12/11/25 11:38	1
13C-1,2,3,7,8-PeCDF	84		40 - 135	12/04/25 21:26	12/11/25 11:38	1
13C-1,2,3,7,8,9-HxCDD	81		40 - 135	12/04/25 21:26	12/11/25 11:38	1
13C-1,2,3,7,8,9-HxCDF	75		40 - 135	12/04/25 21:26	12/11/25 11:38	1
13C-2,3,4,6,7,8-HxCDF	81		40 - 135	12/04/25 21:26	12/11/25 11:38	1
13C-2,3,4,7,8-PeCDF	88		40 - 135	12/04/25 21:26	12/11/25 11:38	1
13C-2,3,7,8-TCDD	90		40 - 135	12/04/25 21:26	12/11/25 11:38	1
13C-2,3,7,8-TCDF	82		40 - 135	12/04/25 21:26	12/11/25 11:38	1
13C-OCDD	83		40 - 135	12/04/25 21:26	12/11/25 11:38	1
13C-OCDF	81		40 - 135	12/04/25 21:26	12/11/25 11:38	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.7		2.0	0.68	ug/L		11/30/25 20:30	12/01/25 12:29	1
Copper	6.2		1.0	0.85	ug/L		11/30/25 20:30	12/01/25 12:29	1

Client Sample ID: S2-3PC-7BFS T01

Lab Sample ID: 180-195596-19

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.2	0.88	ug/L		09/23/25 13:30	09/25/25 21:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	48		23 - 128				09/23/25 13:30	09/25/25 21:19	1
2-Fluorophenol (Surr)	52		20 - 105				09/23/25 13:30	09/25/25 21:19	1
Phenol-d5 (Surr)	49		20 - 106				09/23/25 13:30	09/25/25 21:19	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	9.9	H H3	0.1	0.1	SU			09/17/25 11:13	1
Oxidation Reduction Potential (SM 2580B)	160		10	10	millivolts			09/18/25 11:43	1

Client Sample ID: S2-3PC-7BFS T02

Lab Sample ID: 180-195596-20

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		09/24/25 11:19	09/30/25 21:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	55		23 - 128				09/24/25 11:19	09/30/25 21:20	1
2-Fluorophenol (Surr)	47		20 - 105				09/24/25 11:19	09/30/25 21:20	1
Phenol-d5 (Surr)	47		20 - 106				09/24/25 11:19	09/30/25 21:20	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.6	H H3	0.1	0.1	SU			09/18/25 10:55	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T02

Lab Sample ID: 180-195596-20

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oxidation Reduction Potential (SM 2580B)	150		10	10	millivolts			09/18/25 12:10	1

Client Sample ID: S2-3PC-7BFS T03

Lab Sample ID: 180-195596-21

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		09/25/25 11:52	09/30/25 19:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	44		23 - 128				09/25/25 11:52	09/30/25 19:54	1
2-Fluorophenol (Surr)	61		20 - 105				09/25/25 11:52	09/30/25 19:54	1
Phenol-d5 (Surr)	69		20 - 106				09/25/25 11:52	09/30/25 19:54	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.5	H H3	0.1	0.1	SU			09/19/25 12:47	1
Oxidation Reduction Potential (SM 2580B)	150		10	10	millivolts			09/23/25 16:45	1

Client Sample ID: S2-3PC-7BFS T04

Lab Sample ID: 180-195596-22

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		10/01/25 15:23	10/07/25 13:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	24		23 - 128				10/01/25 15:23	10/07/25 13:57	1
2-Fluorophenol (Surr)	31		20 - 105				10/01/25 15:23	10/07/25 13:57	1
Phenol-d5 (Surr)	33		20 - 106				10/01/25 15:23	10/07/25 13:57	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.8	H H3	0.1	0.1	SU			09/24/25 10:23	1
Oxidation Reduction Potential (SM 2580B)	160		10	10	millivolts			09/24/25 13:17	1

Client Sample ID: S2-3PC-7BFS T05

Lab Sample ID: 180-195596-23

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.2	0.88	ug/L		10/07/25 15:00	10/13/25 15:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	58		23 - 128				10/07/25 15:00	10/13/25 15:38	1
2-Fluorophenol (Surr)	65		20 - 105				10/07/25 15:00	10/13/25 15:38	1
Phenol-d5 (Surr)	58		20 - 106				10/07/25 15:00	10/13/25 15:38	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T05

Lab Sample ID: 180-195596-23

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.9	H H3	0.1	0.1	SU			10/02/25 13:47	1
Oxidation Reduction Potential (SM 2580B)	120		10	10	millivolts			10/01/25 16:02	1

Client Sample ID: S2-3PC-7BFS T06

Lab Sample ID: 180-195596-24

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	2.6	J	5.2	0.88	ug/L		10/21/25 15:44	10/24/25 21:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	57		23 - 128				10/21/25 15:44	10/24/25 21:00	1
2-Fluorophenol (Surr)	55		20 - 105				10/21/25 15:44	10/24/25 21:00	1
Phenol-d5 (Surr)	62		20 - 106				10/21/25 15:44	10/24/25 21:00	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	11.0	H H3	0.1	0.1	SU			10/15/25 16:30	1
Oxidation Reduction Potential (SM 2580B)	110	H	10	10	millivolts			10/17/25 12:19	1

Client Sample ID: S2-3PC-7BFS T07

Lab Sample ID: 180-195596-25

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.7	0.96	ug/L		10/31/25 15:26	11/04/25 22:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	111		23 - 128				10/31/25 15:26	11/04/25 22:43	1
2-Fluorophenol (Surr)	103		20 - 105				10/31/25 15:26	11/04/25 22:43	1
Phenol-d5 (Surr)	97		20 - 106				10/31/25 15:26	11/04/25 22:43	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.9	H H3	0.1	0.1	SU			10/31/25 16:23	1
Oxidation Reduction Potential (SM 2580B)	120		10	10	millivolts			10/29/25 12:15	1

Client Sample ID: S2-3PC-7BFS T08

Lab Sample ID: 180-195596-26

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	4.0	J	5.2	0.88	ug/L		11/11/25 15:41	11/13/25 15:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	66		23 - 128				11/11/25 15:41	11/13/25 15:55	1
2-Fluorophenol (Surr)	61		20 - 105				11/11/25 15:41	11/13/25 15:55	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T08

Lab Sample ID: 180-195596-26

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	66		20 - 106	11/11/25 15:41	11/13/25 15:55	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.6	H H3	0.1	0.1	SU			11/05/25 16:22	1
Oxidation Reduction Potential (SM 2580B)	150		10	10	millivolts			11/05/25 14:34	1

Client Sample ID: S2-3PC-7BFS T09

Lab Sample ID: 180-195596-27

Date Collected: 05/30/25 12:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	11		5.0	0.85	ug/L		11/23/25 10:16	12/01/25 19:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	59		23 - 128				11/23/25 10:16	12/01/25 19:45	1
2-Fluorophenol (Surr)	55		20 - 105				11/23/25 10:16	12/01/25 19:45	1
Phenol-d5 (Surr)	46		20 - 106				11/23/25 10:16	12/01/25 19:45	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.9	H H3	0.1	0.1	SU			11/20/25 17:52	1
Oxidation Reduction Potential (SM 2580B)	130		10	10	millivolts			11/19/25 11:09	1

Client Sample ID: S2-3PC-7BFS T01

Lab Sample ID: 180-195596-28

Date Collected: 09/17/25 09:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	130		26	12	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,4,6,7,8-HpCDF	28		26	4.5	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,4,7,8-HxCDD	ND		26	2.6	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,4,7,8-HxCDF	6.9	J	26	2.6	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,4,7,8,9-HpCDF	5.4	J I	26	2.6	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,6,7,8-HxCDD	4.9	J	26	2.6	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,6,7,8-HxCDF	ND		26	2.6	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,7,8-PeCDD	ND		26	3.3	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,7,8-PeCDF	ND		26	2.8	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,7,8,9-HxCDD	3.8	J	26	2.6	pg/L		10/03/25 21:47	10/08/25 19:30	1
1,2,3,7,8,9-HxCDF	ND		26	3.6	pg/L		10/03/25 21:47	10/08/25 19:30	1
2,3,4,6,7,8-HxCDF	ND		26	2.6	pg/L		10/03/25 21:47	10/08/25 19:30	1
2,3,4,7,8-PeCDF	ND		26	2.6	pg/L		10/03/25 21:47	10/08/25 19:30	1
2,3,7,8-TCDD	ND		5.1	0.90	pg/L		10/03/25 21:47	10/08/25 19:30	1
2,3,7,8-TCDF	ND		5.1	2.4	pg/L		10/03/25 21:47	10/08/25 19:30	1
OCDD	10000		110	77	pg/L		10/03/25 21:47	10/08/25 19:30	1
OCDF	110		51	10	pg/L		10/03/25 21:47	10/08/25 19:30	1

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T01

Lab Sample ID: 180-195596-28

Date Collected: 09/17/25 09:50

Matrix: Water

Date Received: 08/14/25 14:25

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	79		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,4,6,7,8-HpCDF	76		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,4,7,8-HxCDD	72		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,4,7,8,9-HpCDF	79		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,6,7,8-HxCDD	86		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,6,7,8-HxCDF	78		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,7,8-PeCDD	77		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,7,8-PeCDF	73		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,7,8,9-HxCDD	79		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-1,2,3,7,8,9-HxCDF	78		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-2,3,4,6,7,8-HxCDF	78		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-2,3,4,7,8-PeCDF	77		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-2,3,7,8-TCDD	72		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-2,3,7,8-TCDF	70		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-OCDD	72		40 - 135	10/03/25 21:47	10/08/25 19:30	1
13C-OCDF	74		40 - 135	10/03/25 21:47	10/08/25 19:30	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		2.0	0.68	ug/L		10/02/25 06:06	10/02/25 16:13	1
Copper	1.1		1.0	0.85	ug/L		10/02/25 06:06	10/02/25 16:13	1

Client Sample ID: S2-3PC-7BFS T02

Lab Sample ID: 180-195596-29

Date Collected: 09/18/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	58		25	12	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,4,6,7,8-HpCDF	31		25	4.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,4,7,8-HxCDF	18	J I	25	2.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,4,7,8,9-HpCDF	4.1	J I	25	2.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,6,7,8-HxCDD	2.9	J I	25	2.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
1,2,3,7,8,9-HxCDF	4.4	J	25	3.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/19/25 17:12	1
2,3,7,8-TCDD	ND		5.1	0.88	pg/L		10/13/25 20:49	10/19/25 17:12	1
2,3,7,8-TCDF	ND		5.1	2.3	pg/L		10/13/25 20:49	10/19/25 17:12	1
OCDD	7800		110	76	pg/L		10/13/25 20:49	10/19/25 17:12	1
OCDF	91		51	10	pg/L		10/13/25 20:49	10/19/25 17:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	87		40 - 135				10/13/25 20:49	10/19/25 17:12	1
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135				10/13/25 20:49	10/19/25 17:12	1
13C-1,2,3,4,7,8-HxCDD	71		40 - 135				10/13/25 20:49	10/19/25 17:12	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135				10/13/25 20:49	10/19/25 17:12	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T02

Lab Sample ID: 180-195596-29

Date Collected: 09/18/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8,9-HpCDF	85		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-1,2,3,6,7,8-HxCDD	87		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-1,2,3,6,7,8-HxCDF	83		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-1,2,3,7,8-PeCDD	89		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-1,2,3,7,8-PeCDF	92		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-1,2,3,7,8,9-HxCDD	78		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-1,2,3,7,8,9-HxCDF	76		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-2,3,4,6,7,8-HxCDF	82		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-2,3,4,7,8-PeCDF	102		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-2,3,7,8-TCDD	86		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-2,3,7,8-TCDF	86		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-OCDD	86		40 - 135	10/13/25 20:49	10/19/25 17:12	1
13C-OCDF	86		40 - 135	10/13/25 20:49	10/19/25 17:12	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.2		2.0	0.68	ug/L		09/30/25 22:00	10/01/25 11:20	1
Copper	2.3		1.0	0.85	ug/L		09/30/25 22:00	10/01/25 11:20	1

Client Sample ID: S2-3PC-7BFS T03

Lab Sample ID: 180-195596-30

Date Collected: 09/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	42		24	12	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,4,6,7,8-HpCDF	18	J	24	4.3	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,4,7,8-HxCDD	ND		24	2.4	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,4,7,8-HxCDF	6.9	J	24	2.4	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,4,7,8,9-HpCDF	3.0	J	24	2.4	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,6,7,8-HxCDD	ND		24	2.4	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,6,7,8-HxCDF	ND		24	2.4	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,7,8-PeCDD	ND		24	3.1	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,7,8-PeCDF	ND		24	2.7	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,7,8,9-HxCDD	ND		24	2.4	pg/L		10/13/25 20:49	10/19/25 18:03	1
1,2,3,7,8,9-HxCDF	ND		24	3.4	pg/L		10/13/25 20:49	10/19/25 18:03	1
2,3,4,6,7,8-HxCDF	ND		24	2.4	pg/L		10/13/25 20:49	10/19/25 18:03	1
2,3,4,7,8-PeCDF	ND		24	2.4	pg/L		10/13/25 20:49	10/19/25 18:03	1
2,3,7,8-TCDD	ND		4.9	0.85	pg/L		10/13/25 20:49	10/19/25 18:03	1
2,3,7,8-TCDF	ND		4.9	2.2	pg/L		10/13/25 20:49	10/19/25 18:03	1
OCDD	8500		110	73	pg/L		10/13/25 20:49	10/19/25 18:03	1
OCDF	58		49	9.8	pg/L		10/13/25 20:49	10/19/25 18:03	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135				10/13/25 20:49	10/19/25 18:03	1
13C-1,2,3,4,6,7,8-HpCDF	96		40 - 135				10/13/25 20:49	10/19/25 18:03	1
13C-1,2,3,4,7,8-HxCDD	75		40 - 135				10/13/25 20:49	10/19/25 18:03	1
13C-1,2,3,4,7,8-HxCDF	89		40 - 135				10/13/25 20:49	10/19/25 18:03	1
13C-1,2,3,4,7,8,9-HpCDF	95		40 - 135				10/13/25 20:49	10/19/25 18:03	1
13C-1,2,3,6,7,8-HxCDD	101		40 - 135				10/13/25 20:49	10/19/25 18:03	1
13C-1,2,3,6,7,8-HxCDF	95		40 - 135				10/13/25 20:49	10/19/25 18:03	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T03

Lab Sample ID: 180-195596-30

Date Collected: 09/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	93		40 - 135	10/13/25 20:49	10/19/25 18:03	1
13C-1,2,3,7,8-PeCDF	100		40 - 135	10/13/25 20:49	10/19/25 18:03	1
13C-1,2,3,7,8,9-HxCDD	88		40 - 135	10/13/25 20:49	10/19/25 18:03	1
13C-1,2,3,7,8,9-HxCDF	85		40 - 135	10/13/25 20:49	10/19/25 18:03	1
13C-2,3,4,6,7,8-HxCDF	90		40 - 135	10/13/25 20:49	10/19/25 18:03	1
13C-2,3,4,7,8-PeCDF	104		40 - 135	10/13/25 20:49	10/19/25 18:03	1
13C-2,3,7,8-TCDD	89		40 - 135	10/13/25 20:49	10/19/25 18:03	1
13C-2,3,7,8-TCDF	89		40 - 135	10/13/25 20:49	10/19/25 18:03	1
13C-OCDD	97		40 - 135	10/13/25 20:49	10/19/25 18:03	1
13C-OCDF	98		40 - 135	10/13/25 20:49	10/19/25 18:03	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.5		2.0	0.68	ug/L		10/02/25 06:06	10/02/25 16:18	1
Copper	1.5		1.0	0.85	ug/L		10/02/25 06:06	10/02/25 16:18	1

Client Sample ID: S2-3PC-7BFS T04

Lab Sample ID: 180-195596-31

Date Collected: 09/24/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	51		26	12	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,4,6,7,8-HpCDF	39		26	4.5	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,4,7,8-HxCDD	ND		26	2.6	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,4,7,8-HxCDF	49		26	2.6	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,4,7,8,9-HpCDF	3.6	J I	26	2.6	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,6,7,8-HxCDD	ND		26	2.6	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,6,7,8-HxCDF	ND		26	2.6	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,7,8-PeCDD	ND		26	3.2	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,7,8-PeCDF	ND		26	2.8	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,7,8,9-HxCDD	ND		26	2.6	pg/L		10/13/25 20:49	10/19/25 18:54	1
1,2,3,7,8,9-HxCDF	16	J	26	3.6	pg/L		10/13/25 20:49	10/19/25 18:54	1
2,3,4,6,7,8-HxCDF	ND		26	2.6	pg/L		10/13/25 20:49	10/19/25 18:54	1
2,3,4,7,8-PeCDF	4.8	J	26	2.6	pg/L		10/13/25 20:49	10/19/25 18:54	1
2,3,7,8-TCDD	ND		5.1	0.90	pg/L		10/13/25 20:49	10/19/25 18:54	1
2,3,7,8-TCDF	ND		5.1	2.4	pg/L		10/13/25 20:49	10/19/25 18:54	1
OCDD	1200		110	77	pg/L		10/13/25 20:49	10/19/25 18:54	1
OCDF	17	J	51	10	pg/L		10/13/25 20:49	10/19/25 18:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	91		40 - 135				10/13/25 20:49	10/19/25 18:54	1
13C-1,2,3,4,6,7,8-HpCDF	91		40 - 135				10/13/25 20:49	10/19/25 18:54	1
13C-1,2,3,4,7,8-HxCDD	77		40 - 135				10/13/25 20:49	10/19/25 18:54	1
13C-1,2,3,4,7,8-HxCDF	84		40 - 135				10/13/25 20:49	10/19/25 18:54	1
13C-1,2,3,4,7,8,9-HpCDF	88		40 - 135				10/13/25 20:49	10/19/25 18:54	1
13C-1,2,3,6,7,8-HxCDD	95		40 - 135				10/13/25 20:49	10/19/25 18:54	1
13C-1,2,3,6,7,8-HxCDF	89		40 - 135				10/13/25 20:49	10/19/25 18:54	1
13C-1,2,3,7,8-PeCDD	93		40 - 135				10/13/25 20:49	10/19/25 18:54	1
13C-1,2,3,7,8-PeCDF	100		40 - 135				10/13/25 20:49	10/19/25 18:54	1
13C-1,2,3,7,8,9-HxCDD	85		40 - 135				10/13/25 20:49	10/19/25 18:54	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T04

Lab Sample ID: 180-195596-31

Date Collected: 09/24/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	79		40 - 135	10/13/25 20:49	10/19/25 18:54	1
13C-2,3,4,6,7,8-HxCDF	84		40 - 135	10/13/25 20:49	10/19/25 18:54	1
13C-2,3,4,7,8-PeCDF	104		40 - 135	10/13/25 20:49	10/19/25 18:54	1
13C-2,3,7,8-TCDD	84		40 - 135	10/13/25 20:49	10/19/25 18:54	1
13C-2,3,7,8-TCDF	84		40 - 135	10/13/25 20:49	10/19/25 18:54	1
13C-OCDD	91		40 - 135	10/13/25 20:49	10/19/25 18:54	1
13C-OCDF	91		40 - 135	10/13/25 20:49	10/19/25 18:54	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13		2.0	0.68	ug/L		10/13/25 06:52	10/13/25 19:03	1
Copper	3.7		1.0	0.85	ug/L		10/13/25 06:52	10/13/25 19:03	1

Client Sample ID: S2-3PC-7BFS T05

Lab Sample ID: 180-195596-32

Date Collected: 10/01/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	64		25	12	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,4,6,7,8-HpCDF	44		25	4.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,4,7,8-HxCDF	49	I	25	2.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,4,7,8,9-HpCDF	3.8	J I	25	2.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,6,7,8-HxCDD	3.4	J I	25	2.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,7,8,9-HxCDD	2.7	J	25	2.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
1,2,3,7,8,9-HxCDF	16	J I	25	3.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
2,3,4,6,7,8-HxCDF	3.3	J I	25	2.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
2,3,4,7,8-PeCDF	5.7	J I	25	2.5	pg/L		10/13/25 20:49	10/19/25 19:45	1
2,3,7,8-TCDD	ND		5.1	0.88	pg/L		10/13/25 20:49	10/19/25 19:45	1
2,3,7,8-TCDF	ND		5.1	2.3	pg/L		10/13/25 20:49	10/19/25 19:45	1
OCDD	2100		110	76	pg/L		10/13/25 20:49	10/19/25 19:45	1
OCDF	37	J	51	10	pg/L		10/13/25 20:49	10/19/25 19:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	49		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,4,6,7,8-HpCDF	46		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,4,7,8-HxCDD	36	*5-	40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,4,7,8-HxCDF	42		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,4,7,8,9-HpCDF	44		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,6,7,8-HxCDD	52		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,6,7,8-HxCDF	46		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,7,8-PeCDD	46		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,7,8-PeCDF	50		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,7,8,9-HxCDD	44		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-1,2,3,7,8,9-HxCDF	41		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-2,3,4,6,7,8-HxCDF	43		40 - 135				10/13/25 20:49	10/19/25 19:45	1
13C-2,3,4,7,8-PeCDF	53		40 - 135				10/13/25 20:49	10/19/25 19:45	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T05

Lab Sample ID: 180-195596-32

Date Collected: 10/01/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	44		40 - 135	10/13/25 20:49	10/19/25 19:45	1
13C-2,3,7,8-TCDF	44		40 - 135	10/13/25 20:49	10/19/25 19:45	1
13C-OCDD	46		40 - 135	10/13/25 20:49	10/19/25 19:45	1
13C-OCDF	46		40 - 135	10/13/25 20:49	10/19/25 19:45	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		2.0	0.68	ug/L		10/21/25 22:00	10/22/25 19:18	1
Copper	3.7		1.0	0.85	ug/L		10/21/25 22:00	10/22/25 19:18	1

Client Sample ID: S2-3PC-7BFS T06

Lab Sample ID: 180-195596-33

Date Collected: 10/15/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	170		26	13	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,4,6,7,8-HpCDF	84		26	4.6	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,4,7,8-HxCDD	ND		26	2.6	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,4,7,8-HxCDF	110		26	2.6	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,4,7,8,9-HpCDF	4.2	J I	26	2.6	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,6,7,8-HxCDD	5.5	J I	26	2.6	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,6,7,8-HxCDF	ND		26	2.6	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,7,8-PeCDD	ND		26	3.3	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,7,8-PeCDF	ND		26	2.9	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,7,8,9-HxCDD	ND		26	2.6	pg/L		12/04/25 21:26	12/11/25 12:29	1
1,2,3,7,8,9-HxCDF	33		26	3.7	pg/L		12/04/25 21:26	12/11/25 12:29	1
2,3,4,6,7,8-HxCDF	3.7	J I	26	2.6	pg/L		12/04/25 21:26	12/11/25 12:29	1
2,3,4,7,8-PeCDF	6.0	J	26	2.6	pg/L		12/04/25 21:26	12/11/25 12:29	1
2,3,7,8-TCDD	ND		5.2	0.91	pg/L		12/04/25 21:26	12/11/25 12:29	1
2,3,7,8-TCDF	ND		5.2	2.4	pg/L		12/04/25 21:26	12/11/25 12:29	1
OCDD	5500		120	79	pg/L		12/04/25 21:26	12/11/25 12:29	1
OCDF	58		52	10	pg/L		12/04/25 21:26	12/11/25 12:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	77		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,4,6,7,8-HpCDF	69		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,4,7,8-HxCDD	74		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,4,7,8-HxCDF	76		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,4,7,8,9-HpCDF	72		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,6,7,8-HxCDD	72		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,6,7,8-HxCDF	72		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,7,8-PeCDD	69		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,7,8-PeCDF	72		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,7,8,9-HxCDD	74		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-1,2,3,7,8,9-HxCDF	67		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-2,3,4,6,7,8-HxCDF	70		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-2,3,4,7,8-PeCDF	74		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-2,3,7,8-TCDD	73		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-2,3,7,8-TCDF	67		40 - 135				12/04/25 21:26	12/11/25 12:29	1
13C-OCDD	83		40 - 135				12/04/25 21:26	12/11/25 12:29	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T06

Lab Sample ID: 180-195596-33

Date Collected: 10/15/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-OCDF	79		40 - 135	12/04/25 21:26	12/11/25 12:29	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		2.0	0.68	ug/L		10/26/25 21:00	10/27/25 18:46	1
Copper	6.1		1.0	0.85	ug/L		10/26/25 21:00	10/27/25 18:46	1

Client Sample ID: S2-3PC-7BFS T07

Lab Sample ID: 180-195596-34

Date Collected: 10/29/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	140		25	12	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,4,6,7,8-HpCDF	77		25	4.4	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,4,7,8-HxCDF	69		25	2.5	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,4,7,8,9-HpCDF	6.7 J		25	2.5	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,6,7,8-HxCDD	5.3 J		25	2.5	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 13:21	1
1,2,3,7,8,9-HxCDF	18 J		25	3.5	pg/L		12/04/25 21:26	12/11/25 13:21	1
2,3,4,6,7,8-HxCDF	3.2 J		25	2.5	pg/L		12/04/25 21:26	12/11/25 13:21	1
2,3,4,7,8-PeCDF	5.7 J		25	2.5	pg/L		12/04/25 21:26	12/11/25 13:21	1
2,3,7,8-TCDD	ND		5.0	0.88	pg/L		12/04/25 21:26	12/11/25 13:21	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		12/04/25 21:26	12/11/25 13:21	1
OCDD	24000		110	75	pg/L		12/04/25 21:26	12/11/25 13:21	1
OCDF	180		50	10	pg/L		12/04/25 21:26	12/11/25 13:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	71		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,4,6,7,8-HpCDF	67		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,4,7,8-HxCDD	72		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,4,7,8-HxCDF	71		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,4,7,8,9-HpCDF	71		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,6,7,8-HxCDD	72		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,6,7,8-HxCDF	68		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,7,8-PeCDD	66		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,7,8-PeCDF	69		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,7,8,9-HxCDD	75		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-1,2,3,7,8,9-HxCDF	68		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-2,3,4,6,7,8-HxCDF	67		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-2,3,4,7,8-PeCDF	71		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-2,3,7,8-TCDD	70		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-2,3,7,8-TCDF	63		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-OCDD	77		40 - 135	12/04/25 21:26	12/11/25 13:21	1
13C-OCDF	69		40 - 135	12/04/25 21:26	12/11/25 13:21	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T07

Lab Sample ID: 180-195596-34

Date Collected: 10/29/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		2.0	0.68	ug/L		11/10/25 06:42	11/10/25 21:16	1
Copper	4.3		1.0	0.85	ug/L		11/10/25 06:42	11/10/25 21:16	1

Client Sample ID: S2-3PC-7BFS T08

Lab Sample ID: 180-195596-35

Date Collected: 11/05/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	39		25	12	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,4,6,7,8-HpCDF	23	J	25	4.3	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,4,7,8-HxCDF	16	J	25	2.5	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,7,8-PeCDD	ND		25	3.1	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,7,8-PeCDF	ND		25	2.7	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 14:12	1
1,2,3,7,8,9-HxCDF	4.3	J I	25	3.4	pg/L		12/04/25 21:26	12/11/25 14:12	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 14:12	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 14:12	1
2,3,7,8-TCDD	ND		4.9	0.86	pg/L		12/04/25 21:26	12/11/25 14:12	1
2,3,7,8-TCDF	ND		4.9	2.3	pg/L		12/04/25 21:26	12/11/25 14:12	1
OCDD	3300		110	74	pg/L		12/04/25 21:26	12/11/25 14:12	1
OCDF	40	J	49	9.8	pg/L		12/04/25 21:26	12/11/25 14:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	71		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,4,7,8-HxCDD	77		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,4,7,8-HxCDF	76		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,4,7,8,9-HpCDF	72		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,7,8-PeCDD	73		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,7,8-PeCDF	75		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,7,8,9-HxCDD	80		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-1,2,3,7,8,9-HxCDF	71		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-2,3,4,6,7,8-HxCDF	73		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-2,3,4,7,8-PeCDF	77		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-2,3,7,8-TCDD	78		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-2,3,7,8-TCDF	67		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-OCDD	70		40 - 135	12/04/25 21:26	12/11/25 14:12	1
13C-OCDF	72		40 - 135	12/04/25 21:26	12/11/25 14:12	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.0		2.0	0.68	ug/L		11/12/25 11:30	11/13/25 14:54	1
Copper	2.1		1.0	0.85	ug/L		11/12/25 11:30	11/13/25 14:54	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: S2-3PC-7BFS T09

Lab Sample ID: 180-195596-36

Date Collected: 11/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	38		25	12	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,4,6,7,8-HpCDF	19	J	25	4.5	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,4,7,8-HxCDF	12	J	25	2.5	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,4,7,8,9-HpCDF	2.7	J I	25	2.5	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 00:12	1
1,2,3,7,8,9-HxCDF	3.9	J I	25	3.6	pg/L		12/04/25 21:26	12/11/25 00:12	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 00:12	1
2,3,4,7,8-PeCDF	2.7	J	25	2.5	pg/L		12/04/25 21:26	12/11/25 00:12	1
2,3,7,8-TCDD	ND		5.1	0.89	pg/L		12/04/25 21:26	12/11/25 00:12	1
2,3,7,8-TCDF	ND		5.1	2.3	pg/L		12/04/25 21:26	12/11/25 00:12	1
OCDD	4300		110	76	pg/L		12/04/25 21:26	12/11/25 00:12	1
OCDF	47	J	51	10	pg/L		12/04/25 21:26	12/11/25 00:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,4,7,8-HxCDD	76		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,4,7,8-HxCDF	71		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,4,7,8,9-HpCDF	66		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,6,7,8-HxCDD	69		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,6,7,8-HxCDF	67		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,7,8-PeCDD	74		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,7,8-PeCDF	76		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,7,8,9-HxCDD	76		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-1,2,3,7,8,9-HxCDF	73		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-2,3,4,6,7,8-HxCDF	70		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-2,3,4,7,8-PeCDF	78		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-2,3,7,8-TCDD	80		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-2,3,7,8-TCDF	73		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-OCDD	85		40 - 135	12/04/25 21:26	12/11/25 00:12	1
13C-OCDF	62		40 - 135	12/04/25 21:26	12/11/25 00:12	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		2.0	0.68	ug/L		11/30/25 20:30	12/01/25 12:42	1
Copper	3.3		1.0	0.85	ug/L		11/30/25 20:30	12/01/25 12:42	1

Client Sample ID: BLANK T01

Lab Sample ID: 180-195596-37

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		09/23/25 13:30	09/25/25 22:04	1

Eurofins Pittsburgh

Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T01

Lab Sample ID: 180-195596-37

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	36		23 - 128	09/23/25 13:30	09/25/25 22:04	1
2-Fluorophenol (Surr)	50		20 - 105	09/23/25 13:30	09/25/25 22:04	1
Phenol-d5 (Surr)	45		20 - 106	09/23/25 13:30	09/25/25 22:04	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.0	H H3	0.1	0.1	SU			09/17/25 11:14	1
Oxidation Reduction Potential (SM 2580B)	200		10	10	millivolts			09/18/25 11:52	1

Client Sample ID: BLANK T02

Lab Sample ID: 180-195596-38

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Method 8160-17-17-02-2 - Semi-volatile Organic Compounds (SVOCs) - Lead									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		09/24/25 11:19	09/30/25 22:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	49		23 - 128				09/24/25 11:19	09/30/25 22:04	1
2-Fluorophenol (Surr)	47		20 - 105				09/24/25 11:19	09/30/25 22:04	1
Phenol-d5 (Surr)	51		20 - 106				09/24/25 11:19	09/30/25 22:04	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.9	H H3	0.1	0.1	SU			09/18/25 10:57	1
Oxidation Reduction Potential (SM 2580B)	140		10	10	millivolts			09/18/25 12:19	1

Client Sample ID: BLANK T03

Lab Sample ID: 180-195596-39

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		09/25/25 11:52	09/30/25 17:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	46		23 - 128				09/25/25 11:52	09/30/25 17:28	1
2-Fluorophenol (Surr)	58		20 - 105				09/25/25 11:52	09/30/25 17:28	1
Phenol-d5 (Surr)	66		20 - 106				09/25/25 11:52	09/30/25 17:28	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.0	H H3	0.1	0.1	SU			09/19/25 12:49	1
Oxidation Reduction Potential (SM 2580B)	130		10	10	millivolts			09/23/25 16:52	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T04

Lab Sample ID: 180-195596-40

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		10/01/25 15:23	10/07/25 14:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	32		23 - 128				10/01/25 15:23	10/07/25 14:40	1
2-Fluorophenol (Surr)	37		20 - 105				10/01/25 15:23	10/07/25 14:40	1
Phenol-d5 (Surr)	40		20 - 106				10/01/25 15:23	10/07/25 14:40	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.0	H H3	0.1	0.1	SU			09/24/25 10:24	1
Oxidation Reduction Potential (SM 2580B)	130		10	10	millivolts			09/24/25 13:24	1

Client Sample ID: BLANK T05

Lab Sample ID: 180-195596-41

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.4	0.92	ug/L		10/07/25 15:00	10/13/25 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		23 - 128				10/07/25 15:00	10/13/25 16:22	1
2-Fluorophenol (Surr)	75		20 - 105				10/07/25 15:00	10/13/25 16:22	1
Phenol-d5 (Surr)	70		20 - 106				10/07/25 15:00	10/13/25 16:22	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.0	H H3	0.1	0.1	SU			10/02/25 13:46	1
Oxidation Reduction Potential (SM 2580B)	120		10	10	millivolts			10/01/25 16:08	1

Client Sample ID: BLANK T06

Lab Sample ID: 180-195596-42

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		10/21/25 15:44	10/23/25 23:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	55		23 - 128				10/21/25 15:44	10/23/25 23:43	1
2-Fluorophenol (Surr)	57		20 - 105				10/21/25 15:44	10/23/25 23:43	1
Phenol-d5 (Surr)	62		20 - 106				10/21/25 15:44	10/23/25 23:43	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.0	H H3	0.1	0.1	SU			10/15/25 16:32	1
Oxidation Reduction Potential (SM 2580B)	470	H	10	10	millivolts			10/17/25 12:25	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T07

Lab Sample ID: 180-195596-43

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.7	0.96	ug/L		10/31/25 15:26	11/05/25 15:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	79		23 - 128	10/31/25 15:26	11/05/25 15:58	1
2-Fluorophenol (Surr)	76		20 - 105	10/31/25 15:26	11/05/25 15:58	1
Phenol-d5 (Surr)	70		20 - 106	10/31/25 15:26	11/05/25 15:58	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.7	H H3	0.1	0.1	SU			10/31/25 16:26	1
Oxidation Reduction Potential (SM 2580B)	320		10	10	millivolts			10/29/25 12:20	1

Client Sample ID: BLANK T08

Lab Sample ID: 180-195596-44

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.2	0.88	ug/L		11/11/25 15:41	11/13/25 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	80		23 - 128	11/11/25 15:41	11/13/25 16:33	1
2-Fluorophenol (Surr)	74		20 - 105	11/11/25 15:41	11/13/25 16:33	1
Phenol-d5 (Surr)	85		20 - 106	11/11/25 15:41	11/13/25 16:33	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.9	H H3	0.1	0.1	SU			11/05/25 16:21	1
Oxidation Reduction Potential (SM 2580B)	260		10	10	millivolts			11/05/25 14:39	1

Client Sample ID: BLANK T09

Lab Sample ID: 180-195596-45

Date Collected: 05/30/25 00:00

Matrix: Solid

Date Received: 08/14/25 14:25

Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		11/23/25 10:16	12/01/25 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	47		23 - 128	11/23/25 10:16	12/01/25 20:28	1
2-Fluorophenol (Surr)	39		20 - 105	11/23/25 10:16	12/01/25 20:28	1
Phenol-d5 (Surr)	23		20 - 106	11/23/25 10:16	12/01/25 20:28	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	5.9	H H3	0.1	0.1	SU			11/20/25 17:53	1
Oxidation Reduction Potential (SM 2580B)	290		10	10	millivolts			11/19/25 11:17	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T01

Lab Sample ID: 180-195596-46

Date Collected: 09/17/25 09:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		27	13	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,4,6,7,8-HpCDF	ND		27	4.7	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,4,7,8-HxCDD	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,4,7,8-HxCDF	3.0	J I	27	2.7	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,4,7,8,9-HpCDF	2.7	J I	27	2.7	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,6,7,8-HxCDD	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,6,7,8-HxCDF	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,7,8-PeCDD	ND		27	3.4	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,7,8-PeCDF	ND		27	3.0	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,7,8,9-HxCDD	2.9	J I	27	2.7	pg/L		10/13/25 20:49	10/20/25 03:15	1
1,2,3,7,8,9-HxCDF	ND		27	3.8	pg/L		10/13/25 20:49	10/20/25 03:15	1
2,3,4,6,7,8-HxCDF	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 03:15	1
2,3,4,7,8-PeCDF	3.0	J I	27	2.7	pg/L		10/13/25 20:49	10/20/25 03:15	1
2,3,7,8-TCDD	ND		5.4	0.94	pg/L		10/13/25 20:49	10/20/25 03:15	1
2,3,7,8-TCDF	ND		5.4	2.5	pg/L		10/13/25 20:49	10/20/25 03:15	1
OCDD	ND		120	81	pg/L		10/13/25 20:49	10/20/25 03:15	1
OCDF	ND		54	11	pg/L		10/13/25 20:49	10/20/25 03:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	60		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,4,6,7,8-HpCDF	59		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,4,7,8-HxCDD	61		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,4,7,8-HxCDF	65		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,4,7,8,9-HpCDF	64		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,6,7,8-HxCDD	59		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,6,7,8-HxCDF	58		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,7,8-PeCDD	58		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,7,8-PeCDF	56		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,7,8,9-HxCDD	61		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-1,2,3,7,8,9-HxCDF	63		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-2,3,4,6,7,8-HxCDF	62		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-2,3,4,7,8-PeCDF	56		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-2,3,7,8-TCDD	54		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-2,3,7,8-TCDF	52		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-OCDD	55		40 - 135	10/13/25 20:49	10/20/25 03:15	1
13C-OCDF	61		40 - 135	10/13/25 20:49	10/20/25 03:15	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 20:19	1
Copper	ND		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 20:19	1

Client Sample ID: BLANK T02

Lab Sample ID: 180-195596-47

Date Collected: 09/18/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		26	12	pg/L		10/13/25 20:49	10/20/25 17:39	1
1,2,3,4,6,7,8-HpCDF	ND		26	4.5	pg/L		10/13/25 20:49	10/20/25 17:39	1
1,2,3,4,7,8-HxCDD	ND		26	2.6	pg/L		10/13/25 20:49	10/20/25 17:39	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T02

Lab Sample ID: 180-195596-47

Date Collected: 09/18/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDF	ND		26	2.6	pg/L		10/13/25 20:49	10/20/25 17:39	1
1,2,3,4,7,8,9-HpCDF	ND		26	2.6	pg/L		10/13/25 20:49	10/20/25 17:39	1
1,2,3,6,7,8-HxCDD	ND		26	2.6	pg/L		10/13/25 20:49	10/20/25 17:39	1
1,2,3,6,7,8-HxCDF	ND		26	2.6	pg/L		10/13/25 20:49	10/20/25 17:39	1
1,2,3,7,8-PeCDD	ND		26	3.2	pg/L		10/13/25 20:49	10/20/25 17:39	1
1,2,3,7,8-PeCDF	ND		26	2.8	pg/L		10/13/25 20:49	10/20/25 17:39	1
1,2,3,7,8,9-HxCDD	ND		26	2.6	pg/L		10/13/25 20:49	10/20/25 17:39	1
1,2,3,7,8,9-HxCDF	ND		26	3.6	pg/L		10/13/25 20:49	10/20/25 17:39	1
2,3,4,6,7,8-HxCDF	ND		26	2.6	pg/L		10/13/25 20:49	10/20/25 17:39	1
2,3,4,7,8-PeCDF	ND		26	2.6	pg/L		10/13/25 20:49	10/20/25 17:39	1
2,3,7,8-TCDD	ND		5.1	0.90	pg/L		10/13/25 20:49	10/20/25 17:39	1
2,3,7,8-TCDF	ND		5.1	2.4	pg/L		10/13/25 20:49	10/20/25 17:39	1
OCDD	ND		110	77	pg/L		10/13/25 20:49	10/20/25 17:39	1
OCDF	ND		51	10	pg/L		10/13/25 20:49	10/20/25 17:39	1

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	97		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,4,6,7,8-HpCDF	93		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,4,7,8-HxCDD	85		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,4,7,8-HxCDF	90		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,4,7,8,9-HpCDF	91		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,6,7,8-HxCDD	101		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,6,7,8-HxCDF	98		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,7,8-PeCDD	104		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,7,8-PeCDF	103		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,7,8,9-HxCDD	91		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-1,2,3,7,8,9-HxCDF	83		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-2,3,4,6,7,8-HxCDF	92		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-2,3,4,7,8-PeCDF	116		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-2,3,7,8-TCDD	96		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-2,3,7,8-TCDF	95		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-OCDD	93		40 - 135				10/13/25 20:49	10/20/25 17:39	1
13C-OCDF	92		40 - 135				10/13/25 20:49	10/20/25 17:39	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		09/30/25 22:00	10/01/25 11:24	1
Copper	ND		1.0	0.85	ug/L		09/30/25 22:00	10/01/25 11:24	1

Client Sample ID: BLANK T03

Lab Sample ID: 180-195596-48

Date Collected: 09/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	12	pg/L		10/13/25 20:49	10/20/25 01:32	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		10/13/25 20:49	10/20/25 01:32	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 01:32	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 01:32	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 01:32	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 01:32	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T03

Lab Sample ID: 180-195596-48

Date Collected: 09/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 01:32	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		10/13/25 20:49	10/20/25 01:32	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		10/13/25 20:49	10/20/25 01:32	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 01:32	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		10/13/25 20:49	10/20/25 01:32	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 01:32	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 01:32	1
2,3,7,8-TCDD	ND		5.0	0.88	pg/L		10/13/25 20:49	10/20/25 01:32	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		10/13/25 20:49	10/20/25 01:32	1
OCDD	ND		110	75	pg/L		10/13/25 20:49	10/20/25 01:32	1
OCDF	ND		50	10	pg/L		10/13/25 20:49	10/20/25 01:32	1

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	82		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,4,6,7,8-HpCDF	82		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,4,7,8-HxCDD	87		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,4,7,8-HxCDF	92		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,4,7,8,9-HpCDF	88		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,6,7,8-HxCDD	86		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,6,7,8-HxCDF	83		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,7,8-PeCDD	91		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,7,8-PeCDF	92		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,7,8,9-HxCDD	88		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-1,2,3,7,8,9-HxCDF	86		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-2,3,4,6,7,8-HxCDF	88		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-2,3,4,7,8-PeCDF	87		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-2,3,7,8-TCDD	83		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-2,3,7,8-TCDF	77		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-OCDD	74		40 - 135				10/13/25 20:49	10/20/25 01:32	1
13C-OCDF	78		40 - 135				10/13/25 20:49	10/20/25 01:32	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/02/25 06:06	10/02/25 16:22	1
Copper	ND		1.0	0.85	ug/L		10/02/25 06:06	10/02/25 16:22	1

Client Sample ID: BLANK T04

Lab Sample ID: 180-195596-49

Date Collected: 09/24/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		27	13	pg/L		10/13/25 20:49	10/20/25 18:30	1
1,2,3,4,6,7,8-HpCDF	ND		27	4.7	pg/L		10/13/25 20:49	10/20/25 18:30	1
1,2,3,4,7,8-HxCDD	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 18:30	1
1,2,3,4,7,8-HxCDF	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 18:30	1
1,2,3,4,7,8,9-HpCDF	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 18:30	1
1,2,3,6,7,8-HxCDD	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 18:30	1
1,2,3,6,7,8-HxCDF	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 18:30	1
1,2,3,7,8-PeCDD	ND		27	3.4	pg/L		10/13/25 20:49	10/20/25 18:30	1
1,2,3,7,8-PeCDF	ND		27	3.0	pg/L		10/13/25 20:49	10/20/25 18:30	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T04

Lab Sample ID: 180-195596-49

Date Collected: 09/24/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 18:30	1
1,2,3,7,8,9-HxCDF	ND		27	3.8	pg/L		10/13/25 20:49	10/20/25 18:30	1
2,3,4,6,7,8-HxCDF	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 18:30	1
2,3,4,7,8-PeCDF	ND		27	2.7	pg/L		10/13/25 20:49	10/20/25 18:30	1
2,3,7,8-TCDD	ND		5.4	0.94	pg/L		10/13/25 20:49	10/20/25 18:30	1
2,3,7,8-TCDF	ND		5.4	2.5	pg/L		10/13/25 20:49	10/20/25 18:30	1
OCDD	ND		120	81	pg/L		10/13/25 20:49	10/20/25 18:30	1
OCDF	ND		54	11	pg/L		10/13/25 20:49	10/20/25 18:30	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	40		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,4,6,7,8-HpCDF	40		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,4,7,8-HxCDD	36	*5-	40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,4,7,8-HxCDF	38	*5-	40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,4,7,8,9-HpCDF	38	*5-	40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,6,7,8-HxCDD	42		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,6,7,8-HxCDF	42		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,7,8-PeCDD	44		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,7,8-PeCDF	46		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,7,8,9-HxCDD	39	*5-	40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-1,2,3,7,8,9-HxCDF	37	*5-	40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-2,3,4,6,7,8-HxCDF	40		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-2,3,4,7,8-PeCDF	50		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-2,3,7,8-TCDD	43		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-2,3,7,8-TCDF	41		40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-OCDD	35	*5-	40 - 135				10/13/25 20:49	10/20/25 18:30	1
13C-OCDF	36	*5-	40 - 135				10/13/25 20:49	10/20/25 18:30	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		2.0	0.68	ug/L		10/13/25 06:52	10/13/25 19:01	1
Copper	ND		1.0	0.85	ug/L		10/13/25 06:52	10/13/25 19:01	1

Client Sample ID: BLANK T05

Lab Sample ID: 180-195596-50

Date Collected: 10/01/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	12	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 19:21	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		10/13/25 20:49	10/20/25 19:21	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 19:21	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T05

Lab Sample ID: 180-195596-50

Date Collected: 10/01/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/20/25 19:21	1
2,3,7,8-TCDD	ND		5.0	0.88	pg/L		10/13/25 20:49	10/20/25 19:21	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		10/13/25 20:49	10/20/25 19:21	1
OCDD	ND		110	75	pg/L		10/13/25 20:49	10/20/25 19:21	1
OCDF	ND		50	10	pg/L		10/13/25 20:49	10/20/25 19:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	49		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,4,6,7,8-HpCDF	48		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,4,7,8-HxCDD	45		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,4,7,8-HxCDF	47		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,4,7,8,9-HpCDF	46		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,6,7,8-HxCDD	54		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,6,7,8-HxCDF	52		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,7,8-PeCDD	56		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,7,8-PeCDF	57		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,7,8,9-HxCDD	50		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-1,2,3,7,8,9-HxCDF	44		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-2,3,4,6,7,8-HxCDF	49		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-2,3,4,7,8-PeCDF	63		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-2,3,7,8-TCDD	52		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-2,3,7,8-TCDF	49		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-OCDD	43		40 - 135				10/13/25 20:49	10/20/25 19:21	1
13C-OCDF	44		40 - 135				10/13/25 20:49	10/20/25 19:21	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/21/25 22:00	10/22/25 19:13	1
Copper	ND		1.0	0.85	ug/L		10/21/25 22:00	10/22/25 19:13	1

Client Sample ID: BLANK T06

Lab Sample ID: 180-195596-51

Date Collected: 10/15/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	12	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.3	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,7,8-PeCDD	ND		25	3.1	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,7,8-PeCDF	ND		25	2.7	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:04	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		12/04/25 21:26	12/11/25 01:04	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:04	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:04	1
2,3,7,8-TCDD	ND		4.9	0.86	pg/L		12/04/25 21:26	12/11/25 01:04	1
2,3,7,8-TCDF	ND		4.9	2.3	pg/L		12/04/25 21:26	12/11/25 01:04	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T06

Lab Sample ID: 180-195596-51

Date Collected: 10/15/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	ND		110	74	pg/L		12/04/25 21:26	12/11/25 01:04	1
OCDF	ND		49	9.9	pg/L		12/04/25 21:26	12/11/25 01:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	77		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,4,6,7,8-HpCDF	69		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,4,7,8-HxCDD	80		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,4,7,8,9-HpCDF	72		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,6,7,8-HxCDD	78		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,6,7,8-HxCDF	72		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,7,8-PeCDD	79		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,7,8-PeCDF	80		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,7,8,9-HxCDD	84		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-1,2,3,7,8,9-HxCDF	79		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-2,3,4,6,7,8-HxCDF	74		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-2,3,4,7,8-PeCDF	81		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-2,3,7,8-TCDD	80		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-2,3,7,8-TCDF	72		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-OCDD	94		40 - 135				12/04/25 21:26	12/11/25 01:04	1
13C-OCDF	68		40 - 135				12/04/25 21:26	12/11/25 01:04	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/26/25 21:00	10/27/25 18:28	1
Copper	ND		1.0	0.85	ug/L		10/26/25 21:00	10/27/25 18:28	1

Client Sample ID: BLANK T07

Lab Sample ID: 180-195596-52

Date Collected: 10/29/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	12	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:55	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		12/04/25 21:26	12/11/25 01:55	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:55	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 01:55	1
2,3,7,8-TCDD	ND		5.0	0.87	pg/L		12/04/25 21:26	12/11/25 01:55	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		12/04/25 21:26	12/11/25 01:55	1
OCDD	ND		110	75	pg/L		12/04/25 21:26	12/11/25 01:55	1
OCDF	ND		50	10	pg/L		12/04/25 21:26	12/11/25 01:55	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T07

Lab Sample ID: 180-195596-52

Date Collected: 10/29/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	77		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,4,7,8-HxCDD	86		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,4,7,8,9-HpCDF	74		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,7,8-PeCDD	79		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,7,8-PeCDF	83		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,7,8,9-HxCDD	83		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-1,2,3,7,8,9-HxCDF	83		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-2,3,4,6,7,8-HxCDF	74		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-2,3,4,7,8-PeCDF	81		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-2,3,7,8-TCDD	82		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-2,3,7,8-TCDF	75		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-OCDD	94		40 - 135	12/04/25 21:26	12/11/25 01:55	1
13C-OCDF	71		40 - 135	12/04/25 21:26	12/11/25 01:55	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/10/25 06:42	11/10/25 21:28	1
Copper	ND		1.0	0.85	ug/L		11/10/25 06:42	11/10/25 21:28	1

Client Sample ID: BLANK T08

Lab Sample ID: 180-195596-53

Date Collected: 11/05/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		24	12	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,4,6,7,8-HpCDF	ND		24	4.3	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,4,7,8-HxCDD	ND		24	2.4	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,4,7,8-HxCDF	ND		24	2.4	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,4,7,8,9-HpCDF	ND		24	2.4	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,6,7,8-HxCDD	ND		24	2.4	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,6,7,8-HxCDF	ND		24	2.4	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,7,8-PeCDD	ND		24	3.1	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,7,8-PeCDF	ND		24	2.7	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,7,8,9-HxCDD	ND		24	2.4	pg/L		12/04/25 21:26	12/13/25 09:34	1
1,2,3,7,8,9-HxCDF	ND		24	3.4	pg/L		12/04/25 21:26	12/13/25 09:34	1
2,3,4,6,7,8-HxCDF	ND		24	2.4	pg/L		12/04/25 21:26	12/13/25 09:34	1
2,3,4,7,8-PeCDF	ND		24	2.4	pg/L		12/04/25 21:26	12/13/25 09:34	1
2,3,7,8-TCDD	ND		4.9	0.85	pg/L		12/04/25 21:26	12/13/25 09:34	1
2,3,7,8-TCDF	ND		4.9	2.2	pg/L		12/04/25 21:26	12/13/25 09:34	1
OCDD	ND		110	73	pg/L		12/04/25 21:26	12/13/25 09:34	1
OCDF	ND		49	9.7	pg/L		12/04/25 21:26	12/13/25 09:34	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	72		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-1,2,3,4,6,7,8-HpCDF	72		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-1,2,3,4,7,8-HxCDD	77		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-1,2,3,4,7,8-HxCDF	74		40 - 135	12/04/25 21:26	12/13/25 09:34	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T08

Lab Sample ID: 180-195596-53

Date Collected: 11/05/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8,9-HpCDF	73		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-1,2,3,6,7,8-HxCDD	76		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-1,2,3,7,8-PeCDD	73		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-1,2,3,7,8-PeCDF	74		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-1,2,3,7,8,9-HxCDD	78		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-1,2,3,7,8,9-HxCDF	74		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-2,3,4,6,7,8-HxCDF	75		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-2,3,4,7,8-PeCDF	78		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-2,3,7,8-TCDD	73		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-2,3,7,8-TCDF	69		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-OCDD	74		40 - 135	12/04/25 21:26	12/13/25 09:34	1
13C-OCDF	74		40 - 135	12/04/25 21:26	12/13/25 09:34	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/13/25 11:51	11/14/25 21:48	1
Copper	ND		1.0	0.85	ug/L		11/13/25 11:51	11/14/25 21:48	1

Client Sample ID: BLANK T09

Lab Sample ID: 180-195596-54

Date Collected: 11/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	12	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 03:38	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		12/04/25 21:26	12/11/25 03:38	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 03:38	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 03:38	1
2,3,7,8-TCDD	ND		5.0	0.88	pg/L		12/04/25 21:26	12/11/25 03:38	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		12/04/25 21:26	12/11/25 03:38	1
OCDD	ND		110	75	pg/L		12/04/25 21:26	12/11/25 03:38	1
OCDF	ND		50	10	pg/L		12/04/25 21:26	12/11/25 03:38	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	71		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-1,2,3,4,7,8-HxCDF	76		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-1,2,3,4,7,8,9-HpCDF	67		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-1,2,3,6,7,8-HxCDD	75		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-1,2,3,6,7,8-HxCDF	68		40 - 135	12/04/25 21:26	12/11/25 03:38	1

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Client Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Client Sample ID: BLANK T09

Lab Sample ID: 180-195596-54

Date Collected: 11/19/25 07:50

Matrix: Water

Date Received: 08/14/25 14:25

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	78		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-1,2,3,7,8-PeCDF	79		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-1,2,3,7,8,9-HxCDD	79		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-1,2,3,7,8,9-HxCDF	77		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-2,3,4,6,7,8-HxCDF	72		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-2,3,4,7,8-PeCDF	80		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-2,3,7,8-TCDD	79		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-2,3,7,8-TCDF	73		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-OCDD	79		40 - 135	12/04/25 21:26	12/11/25 03:38	1
13C-OCDF	58		40 - 135	12/04/25 21:26	12/11/25 03:38	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/30/25 20:30	12/01/25 12:46	1
Copper	ND		1.0	0.85	ug/L		11/30/25 20:30	12/01/25 12:46	1

QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-503414/1-A

Matrix: Solid

Analysis Batch: 503539

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 503414

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		09/23/25 13:30	09/25/25 12:42	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	74		23 - 128				09/23/25 13:30	09/25/25 12:42	1
2-Fluorophenol (Surr)	85		20 - 105				09/23/25 13:30	09/25/25 12:42	1
Phenol-d5 (Surr)	80		20 - 106				09/23/25 13:30	09/25/25 12:42	1

Lab Sample ID: LCS 180-503414/2-A

Matrix: Solid

Analysis Batch: 503539

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 503414

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Pentachlorophenol		40.0	28.9		ug/L		72	35 - 102	
Surrogate	%Recovery	LCS Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	74		23 - 128						
2-Fluorophenol (Surr)	79		20 - 105						
Phenol-d5 (Surr)	70		20 - 106						

Lab Sample ID: LCSD 180-503414/3-A

Matrix: Solid

Analysis Batch: 503539

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 503414

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pentachlorophenol		40.0	29.4		ug/L		73	35 - 102	2	17
Surrogate	%Recovery	LCSD Qualifier	Limits							
2,4,6-Tribromophenol (Surr)	73		23 - 128							
2-Fluorophenol (Surr)	79		20 - 105							
Phenol-d5 (Surr)	69		20 - 106							

Lab Sample ID: MB 180-503476/1-A

Matrix: Solid

Analysis Batch: 503759

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 503476

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		09/24/25 11:18	09/30/25 13:16	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	86		23 - 128				09/24/25 11:18	09/30/25 13:16	1
2-Fluorophenol (Surr)	80		20 - 105				09/24/25 11:18	09/30/25 13:16	1
Phenol-d5 (Surr)	74		20 - 106				09/24/25 11:18	09/30/25 13:16	1

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-503476/2-A

Matrix: Solid

Analysis Batch: 503759

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 503476

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	40.0	26.1		ug/L		65	35 - 102
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	78		23 - 128				
2-Fluorophenol (Surr)	76		20 - 105				
Phenol-d5 (Surr)	69		20 - 106				

Lab Sample ID: MB 180-503545/1-A

Matrix: Solid

Analysis Batch: 503757

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 503545

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		09/25/25 11:38	09/30/25 13:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	66		23 - 128				09/25/25 11:38	09/30/25 13:47	1
2-Fluorophenol (Surr)	73		20 - 105				09/25/25 11:38	09/30/25 13:47	1
Phenol-d5 (Surr)	77		20 - 106				09/25/25 11:38	09/30/25 13:47	1

Lab Sample ID: LCS 180-503545/2-A

Matrix: Solid

Analysis Batch: 503757

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 503545

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	40.0	28.2		ug/L		71	35 - 102
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	73		23 - 128				
2-Fluorophenol (Surr)	75		20 - 105				
Phenol-d5 (Surr)	76		20 - 106				

Lab Sample ID: MB 180-503874/1-A

Matrix: Solid

Analysis Batch: 504078

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 503874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		10/01/25 15:22	10/06/25 13:16	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	89		23 - 128				10/01/25 15:22	10/06/25 13:16	1
2-Fluorophenol (Surr)	70		20 - 105				10/01/25 15:22	10/06/25 13:16	1
Phenol-d5 (Surr)	72		20 - 106				10/01/25 15:22	10/06/25 13:16	1

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-503874/2-A

Matrix: Solid

Analysis Batch: 504078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 503874

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	40.0	29.3		ug/L		73	35 - 102
Surrogate	%Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	75		23 - 128				
2-Fluorophenol (Surr)	61		20 - 105				
Phenol-d5 (Surr)	64		20 - 106				

Lab Sample ID: MB 180-504169/1-A

Matrix: Solid

Analysis Batch: 504426

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 504169

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		10/07/25 14:56	10/13/25 09:43	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		23 - 128				10/07/25 14:56	10/13/25 09:43	1
2-Fluorophenol (Surr)	85		20 - 105				10/07/25 14:56	10/13/25 09:43	1
Phenol-d5 (Surr)	77		20 - 106				10/07/25 14:56	10/13/25 09:43	1

Lab Sample ID: LCS 180-504169/2-A

Matrix: Solid

Analysis Batch: 504426

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 504169

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	40.0	32.4		ug/L		81	35 - 102
Surrogate	%Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	76		23 - 128				
2-Fluorophenol (Surr)	88		20 - 105				
Phenol-d5 (Surr)	76		20 - 106				

Lab Sample ID: MB 180-504959/1-A

Matrix: Solid

Analysis Batch: 505101

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 504959

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		10/21/25 15:44	10/23/25 13:34	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		23 - 128				10/21/25 15:44	10/23/25 13:34	1
2-Fluorophenol (Surr)	92		20 - 105				10/21/25 15:44	10/23/25 13:34	1
Phenol-d5 (Surr)	96		20 - 106				10/21/25 15:44	10/23/25 13:34	1

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-504959/2-A

Matrix: Solid

Analysis Batch: 505101

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 504959

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	40.0	30.3		ug/L		76	35 - 102
Surrogate	%Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	73		23 - 128				
2-Fluorophenol (Surr)	80		20 - 105				
Phenol-d5 (Surr)	83		20 - 106				

Lab Sample ID: MB 180-505614/1-A

Matrix: Solid

Analysis Batch: 505749

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 505614

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		10/31/25 15:26	11/04/25 13:26	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		23 - 128				10/31/25 15:26	11/04/25 13:26	1
2-Fluorophenol (Surr)	78		20 - 105				10/31/25 15:26	11/04/25 13:26	1
Phenol-d5 (Surr)	72		20 - 106				10/31/25 15:26	11/04/25 13:26	1

Lab Sample ID: LCS 180-505614/2-A

Matrix: Solid

Analysis Batch: 505749

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 505614

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	40.0	28.9		ug/L		72	35 - 102
Surrogate	%Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	75		23 - 128				
2-Fluorophenol (Surr)	81		20 - 105				
Phenol-d5 (Surr)	71		20 - 106				

Lab Sample ID: LCSD 180-505614/3-A

Matrix: Solid

Analysis Batch: 505749

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 505614

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pentachlorophenol	40.0	29.0		ug/L		72	35 - 102	0	17
Surrogate	%Recovery	LCSD Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	76		23 - 128						
2-Fluorophenol (Surr)	81		20 - 105						
Phenol-d5 (Surr)	71		20 - 106						

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-506196/1-A

Matrix: Solid

Analysis Batch: 506320

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 506196

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		11/11/25 15:41	11/13/25 12:09	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		23 - 128				11/11/25 15:41	11/13/25 12:09	1
2-Fluorophenol (Surr)	83		20 - 105				11/11/25 15:41	11/13/25 12:09	1
Phenol-d5 (Surr)	85		20 - 106				11/11/25 15:41	11/13/25 12:09	1

Lab Sample ID: LCS 180-506196/2-A

Matrix: Solid

Analysis Batch: 506320

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 506196

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Pentachlorophenol		40.0	27.0		ug/L		67	35 - 102	
Surrogate	%Recovery	LCS Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	70		23 - 128						
2-Fluorophenol (Surr)	78		20 - 105						
Phenol-d5 (Surr)	80		20 - 106						

Lab Sample ID: LCSD 180-506196/3-A

Matrix: Solid

Analysis Batch: 506320

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 506196

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pentachlorophenol		40.0	28.5		ug/L		71	35 - 102	5	17
Surrogate	%Recovery	LCSD Qualifier	Limits							
2,4,6-Tribromophenol (Surr)	74		23 - 128							
2-Fluorophenol (Surr)	85		20 - 105							
Phenol-d5 (Surr)	87		20 - 106							

Lab Sample ID: MB 180-506806/1-A

Matrix: Solid

Analysis Batch: 507135

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 506806

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	0.85	ug/L		11/21/25 13:49	12/01/25 12:12	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		23 - 128				11/21/25 13:49	12/01/25 12:12	1
2-Fluorophenol (Surr)	90		20 - 105				11/21/25 13:49	12/01/25 12:12	1
Phenol-d5 (Surr)	80		20 - 106				11/21/25 13:49	12/01/25 12:12	1

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-506806/2-A

Matrix: Solid

Analysis Batch: 507135

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 506806

Analyte				Spike	LCS	LCS				%Rec
				Added	Result	Qualifier	Unit	D	%Rec	Limits
Pentachlorophenol				40.0	30.0		ug/L		75	35 - 102
Surrogate	LCS	LCS								
	%Recovery	Qualifier		Limits						
2,4,6-Tribromophenol (Surr)	81			23 - 128						
2-Fluorophenol (Surr)	89			20 - 105						
Phenol-d5 (Surr)	73			20 - 106						

Lab Sample ID: LCSD 180-506806/3-A

Matrix: Solid

Analysis Batch: 507135

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 506806

			Spike	LCSD	LCSD				%Rec	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Pentachlorophenol			40.0	29.9		ug/L		75	35 - 102	0	17
Surrogate	LCSD	LCSD									
	%Recovery	Qualifier	Limits								
2,4,6-Tribromophenol (Surr)	74		23 - 128								
2-Fluorophenol (Surr)	90		20 - 105								
Phenol-d5 (Surr)	73		20 - 106								

Lab Sample ID: 180-195596-1 DU

Matrix: Solid

Analysis Batch: 503539

Client Sample ID: S2-10PC T01

Prep Type: Leach

Prep Batch: 503414

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	DU %Recovery	DU Qualifier	Limits					
2,4,6-Tribromophenol (Surr)	40		23 - 128					
2-Fluorophenol (Surr)	45		20 - 105					
Phenol-d5 (Surr)	44		20 - 106					

Lab Sample ID: 180-195596-19 DU

Matrix: Solid

Analysis Batch: 503539

Client Sample ID: S2-3PC-7BFS T01

Prep Type: Leach

Prep Batch: 503414

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	Limits					
2,4,6-Tribromophenol (Surr)	43		23 - 128					
2-Fluorophenol (Surr)	52		20 - 105					
Phenol-d5 (Surr)	49		20 - 106					

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-195596-2 DU

Matrix: Solid

Analysis Batch: 503759

Client Sample ID: S2-10PC T02

Prep Type: Leach

Prep Batch: 503476

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	45			23 - 128				
2-Fluorophenol (Surr)	47			20 - 105				
Phenol-d5 (Surr)	44			20 - 106				

Lab Sample ID: 180-195596-20 DU

Matrix: Solid

Analysis Batch: 503759

Client Sample ID: S2-3PC-7BFS T02

Prep Type: Leach

Prep Batch: 503476

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	56			23 - 128				
2-Fluorophenol (Surr)	55			20 - 105				
Phenol-d5 (Surr)	52			20 - 106				

Lab Sample ID: 180-195596-3 DU

Matrix: Solid

Analysis Batch: 503757

Client Sample ID: S2-10PC T03

Prep Type: Leach

Prep Batch: 503545

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	56			23 - 128				
2-Fluorophenol (Surr)	64			20 - 105				
Phenol-d5 (Surr)	72			20 - 106				

Lab Sample ID: 180-195596-21 DU

Matrix: Solid

Analysis Batch: 503757

Client Sample ID: S2-3PC-7BFS T03

Prep Type: Leach

Prep Batch: 503545

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	56			23 - 128				
2-Fluorophenol (Surr)	60			20 - 105				
Phenol-d5 (Surr)	67			20 - 106				

QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-195596-4 DU

Matrix: Solid

Analysis Batch: 504141

Client Sample ID: S2-10PC T04

Prep Type: Leach

Prep Batch: 503874

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	1.3	J	ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	25			23 - 128				
2-Fluorophenol (Surr)	33			20 - 105				
Phenol-d5 (Surr)	35			20 - 106				

Lab Sample ID: 180-195596-22 DU

Matrix: Solid

Analysis Batch: 504141

Client Sample ID: S2-3PC-7BFS T04

Prep Type: Leach

Prep Batch: 503874

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	36			23 - 128				
2-Fluorophenol (Surr)	37			20 - 105				
Phenol-d5 (Surr)	41			20 - 106				

Lab Sample ID: LB 180-503678/1-E

Matrix: Solid

Analysis Batch: 504426

Client Sample ID: Method Blank

Prep Type: Leach

Prep Batch: 504169

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.2	0.88	ug/L		10/07/25 14:56	10/13/25 11:34	1
Surrogate	%Recovery	LB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		23 - 128				10/07/25 14:56	10/13/25 11:34	1
2-Fluorophenol (Surr)	86		20 - 105				10/07/25 14:56	10/13/25 11:34	1
Phenol-d5 (Surr)	76		20 - 106				10/07/25 14:56	10/13/25 11:34	1

Lab Sample ID: 180-195596-5 DU

Matrix: Solid

Analysis Batch: 504426

Client Sample ID: S2-10PC T05

Prep Type: Leach

Prep Batch: 504169

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	74			23 - 128				
2-Fluorophenol (Surr)	73			20 - 105				
Phenol-d5 (Surr)	69			20 - 106				

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-195596-23 DU

Matrix: Solid

Analysis Batch: 504426

Client Sample ID: S2-3PC-7BFS T05

Prep Type: Leach

Prep Batch: 504169

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	69			23 - 128				
2-Fluorophenol (Surr)	80			20 - 105				
Phenol-d5 (Surr)	73			20 - 106				

Lab Sample ID: 180-195596-6 DU

Matrix: Solid

Analysis Batch: 505101

Client Sample ID: S2-10PC T06

Prep Type: Leach

Prep Batch: 504959

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	4.1	J	6.10		ug/L		40	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	61			23 - 128				
2-Fluorophenol (Surr)	59			20 - 105				
Phenol-d5 (Surr)	66			20 - 106				

Lab Sample ID: 180-195596-24 DU

Matrix: Solid

Analysis Batch: 505174

Client Sample ID: S2-3PC-7BFS T06

Prep Type: Leach

Prep Batch: 504959

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	2.6	J	6.20		ug/L		81	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	59			23 - 128				
2-Fluorophenol (Surr)	60			20 - 105				
Phenol-d5 (Surr)	69			20 - 106				

Lab Sample ID: 180-195596-7 DU

Matrix: Solid

Analysis Batch: 505749

Client Sample ID: S2-10PC T07

Prep Type: Leach

Prep Batch: 505614

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	ND		ND		ug/L			
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	34			23 - 128				
2-Fluorophenol (Surr)	41			20 - 105				
Phenol-d5 (Surr)	37			20 - 106				

QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-195596-25 DU

Matrix: Solid

Analysis Batch: 505749

Client Sample ID: S2-3PC-7BFS T07

Prep Type: Leach

Prep Batch: 505614

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	ND		ND		ug/L		NC	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	114			23 - 128				
2-Fluorophenol (Surr)	103			20 - 105				
Phenol-d5 (Surr)	102			20 - 106				

Lab Sample ID: 180-195596-8 DU

Matrix: Solid

Analysis Batch: 506320

Client Sample ID: S2-10PC T08

Prep Type: Leach

Prep Batch: 506196

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	7.5		5.91		ug/L		24	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	70			23 - 128				
2-Fluorophenol (Surr)	65			20 - 105				
Phenol-d5 (Surr)	74			20 - 106				

Lab Sample ID: 180-195596-26 DU

Matrix: Solid

Analysis Batch: 506320

Client Sample ID: S2-3PC-7BFS T08

Prep Type: Leach

Prep Batch: 506196

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	4.0	J	4.80	J	ug/L		18	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	87			23 - 128				
2-Fluorophenol (Surr)	82			20 - 105				
Phenol-d5 (Surr)	94			20 - 106				

Lab Sample ID: 180-195596-9 DU

Matrix: Solid

Analysis Batch: 507135

Client Sample ID: S2-10PC T09

Prep Type: Leach

Prep Batch: 506806

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	5.8		6.39		ug/L		10	
Surrogate	%Recovery	DU Qualifier	DU	Limits				
2,4,6-Tribromophenol (Surr)	60			23 - 128				
2-Fluorophenol (Surr)	46			20 - 105				
Phenol-d5 (Surr)	32			20 - 106				

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-195596-27 DU

Matrix: Solid

Analysis Batch: 507135

Client Sample ID: S2-3PC-7BFS T09

Prep Type: Leach

Prep Batch: 506806

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Pentachlorophenol	11		5.02		ug/L		77	
Surrogate	%Recovery	DU Qualifier	DU Limits					
2,4,6-Tribromophenol (Surr)	55		23 - 128					
2-Fluorophenol (Surr)	46		20 - 105					
Phenol-d5 (Surr)	41		20 - 106					

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 410-708550/1-A

Matrix: Water

Analysis Batch: 709013

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 708550

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	12	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		10/03/25 05:57	10/05/25 17:12	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		10/03/25 05:57	10/05/25 17:12	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		10/03/25 05:57	10/05/25 17:12	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		10/03/25 05:57	10/05/25 17:12	1
2,3,7,8-TCDD	ND		5.0	0.87	pg/L		10/03/25 05:57	10/05/25 17:12	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		10/03/25 05:57	10/05/25 17:12	1
OCDD	ND		110	75	pg/L		10/03/25 05:57	10/05/25 17:12	1
OCDF	ND		50	10	pg/L		10/03/25 05:57	10/05/25 17:12	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,4,6,7,8-HpCDF	114		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,4,7,8-HxCDD	88		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,4,7,8-HxCDF	115		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,4,7,8,9-HpCDF	123		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,6,7,8-HxCDD	89		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,6,7,8-HxCDF	105		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,7,8-PeCDD	79		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,7,8-PeCDF	98		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,7,8,9-HxCDD	86		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-1,2,3,7,8,9-HxCDF	105		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-2,3,4,6,7,8-HxCDF	108		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-2,3,4,7,8-PeCDF	99		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-2,3,7,8-TCDD	75		40 - 135				10/03/25 05:57	10/05/25 17:12	1
13C-2,3,7,8-TCDF	87		40 - 135				10/03/25 05:57	10/05/25 17:12	1

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 410-708550/1-A

Matrix: Water

Analysis Batch: 709013

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 708550

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-OCDD	105		40 - 135	10/03/25 05:57	10/05/25 17:12	1
13C-OCDF	99		40 - 135	10/03/25 05:57	10/05/25 17:12	1

Lab Sample ID: LCS 410-708550/2-A

Matrix: Water

Analysis Batch: 709013

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 708550

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,4,6,7,8-HpCDD	1000	1130		pg/L		113	71 - 120
1,2,3,4,6,7,8-HpCDF	1000	1050		pg/L		105	73 - 120
1,2,3,4,7,8-HxCDD	1000	1140		pg/L		114	76 - 120
1,2,3,4,7,8-HxCDF	1000	1090		pg/L		109	76 - 120
1,2,3,4,7,8,9-HpCDF	1000	1090		pg/L		109	71 - 120
1,2,3,6,7,8-HxCDD	1000	1110		pg/L		111	77 - 120
1,2,3,6,7,8-HxCDF	1000	1080		pg/L		108	76 - 120
1,2,3,7,8-PeCDD	1000	1010		pg/L		101	80 - 126
1,2,3,7,8-PeCDF	1000	1060		pg/L		106	76 - 123
1,2,3,7,8,9-HxCDD	1000	1150		pg/L		115	76 - 123
1,2,3,7,8,9-HxCDF	1000	1150		pg/L		115	76 - 120
2,3,4,6,7,8-HxCDF	1000	1090		pg/L		109	75 - 120
2,3,4,7,8-PeCDF	1000	1040		pg/L		104	75 - 121
2,3,7,8-TCDD	200	225		pg/L		113	71 - 120
2,3,7,8-TCDF	200	208		pg/L		104	68 - 128
OCDD	2000	2130		pg/L		106	71 - 120
OCDF	2000	2160		pg/L		108	71 - 120

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,4,6,7,8-HpCDD	88		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	107		40 - 135
13C-1,2,3,4,7,8-HxCDD	79		40 - 135
13C-1,2,3,4,7,8-HxCDF	107		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	111		40 - 135
13C-1,2,3,6,7,8-HxCDD	78		40 - 135
13C-1,2,3,6,7,8-HxCDF	99		40 - 135
13C-1,2,3,7,8-PeCDD	81		40 - 135
13C-1,2,3,7,8-PeCDF	92		40 - 135
13C-1,2,3,7,8,9-HxCDD	77		40 - 135
13C-1,2,3,7,8,9-HxCDF	90		40 - 135
13C-2,3,4,6,7,8-HxCDF	100		40 - 135
13C-2,3,4,7,8-PeCDF	90		40 - 135
13C-2,3,7,8-TCDD	73		40 - 135
13C-2,3,7,8-TCDF	84		40 - 135
13C-OCDD	95		40 - 135
13C-OCDF	88		40 - 135

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 410-713366/1-A

Matrix: Water

Analysis Batch: 713576

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 713366

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		25	12	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		10/13/25 20:49	10/15/25 11:36	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		10/13/25 20:49	10/15/25 11:36	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/15/25 11:36	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		10/13/25 20:49	10/15/25 11:36	1
2,3,7,8-TCDD	ND		5.0	0.87	pg/L		10/13/25 20:49	10/15/25 11:36	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		10/13/25 20:49	10/15/25 11:36	1
OCDD	ND		110	75	pg/L		10/13/25 20:49	10/15/25 11:36	1
OCDF	ND		50	10	pg/L		10/13/25 20:49	10/15/25 11:36	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	106		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,4,6,7,8-HpCDF	105		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,4,7,8-HxCDD	102		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,4,7,8-HxCDF	110		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,4,7,8,9-HpCDF	110		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,6,7,8-HxCDD	101		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,6,7,8-HxCDF	99		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,7,8-PeCDD	96		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,7,8-PeCDF	94		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,7,8,9-HxCDD	104		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-1,2,3,7,8,9-HxCDF	109		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-2,3,4,6,7,8-HxCDF	104		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-2,3,4,7,8-PeCDF	97		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-2,3,7,8-TCDD	99		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-2,3,7,8-TCDF	96		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-OCDD	103		40 - 135	10/13/25 20:49	10/15/25 11:36	1
13C-OCDF	107		40 - 135	10/13/25 20:49	10/15/25 11:36	1

Lab Sample ID: LCS 410-713366/2-A

Matrix: Water

Analysis Batch: 713576

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 713366

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,4,6,7,8-HpCDD	1000	981		pg/L		98	71 - 120
1,2,3,4,6,7,8-HpCDF	1000	954		pg/L		95	73 - 120
1,2,3,4,7,8-HxCDD	1000	999		pg/L		100	76 - 120
1,2,3,4,7,8-HxCDF	1000	959		pg/L		96	76 - 120
1,2,3,4,7,8,9-HpCDF	1000	971		pg/L		97	71 - 120
1,2,3,6,7,8-HxCDD	1000	967		pg/L		97	77 - 120
1,2,3,6,7,8-HxCDF	1000	948		pg/L		95	76 - 120

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-713366/2-A

Matrix: Water

Analysis Batch: 713576

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 713366

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,7,8-PeCDD	1000	976		pg/L		98	80 - 126
1,2,3,7,8-PeCDF	1000	944		pg/L		94	76 - 123
1,2,3,7,8,9-HxCDD	1000	1010		pg/L		101	76 - 123
1,2,3,7,8,9-HxCDF	1000	977		pg/L		98	76 - 120
2,3,4,6,7,8-HxCDF	1000	976		pg/L		98	75 - 120
2,3,4,7,8-PeCDF	1000	907		pg/L		91	75 - 121
2,3,7,8-TCDD	200	200		pg/L		100	71 - 120
2,3,7,8-TCDF	200	186		pg/L		93	68 - 128
OCDD	2000	1930		pg/L		97	71 - 120
OCDF	2000	1930		pg/L		97	71 - 120

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,4,6,7,8-HpCDD	98		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	95		40 - 135
13C-1,2,3,4,7,8-HxCDD	97		40 - 135
13C-1,2,3,4,7,8-HxCDF	103		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	102		40 - 135
13C-1,2,3,6,7,8-HxCDD	96		40 - 135
13C-1,2,3,6,7,8-HxCDF	94		40 - 135
13C-1,2,3,7,8-PeCDD	85		40 - 135
13C-1,2,3,7,8-PeCDF	86		40 - 135
13C-1,2,3,7,8,9-HxCDD	98		40 - 135
13C-1,2,3,7,8,9-HxCDF	99		40 - 135
13C-2,3,4,6,7,8-HxCDF	98		40 - 135
13C-2,3,4,7,8-PeCDF	89		40 - 135
13C-2,3,7,8-TCDD	89		40 - 135
13C-2,3,7,8-TCDF	87		40 - 135
13C-OCDD	91		40 - 135
13C-OCDF	96		40 - 135

Lab Sample ID: LCSD 410-713366/3-A

Matrix: Water

Analysis Batch: 713576

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 713366

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	1000	1030		pg/L		103	71 - 120	4	25
1,2,3,4,6,7,8-HpCDF	1000	965		pg/L		96	73 - 120	1	25
1,2,3,4,7,8-HxCDD	1000	990		pg/L		99	76 - 120	1	25
1,2,3,4,7,8-HxCDF	1000	941		pg/L		94	76 - 120	2	25
1,2,3,4,7,8,9-HpCDF	1000	967		pg/L		97	71 - 120	0	25
1,2,3,6,7,8-HxCDD	1000	968		pg/L		97	77 - 120	0	25
1,2,3,6,7,8-HxCDF	1000	961		pg/L		96	76 - 120	1	25
1,2,3,7,8-PeCDD	1000	973		pg/L		97	80 - 126	0	25
1,2,3,7,8-PeCDF	1000	951		pg/L		95	76 - 123	1	25
1,2,3,7,8,9-HxCDD	1000	993		pg/L		99	76 - 123	2	25
1,2,3,7,8,9-HxCDF	1000	981		pg/L		98	76 - 120	0	25
2,3,4,6,7,8-HxCDF	1000	987		pg/L		99	75 - 120	1	25
2,3,4,7,8-PeCDF	1000	959		pg/L		96	75 - 121	6	25
2,3,7,8-TCDD	200	198		pg/L		99	71 - 120	1	25

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 410-713366/3-A

Matrix: Water

Analysis Batch: 713576

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 713366

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDF	200	178		pg/L		89	68 - 128	4	25
OCDD	2000	1940		pg/L		97	71 - 120	0	25
OCDF	2000	1920		pg/L		96	71 - 120	1	25
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
13C-1,2,3,4,6,7,8-HpCDD	92		40 - 135						
13C-1,2,3,4,6,7,8-HpCDF	91		40 - 135						
13C-1,2,3,4,7,8-HxCDD	90		40 - 135						
13C-1,2,3,4,7,8-HxCDF	98		40 - 135						
13C-1,2,3,4,7,8,9-HpCDF	99		40 - 135						
13C-1,2,3,6,7,8-HxCDD	90		40 - 135						
13C-1,2,3,6,7,8-HxCDF	89		40 - 135						
13C-1,2,3,7,8-PeCDD	82		40 - 135						
13C-1,2,3,7,8-PeCDF	81		40 - 135						
13C-1,2,3,7,8,9-HxCDD	93		40 - 135						
13C-1,2,3,7,8,9-HxCDF	95		40 - 135						
13C-2,3,4,6,7,8-HxCDF	91		40 - 135						
13C-2,3,4,7,8-PeCDF	85		40 - 135						
13C-2,3,7,8-TCDD	85		40 - 135						
13C-2,3,7,8-TCDF	84		40 - 135						
13C-OCDD	89		40 - 135						
13C-OCDF	95		40 - 135						

Lab Sample ID: MB 410-739401/1-A

Matrix: Water

Analysis Batch: 742203

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 739401

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3,4,6,7,8-HpCDD	ND		25	12	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,4,6,7,8-HpCDF	ND		25	4.4	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,4,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,4,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,4,7,8,9-HpCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,6,7,8-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,7,8-PeCDD	ND		25	3.2	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,7,8-PeCDF	ND		25	2.8	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,7,8,9-HxCDD	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 06:29	1
1,2,3,7,8,9-HxCDF	ND		25	3.5	pg/L		12/04/25 21:26	12/11/25 06:29	1
2,3,4,6,7,8-HxCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 06:29	1
2,3,4,7,8-PeCDF	ND		25	2.5	pg/L		12/04/25 21:26	12/11/25 06:29	1
2,3,7,8-TCDD	ND		5.0	0.87	pg/L		12/04/25 21:26	12/11/25 06:29	1
2,3,7,8-TCDF	ND		5.0	2.3	pg/L		12/04/25 21:26	12/11/25 06:29	1
OCDD	ND		110	75	pg/L		12/04/25 21:26	12/11/25 06:29	1
OCDF	ND		50	10	pg/L		12/04/25 21:26	12/11/25 06:29	1
	MB	MB							
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	85		40 - 135				12/04/25 21:26	12/11/25 06:29	1
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135				12/04/25 21:26	12/11/25 06:29	1

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 410-739401/1-A

Matrix: Water

Analysis Batch: 742203

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 739401

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDD	76		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-1,2,3,4,7,8-HxCDF	83		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-1,2,3,4,7,8,9-HpCDF	77		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-1,2,3,6,7,8-HxCDF	75		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-1,2,3,7,8-PeCDD	73		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-1,2,3,7,8-PeCDF	76		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-1,2,3,7,8,9-HxCDD	80		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-1,2,3,7,8,9-HxCDF	69		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-2,3,4,6,7,8-HxCDF	71		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-2,3,4,7,8-PeCDF	79		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-2,3,7,8-TCDD	78		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-2,3,7,8-TCDF	73		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-OCDD	87		40 - 135	12/04/25 21:26	12/11/25 06:29	1
13C-OCDF	84		40 - 135	12/04/25 21:26	12/11/25 06:29	1

Lab Sample ID: LCS 410-739401/2-A

Matrix: Water

Analysis Batch: 742203

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 739401

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,4,6,7,8-HpCDD	1000	909		pg/L		91	71 - 120
1,2,3,4,6,7,8-HpCDF	1000	940		pg/L		94	73 - 120
1,2,3,4,7,8-HxCDD	1000	899		pg/L		90	76 - 120
1,2,3,4,7,8-HxCDF	1000	933		pg/L		93	76 - 120
1,2,3,4,7,8,9-HpCDF	1000	936		pg/L		94	71 - 120
1,2,3,6,7,8-HxCDD	1000	921		pg/L		92	77 - 120
1,2,3,6,7,8-HxCDF	1000	931		pg/L		93	76 - 120
1,2,3,7,8-PeCDD	1000	990		pg/L		99	80 - 126
1,2,3,7,8-PeCDF	1000	981		pg/L		98	76 - 123
1,2,3,7,8,9-HxCDD	1000	920		pg/L		92	76 - 123
1,2,3,7,8,9-HxCDF	1000	952		pg/L		95	76 - 120
2,3,4,6,7,8-HxCDF	1000	963		pg/L		96	75 - 120
2,3,4,7,8-PeCDF	1000	959		pg/L		96	75 - 121
2,3,7,8-TCDD	200	184		pg/L		92	71 - 120
2,3,7,8-TCDF	200	179		pg/L		90	68 - 128
OCDD	2000	1880		pg/L		94	71 - 120
OCDF	2000	1810		pg/L		90	71 - 120

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,4,6,7,8-HpCDD	97		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135
13C-1,2,3,4,7,8-HxCDD	96		40 - 135
13C-1,2,3,4,7,8-HxCDF	94		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	93		40 - 135
13C-1,2,3,6,7,8-HxCDD	94		40 - 135
13C-1,2,3,6,7,8-HxCDF	92		40 - 135
13C-1,2,3,7,8-PeCDD	85		40 - 135
13C-1,2,3,7,8-PeCDF	88		40 - 135

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-739401/2-A

Matrix: Water

Analysis Batch: 742203

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 739401

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,7,8,9-HxCDD	96		40 - 135
13C-1,2,3,7,8,9-HxCDF	88		40 - 135
13C-2,3,4,6,7,8-HxCDF	92		40 - 135
13C-2,3,4,7,8-PeCDF	93		40 - 135
13C-2,3,7,8-TCDD	86		40 - 135
13C-2,3,7,8-TCDF	81		40 - 135
13C-OCDD	101		40 - 135
13C-OCDF	105		40 - 135

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-706337/1-A

Matrix: Water

Analysis Batch: 711173

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/06/25 06:45	10/08/25 16:22	1
Copper	ND		1.0	0.85	ug/L		10/06/25 06:45	10/08/25 16:22	1

Lab Sample ID: LCS 410-706337/2-A

Matrix: Water

Analysis Batch: 711173

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	485		ug/L		97	86 - 111
Copper	500	494		ug/L		99	86 - 111

Lab Sample ID: 180-195596-46 MS

Matrix: Water

Analysis Batch: 711173

Client Sample ID: BLANK T01

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		500	496		ug/L		99	75 - 125
Copper	ND		500	493		ug/L		99	75 - 125

Lab Sample ID: 180-195596-46 MSD

Matrix: Water

Analysis Batch: 711173

Client Sample ID: BLANK T01

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		500	476		ug/L		95	75 - 125	4	20
Copper	ND		500	477		ug/L		95	75 - 125	3	20

Lab Sample ID: 180-195596-10 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: S2-10PC T01

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	1.2	J	1.16	J	ug/L		5	20
Copper	2.4		2.45		ug/L		1	20

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-195596-46 DU

Matrix: Water

Analysis Batch: 711173

Client Sample ID: BLANK T01

Prep Type: Total Recoverable

Prep Batch: 706337

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	ND		ND		ug/L		NC	20
Copper	ND		ND		ug/L		NC	20

Lab Sample ID: MB 410-706341/1-A

Matrix: Water

Analysis Batch: 708461

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 706341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/02/25 06:06	10/02/25 15:40	1
Copper	ND		1.0	0.85	ug/L		10/02/25 06:06	10/02/25 15:40	1

Lab Sample ID: LCS 410-706341/2-A

Matrix: Water

Analysis Batch: 708461

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 706341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	470		ug/L		94	86 - 111
Copper	500	497		ug/L		99	86 - 111

Lab Sample ID: 180-195596-12 DU

Matrix: Water

Analysis Batch: 708461

Client Sample ID: S2-10PC T03

Prep Type: Total Recoverable

Prep Batch: 706341

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	2.3		2.22		ug/L		6	20
Copper	3.1		3.09		ug/L		0.8	20

Lab Sample ID: 180-195596-28 DU

Matrix: Water

Analysis Batch: 708461

Client Sample ID: S2-3PC-7BFS T01

Prep Type: Total Recoverable

Prep Batch: 706341

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	2.3		2.10		ug/L		10	20
Copper	1.1		1.03		ug/L		7	20

Lab Sample ID: 180-195596-30 DU

Matrix: Water

Analysis Batch: 708461

Client Sample ID: S2-3PC-7BFS T03

Prep Type: Total Recoverable

Prep Batch: 706341

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	6.5		6.67		ug/L		2	20
Copper	1.5		1.53		ug/L		4	20

Lab Sample ID: MB 410-707074/1-A

Matrix: Water

Analysis Batch: 707557

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 707074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		09/30/25 22:00	10/01/25 10:32	1
Copper	ND		1.0	0.85	ug/L		09/30/25 22:00	10/01/25 10:32	1

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCS 410-707074/2-A

Matrix: Water

Analysis Batch: 707557

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 707074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	471		ug/L		94	86 - 111
Copper	500	475		ug/L		95	86 - 111

Lab Sample ID: 180-195596-11 DU

Matrix: Water

Analysis Batch: 707557

Client Sample ID: S2-10PC T02

Prep Type: Total Recoverable

Prep Batch: 707074

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	1.9	J	2.23		ug/L		15	20
Copper	5.3		4.93		ug/L		7	20

Lab Sample ID: 180-195596-29 DU

Matrix: Water

Analysis Batch: 707557

Client Sample ID: S2-3PC-7BFS T02

Prep Type: Total Recoverable

Prep Batch: 707074

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	8.2		8.83		ug/L		7	20
Copper	2.3		2.23		ug/L		1	20

Lab Sample ID: MB 410-712510/1-A

Matrix: Water

Analysis Batch: 713404

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 712510

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/13/25 06:52	10/13/25 18:39	1
Copper	ND		1.0	0.85	ug/L		10/13/25 06:52	10/13/25 18:39	1

Lab Sample ID: LCS 410-712510/2-A

Matrix: Water

Analysis Batch: 713404

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 712510

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	481		ug/L		96	86 - 111
Copper	500	482		ug/L		96	86 - 111

Lab Sample ID: 180-195596-13 MS

Matrix: Water

Analysis Batch: 713404

Client Sample ID: S2-10PC T04

Prep Type: Total Recoverable

Prep Batch: 712510

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	5.7		500	486		ug/L		96	75 - 125
Copper	8.5		500	480		ug/L		94	75 - 125

Lab Sample ID: 180-195596-13 MSD

Matrix: Water

Analysis Batch: 713404

Client Sample ID: S2-10PC T04

Prep Type: Total Recoverable

Prep Batch: 712510

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	5.7		500	478		ug/L		95	75 - 125	2	20
Copper	8.5		500	470		ug/L		92	75 - 125	2	20

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: 180-195596-13 DU

Matrix: Water

Analysis Batch: 713404

Client Sample ID: S2-10PC T04

Prep Type: Total Recoverable

Prep Batch: 712510

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	5.7		5.80		ug/L		3	20
Copper	8.5		8.30		ug/L		3	20

Lab Sample ID: 180-195596-31 DU

Matrix: Water

Analysis Batch: 713404

Client Sample ID: S2-3PC-7BFS T04

Prep Type: Total Recoverable

Prep Batch: 712510

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	13		12.8		ug/L		3	20
Copper	3.7		3.64		ug/L		0.8	20

Lab Sample ID: MB 410-712518/1-A

Matrix: Water

Analysis Batch: 718449

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 712518

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/21/25 22:00	10/22/25 16:00	1
Copper	ND		1.0	0.85	ug/L		10/21/25 22:00	10/22/25 16:00	1

Lab Sample ID: LCS 410-712518/2-A

Matrix: Water

Analysis Batch: 718449

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 712518

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	505		ug/L		101	86 - 111
Copper	500	511		ug/L		102	86 - 111

Lab Sample ID: 180-195596-14 DU

Matrix: Water

Analysis Batch: 718449

Client Sample ID: S2-10PC T05

Prep Type: Total Recoverable

Prep Batch: 712518

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	5.8		6.16		ug/L		5	20
Copper	8.1		8.14		ug/L		0	20

Lab Sample ID: 180-195596-32 DU

Matrix: Water

Analysis Batch: 718449

Client Sample ID: S2-3PC-7BFS T05

Prep Type: Total Recoverable

Prep Batch: 712518

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	11		10.8		ug/L		2	20
Copper	3.7		3.40		ug/L		8	20

Lab Sample ID: MB 410-719868/1-A

Matrix: Water

Analysis Batch: 720552

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 719868

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		10/26/25 21:00	10/27/25 16:35	1
Copper	ND		1.0	0.85	ug/L		10/26/25 21:00	10/27/25 16:35	1

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCS 410-719868/2-A

Matrix: Water

Analysis Batch: 720552

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 719868

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	498		ug/L		100	86 - 111
Copper	500	514		ug/L		103	86 - 111

Lab Sample ID: 180-195596-15 DU

Matrix: Water

Analysis Batch: 720552

Client Sample ID: S2-10PC T06

Prep Type: Total Recoverable

Prep Batch: 719868

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	7.7		7.57		ug/L		2	20
Copper	12		13.5		ug/L		9	20

Lab Sample ID: 180-195596-33 DU

Matrix: Water

Analysis Batch: 720552

Client Sample ID: S2-3PC-7BFS T06

Prep Type: Total Recoverable

Prep Batch: 719868

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	14		13.1		ug/L		5	20
Copper	6.1		5.47		ug/L		10	20

Lab Sample ID: MB 410-726014/1-A

Matrix: Water

Analysis Batch: 727667

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 726014

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/10/25 06:42	11/10/25 20:34	1
Copper	ND		1.0	0.85	ug/L		11/10/25 06:42	11/10/25 20:34	1

Lab Sample ID: LCS 410-726014/2-A

Matrix: Water

Analysis Batch: 727667

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 726014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	498		ug/L		100	86 - 111
Copper	500	503		ug/L		101	86 - 111

Lab Sample ID: 180-195596-16 DU

Matrix: Water

Analysis Batch: 727683

Client Sample ID: S2-10PC T07

Prep Type: Total Recoverable

Prep Batch: 726014

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	7.5		7.30		ug/L		3	20
Copper	8.3		8.26		ug/L		0.4	20

Lab Sample ID: 180-195596-34 DU

Matrix: Water

Analysis Batch: 727667

Client Sample ID: S2-3PC-7BFS T07

Prep Type: Total Recoverable

Prep Batch: 726014

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	10		10.8		ug/L		3	20
Copper	4.3		4.36		ug/L		0.4	20

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-728523/1-A
Matrix: Water
Analysis Batch: 729473

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 728523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/12/25 11:30	11/13/25 14:05	1
Copper	ND		1.0	0.85	ug/L		11/12/25 11:30	11/13/25 14:05	1

Lab Sample ID: LCS 410-728523/2-A
Matrix: Water
Analysis Batch: 729473

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 728523

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	497		ug/L		99	86 - 111
Copper	500	499		ug/L		100	86 - 111

Lab Sample ID: 180-195596-17 DU
Matrix: Water
Analysis Batch: 729473

Client Sample ID: S2-10PC T08
Prep Type: Total Recoverable
Prep Batch: 728523

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	5.4		5.56		ug/L		3	20
Copper	4.0		4.11		ug/L		2	20

Lab Sample ID: 180-195596-35 DU
Matrix: Water
Analysis Batch: 729473

Client Sample ID: S2-3PC-7BFS T08
Prep Type: Total Recoverable
Prep Batch: 728523

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	6.0		6.14		ug/L		2	20
Copper	2.1		3.25	F3	ug/L		42	20

Lab Sample ID: MB 410-729282/1-A
Matrix: Water
Analysis Batch: 730303

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 729282

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/13/25 11:51	11/14/25 20:42	1
Copper	ND		1.0	0.85	ug/L		11/13/25 11:51	11/14/25 20:42	1

Lab Sample ID: LCS 410-729282/2-A
Matrix: Water
Analysis Batch: 730303

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 729282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	509		ug/L		102	86 - 111
Copper	500	518		ug/L		104	86 - 111

Lab Sample ID: MB 410-735790/1-A
Matrix: Water
Analysis Batch: 737143

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 735790

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/30/25 20:30	12/01/25 11:29	1
Copper	ND		1.0	0.85	ug/L		11/30/25 20:30	12/01/25 11:29	1

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LCS 410-735790/2-A
Matrix: Water
Analysis Batch: 737143

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 735790

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	509		ug/L		102	86 - 111
Copper	500	508		ug/L		102	86 - 111

Lab Sample ID: 180-195596-18 DU
Matrix: Water
Analysis Batch: 737143

Client Sample ID: S2-10PC T09
Prep Type: Total Recoverable
Prep Batch: 735790

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	7.7		7.58		ug/L		2	20
Copper	6.2		6.41		ug/L		3	20

Lab Sample ID: 180-195596-36 DU
Matrix: Water
Analysis Batch: 737143

Client Sample ID: S2-3PC-7BFS T09
Prep Type: Total Recoverable
Prep Batch: 735790

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	10		10.6		ug/L		1	20
Copper	3.3		3.42		ug/L		4	20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-503088/24
Matrix: Solid
Analysis Batch: 503088

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-503160/24
Matrix: Solid
Analysis Batch: 503160

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.1		SU		101	99 - 101

Lab Sample ID: LCS 180-503244/24
Matrix: Solid
Analysis Batch: 503244

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-503466/1
Matrix: Solid
Analysis Batch: 503466

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 9040C - pH (Continued)

Lab Sample ID: LCS 180-503466/24

Matrix: Solid

Analysis Batch: 503466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		101	99 - 101

Lab Sample ID: LCS 180-503939/47

Matrix: Solid

Analysis Batch: 503939

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-504622/47

Matrix: Solid

Analysis Batch: 504622

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-505616/1

Matrix: Solid

Analysis Batch: 505616

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-505848/1

Matrix: Solid

Analysis Batch: 505848

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		99	99 - 101

Lab Sample ID: LCS 180-506723/47

Matrix: Solid

Analysis Batch: 506723

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		101	99 - 101

Lab Sample ID: 180-195596-38 DU

Matrix: Solid

Analysis Batch: 503160

Client Sample ID: BLANK T02

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	5.9	H H3	5.9		SU		0	2

Lab Sample ID: 180-195596-3 DU

Matrix: Solid

Analysis Batch: 503244

Client Sample ID: S2-10PC T03

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	11.0	H H3	11.0		SU		0.4	2

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: EPA 9040C - pH

Lab Sample ID: LB 180-503678/1-A
Matrix: Solid
Analysis Batch: 503939

Client Sample ID: Method Blank
Prep Type: Leach

Analyte	LB Result	LB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	4.5		0.1	0.1	SU			10/02/25 13:50	1

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

Lab Sample ID: LCS 180-503154/1
Matrix: Solid
Analysis Batch: 503154

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	474		millivolts		100	98 - 102

Lab Sample ID: LCS 180-503426/1
Matrix: Solid
Analysis Batch: 503426

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	479		millivolts		101	98 - 102

Lab Sample ID: LCS 180-503506/1
Matrix: Solid
Analysis Batch: 503506

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	477		millivolts		100	98 - 102

Lab Sample ID: LCS 180-503863/1
Matrix: Solid
Analysis Batch: 503863

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	479		millivolts		101	98 - 102

Lab Sample ID: LCS 180-504699/1
Matrix: Solid
Analysis Batch: 504699

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	466		millivolts		98	98 - 102

Lab Sample ID: LCS 180-505434/1
Matrix: Solid
Analysis Batch: 505434

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	465		millivolts		98	98 - 102

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QC Sample Results

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential (Continued)

Lab Sample ID: LCS 180-505842/1

Matrix: Solid

Analysis Batch: 505842

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	467		millivolts		98	98 - 102

Lab Sample ID: LCS 180-506656/1

Matrix: Solid

Analysis Batch: 506656

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oxidation Reduction Potential	475	465		millivolts		98	98 - 102

Lab Sample ID: 180-195596-9 DU

Matrix: Solid

Analysis Batch: 506656

Client Sample ID: S2-10PC T09

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	120		123		millivolts		6	20

QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

GC/MS Semi VOA

Leach Batch: 502925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-1	S2-10PC T01	Leach	Solid	1315	
180-195596-19	S2-3PC-7BFS T01	Leach	Solid	1315	
180-195596-37	BLANK T01	Leach	Solid	1315	
180-195596-1 DU	S2-10PC T01	Leach	Solid	1315	
180-195596-19 DU	S2-3PC-7BFS T01	Leach	Solid	1315	

Leach Batch: 503070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-2	S2-10PC T02	Leach	Solid	1315	
180-195596-20	S2-3PC-7BFS T02	Leach	Solid	1315	
180-195596-38	BLANK T02	Leach	Solid	1315	
180-195596-2 DU	S2-10PC T02	Leach	Solid	1315	
180-195596-20 DU	S2-3PC-7BFS T02	Leach	Solid	1315	

Leach Batch: 503071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-3	S2-10PC T03	Leach	Solid	1315	
180-195596-21	S2-3PC-7BFS T03	Leach	Solid	1315	
180-195596-39	BLANK T03	Leach	Solid	1315	
180-195596-3 DU	S2-10PC T03	Leach	Solid	1315	
180-195596-21 DU	S2-3PC-7BFS T03	Leach	Solid	1315	

Leach Batch: 503072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-4	S2-10PC T04	Leach	Solid	1315	
180-195596-22	S2-3PC-7BFS T04	Leach	Solid	1315	
180-195596-40	BLANK T04	Leach	Solid	1315	
180-195596-4 DU	S2-10PC T04	Leach	Solid	1315	
180-195596-22 DU	S2-3PC-7BFS T04	Leach	Solid	1315	

Leach Batch: 503073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-5	S2-10PC T05	Leach	Solid	1315	
180-195596-23	S2-3PC-7BFS T05	Leach	Solid	1315	
180-195596-41	BLANK T05	Leach	Solid	1315	
180-195596-5 DU	S2-10PC T05	Leach	Solid	1315	
180-195596-23 DU	S2-3PC-7BFS T05	Leach	Solid	1315	

Leach Batch: 503074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-6	S2-10PC T06	Leach	Solid	1315	
180-195596-24	S2-3PC-7BFS T06	Leach	Solid	1315	
180-195596-42	BLANK T06	Leach	Solid	1315	
180-195596-6 DU	S2-10PC T06	Leach	Solid	1315	
180-195596-24 DU	S2-3PC-7BFS T06	Leach	Solid	1315	

Leach Batch: 503075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-7	S2-10PC T07	Leach	Solid	1315	
180-195596-25	S2-3PC-7BFS T07	Leach	Solid	1315	
180-195596-43	BLANK T07	Leach	Solid	1315	

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

GC/MS Semi VOA (Continued)

Leach Batch: 503075 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-7 DU	S2-10PC T07	Leach	Solid	1315	
180-195596-25 DU	S2-3PC-7BFS T07	Leach	Solid	1315	

Leach Batch: 503076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-8	S2-10PC T08	Leach	Solid	1315	
180-195596-26	S2-3PC-7BFS T08	Leach	Solid	1315	
180-195596-44	BLANK T08	Leach	Solid	1315	
180-195596-8 DU	S2-10PC T08	Leach	Solid	1315	
180-195596-26 DU	S2-3PC-7BFS T08	Leach	Solid	1315	

Leach Batch: 503077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-9	S2-10PC T09	Leach	Solid	1315	
180-195596-27	S2-3PC-7BFS T09	Leach	Solid	1315	
180-195596-45	BLANK T09	Leach	Solid	1315	
180-195596-9 DU	S2-10PC T09	Leach	Solid	1315	
180-195596-27 DU	S2-3PC-7BFS T09	Leach	Solid	1315	

Prep Batch: 503414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-1	S2-10PC T01	Leach	Solid	3520C	502925
180-195596-19	S2-3PC-7BFS T01	Leach	Solid	3520C	502925
180-195596-37	BLANK T01	Leach	Solid	3520C	502925
MB 180-503414/1-A	Method Blank	Total/NA	Solid	3520C	
LCS 180-503414/2-A	Lab Control Sample	Total/NA	Solid	3520C	
LCSD 180-503414/3-A	Lab Control Sample Dup	Total/NA	Solid	3520C	
180-195596-1 DU	S2-10PC T01	Leach	Solid	3520C	502925
180-195596-19 DU	S2-3PC-7BFS T01	Leach	Solid	3520C	502925

Prep Batch: 503476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-2	S2-10PC T02	Leach	Solid	3520C	503070
180-195596-20	S2-3PC-7BFS T02	Leach	Solid	3520C	503070
180-195596-38	BLANK T02	Leach	Solid	3520C	503070
MB 180-503476/1-A	Method Blank	Total/NA	Solid	3520C	
LCS 180-503476/2-A	Lab Control Sample	Total/NA	Solid	3520C	
180-195596-2 DU	S2-10PC T02	Leach	Solid	3520C	503070
180-195596-20 DU	S2-3PC-7BFS T02	Leach	Solid	3520C	503070

Analysis Batch: 503539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-1	S2-10PC T01	Leach	Solid	EPA 8270E LL	503414
180-195596-19	S2-3PC-7BFS T01	Leach	Solid	EPA 8270E LL	503414
180-195596-37	BLANK T01	Leach	Solid	EPA 8270E LL	503414
MB 180-503414/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	503414
LCS 180-503414/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	503414
LCSD 180-503414/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 8270E LL	503414
180-195596-1 DU	S2-10PC T01	Leach	Solid	EPA 8270E LL	503414
180-195596-19 DU	S2-3PC-7BFS T01	Leach	Solid	EPA 8270E LL	503414

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

GC/MS Semi VOA

Prep Batch: 503545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-3	S2-10PC T03	Leach	Solid	3520C	503071
180-195596-21	S2-3PC-7BFS T03	Leach	Solid	3520C	503071
180-195596-39	BLANK T03	Leach	Solid	3520C	503071
MB 180-503545/1-A	Method Blank	Total/NA	Solid	3520C	
LCS 180-503545/2-A	Lab Control Sample	Total/NA	Solid	3520C	
180-195596-3 DU	S2-10PC T03	Leach	Solid	3520C	503071
180-195596-21 DU	S2-3PC-7BFS T03	Leach	Solid	3520C	503071

Leach Batch: 503678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 180-503678/1-E	Method Blank	Leach	Solid	EPA 1312	

Analysis Batch: 503757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-3	S2-10PC T03	Leach	Solid	EPA 8270E LL	503545
180-195596-21	S2-3PC-7BFS T03	Leach	Solid	EPA 8270E LL	503545
180-195596-39	BLANK T03	Leach	Solid	EPA 8270E LL	503545
MB 180-503545/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	503545
LCS 180-503545/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	503545
180-195596-3 DU	S2-10PC T03	Leach	Solid	EPA 8270E LL	503545
180-195596-21 DU	S2-3PC-7BFS T03	Leach	Solid	EPA 8270E LL	503545

Analysis Batch: 503759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-2	S2-10PC T02	Leach	Solid	EPA 8270E LL	503476
180-195596-20	S2-3PC-7BFS T02	Leach	Solid	EPA 8270E LL	503476
180-195596-38	BLANK T02	Leach	Solid	EPA 8270E LL	503476
MB 180-503476/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	503476
LCS 180-503476/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	503476
180-195596-2 DU	S2-10PC T02	Leach	Solid	EPA 8270E LL	503476
180-195596-20 DU	S2-3PC-7BFS T02	Leach	Solid	EPA 8270E LL	503476

Prep Batch: 503874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-4	S2-10PC T04	Leach	Solid	3520C	503072
180-195596-22	S2-3PC-7BFS T04	Leach	Solid	3520C	503072
180-195596-40	BLANK T04	Leach	Solid	3520C	503072
MB 180-503874/1-A	Method Blank	Total/NA	Solid	3520C	
LCS 180-503874/2-A	Lab Control Sample	Total/NA	Solid	3520C	
180-195596-4 DU	S2-10PC T04	Leach	Solid	3520C	503072
180-195596-22 DU	S2-3PC-7BFS T04	Leach	Solid	3520C	503072

Analysis Batch: 504078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-503874/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	503874
LCS 180-503874/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	503874

Analysis Batch: 504141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-4	S2-10PC T04	Leach	Solid	EPA 8270E LL	503874
180-195596-22	S2-3PC-7BFS T04	Leach	Solid	EPA 8270E LL	503874

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

GC/MS Semi VOA (Continued)

Analysis Batch: 504141 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-40	BLANK T04	Leach	Solid	EPA 8270E LL	503874
180-195596-4 DU	S2-10PC T04	Leach	Solid	EPA 8270E LL	503874
180-195596-22 DU	S2-3PC-7BFS T04	Leach	Solid	EPA 8270E LL	503874

Prep Batch: 504169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-5	S2-10PC T05	Leach	Solid	3520C	503073
180-195596-23	S2-3PC-7BFS T05	Leach	Solid	3520C	503073
180-195596-41	BLANK T05	Leach	Solid	3520C	503073
LB 180-503678/1-E	Method Blank	Leach	Solid	3520C	503678
MB 180-504169/1-A	Method Blank	Total/NA	Solid	3520C	
LCS 180-504169/2-A	Lab Control Sample	Total/NA	Solid	3520C	
180-195596-5 DU	S2-10PC T05	Leach	Solid	3520C	503073
180-195596-23 DU	S2-3PC-7BFS T05	Leach	Solid	3520C	503073

Analysis Batch: 504355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-5	S2-10PC T05	Leach	Solid	EPA 8270E LL	504169

Analysis Batch: 504426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-23	S2-3PC-7BFS T05	Leach	Solid	EPA 8270E LL	504169
180-195596-41	BLANK T05	Leach	Solid	EPA 8270E LL	504169
LB 180-503678/1-E	Method Blank	Leach	Solid	EPA 8270E LL	504169
MB 180-504169/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	504169
LCS 180-504169/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	504169
180-195596-5 DU	S2-10PC T05	Leach	Solid	EPA 8270E LL	504169
180-195596-23 DU	S2-3PC-7BFS T05	Leach	Solid	EPA 8270E LL	504169

Prep Batch: 504959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-6	S2-10PC T06	Leach	Solid	3520C	503074
180-195596-24	S2-3PC-7BFS T06	Leach	Solid	3520C	503074
180-195596-42	BLANK T06	Leach	Solid	3520C	503074
MB 180-504959/1-A	Method Blank	Total/NA	Solid	3520C	
LCS 180-504959/2-A	Lab Control Sample	Total/NA	Solid	3520C	
180-195596-6 DU	S2-10PC T06	Leach	Solid	3520C	503074
180-195596-24 DU	S2-3PC-7BFS T06	Leach	Solid	3520C	503074

Analysis Batch: 505101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-6	S2-10PC T06	Leach	Solid	EPA 8270E LL	504959
180-195596-42	BLANK T06	Leach	Solid	EPA 8270E LL	504959
MB 180-504959/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	504959
LCS 180-504959/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	504959
180-195596-6 DU	S2-10PC T06	Leach	Solid	EPA 8270E LL	504959

Analysis Batch: 505174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-24	S2-3PC-7BFS T06	Leach	Solid	EPA 8270E LL	504959
180-195596-24 DU	S2-3PC-7BFS T06	Leach	Solid	EPA 8270E LL	504959

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

GC/MS Semi VOA

Prep Batch: 505614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-7	S2-10PC T07	Leach	Solid	3520C	503075
180-195596-25	S2-3PC-7BFS T07	Leach	Solid	3520C	503075
180-195596-43	BLANK T07	Leach	Solid	3520C	503075
MB 180-505614/1-A	Method Blank	Total/NA	Solid	3520C	
LCS 180-505614/2-A	Lab Control Sample	Total/NA	Solid	3520C	
LCSD 180-505614/3-A	Lab Control Sample Dup	Total/NA	Solid	3520C	
180-195596-7 DU	S2-10PC T07	Leach	Solid	3520C	503075
180-195596-25 DU	S2-3PC-7BFS T07	Leach	Solid	3520C	503075

Analysis Batch: 505749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-7	S2-10PC T07	Leach	Solid	EPA 8270E LL	505614
180-195596-25	S2-3PC-7BFS T07	Leach	Solid	EPA 8270E LL	505614
MB 180-505614/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	505614
LCS 180-505614/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	505614
LCSD 180-505614/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 8270E LL	505614
180-195596-7 DU	S2-10PC T07	Leach	Solid	EPA 8270E LL	505614
180-195596-25 DU	S2-3PC-7BFS T07	Leach	Solid	EPA 8270E LL	505614

Analysis Batch: 505827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-43	BLANK T07	Leach	Solid	EPA 8270E LL	505614

Prep Batch: 506196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-8	S2-10PC T08	Leach	Solid	3520C	503076
180-195596-26	S2-3PC-7BFS T08	Leach	Solid	3520C	503076
180-195596-44	BLANK T08	Leach	Solid	3520C	503076
MB 180-506196/1-A	Method Blank	Total/NA	Solid	3520C	
LCS 180-506196/2-A	Lab Control Sample	Total/NA	Solid	3520C	
LCSD 180-506196/3-A	Lab Control Sample Dup	Total/NA	Solid	3520C	
180-195596-8 DU	S2-10PC T08	Leach	Solid	3520C	503076
180-195596-26 DU	S2-3PC-7BFS T08	Leach	Solid	3520C	503076

Analysis Batch: 506320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-8	S2-10PC T08	Leach	Solid	EPA 8270E LL	506196
180-195596-26	S2-3PC-7BFS T08	Leach	Solid	EPA 8270E LL	506196
180-195596-44	BLANK T08	Leach	Solid	EPA 8270E LL	506196
MB 180-506196/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	506196
LCS 180-506196/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	506196
LCSD 180-506196/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 8270E LL	506196
180-195596-8 DU	S2-10PC T08	Leach	Solid	EPA 8270E LL	506196
180-195596-26 DU	S2-3PC-7BFS T08	Leach	Solid	EPA 8270E LL	506196

Prep Batch: 506806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-9	S2-10PC T09	Leach	Solid	3520C	503077
180-195596-27	S2-3PC-7BFS T09	Leach	Solid	3520C	503077
180-195596-45	BLANK T09	Leach	Solid	3520C	503077
MB 180-506806/1-A	Method Blank	Total/NA	Solid	3520C	

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

GC/MS Semi VOA (Continued)

Prep Batch: 506806 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-506806/2-A	Lab Control Sample	Total/NA	Solid	3520C	
LCSD 180-506806/3-A	Lab Control Sample Dup	Total/NA	Solid	3520C	
180-195596-9 DU	S2-10PC T09	Leach	Solid	3520C	503077
180-195596-27 DU	S2-3PC-7BFS T09	Leach	Solid	3520C	503077

Analysis Batch: 507135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-9	S2-10PC T09	Leach	Solid	EPA 8270E LL	506806
180-195596-27	S2-3PC-7BFS T09	Leach	Solid	EPA 8270E LL	506806
180-195596-45	BLANK T09	Leach	Solid	EPA 8270E LL	506806
MB 180-506806/1-A	Method Blank	Total/NA	Solid	EPA 8270E LL	506806
LCS 180-506806/2-A	Lab Control Sample	Total/NA	Solid	EPA 8270E LL	506806
LCSD 180-506806/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 8270E LL	506806
180-195596-9 DU	S2-10PC T09	Leach	Solid	EPA 8270E LL	506806
180-195596-27 DU	S2-3PC-7BFS T09	Leach	Solid	EPA 8270E LL	506806

Specialty Organics

Prep Batch: 708550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-10	S2-10PC T01	Total/NA	Water	8290A	
180-195596-11	S2-10PC T02	Total/NA	Water	8290A	
180-195596-12	S2-10PC T03	Total/NA	Water	8290A	
180-195596-13	S2-10PC T04	Total/NA	Water	8290A	
180-195596-14	S2-10PC T05	Total/NA	Water	8290A	
180-195596-28	S2-3PC-7BFS T01	Total/NA	Water	8290A	
MB 410-708550/1-A	Method Blank	Total/NA	Water	8290A	
LCS 410-708550/2-A	Lab Control Sample	Total/NA	Water	8290A	

Analysis Batch: 709013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-708550/1-A	Method Blank	Total/NA	Water	8290A	708550
LCS 410-708550/2-A	Lab Control Sample	Total/NA	Water	8290A	708550

Analysis Batch: 709624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-10	S2-10PC T01	Total/NA	Water	8290A	708550
180-195596-11	S2-10PC T02	Total/NA	Water	8290A	708550
180-195596-12	S2-10PC T03	Total/NA	Water	8290A	708550
180-195596-13	S2-10PC T04	Total/NA	Water	8290A	708550

Analysis Batch: 710264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-28	S2-3PC-7BFS T01	Total/NA	Water	8290A	708550

Analysis Batch: 710446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-14	S2-10PC T05	Total/NA	Water	8290A	708550

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Specialty Organics

Prep Batch: 713366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-29	S2-3PC-7BFS T02	Total/NA	Water	8290A	
180-195596-30	S2-3PC-7BFS T03	Total/NA	Water	8290A	
180-195596-31	S2-3PC-7BFS T04	Total/NA	Water	8290A	
180-195596-32	S2-3PC-7BFS T05	Total/NA	Water	8290A	
180-195596-46	BLANK T01	Total/NA	Water	8290A	
180-195596-47	BLANK T02	Total/NA	Water	8290A	
180-195596-48	BLANK T03	Total/NA	Water	8290A	
180-195596-49	BLANK T04	Total/NA	Water	8290A	
180-195596-50	BLANK T05	Total/NA	Water	8290A	
MB 410-713366/1-A	Method Blank	Total/NA	Water	8290A	
LCS 410-713366/2-A	Lab Control Sample	Total/NA	Water	8290A	
LCSD 410-713366/3-A	Lab Control Sample Dup	Total/NA	Water	8290A	

Analysis Batch: 713576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-713366/1-A	Method Blank	Total/NA	Water	8290A	713366
LCS 410-713366/2-A	Lab Control Sample	Total/NA	Water	8290A	713366
LCSD 410-713366/3-A	Lab Control Sample Dup	Total/NA	Water	8290A	713366

Analysis Batch: 716048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-29	S2-3PC-7BFS T02	Total/NA	Water	8290A	713366
180-195596-30	S2-3PC-7BFS T03	Total/NA	Water	8290A	713366
180-195596-31	S2-3PC-7BFS T04	Total/NA	Water	8290A	713366
180-195596-32	S2-3PC-7BFS T05	Total/NA	Water	8290A	713366

Analysis Batch: 716163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-46	BLANK T01	Total/NA	Water	8290A	713366
180-195596-48	BLANK T03	Total/NA	Water	8290A	713366

Analysis Batch: 716230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-47	BLANK T02	Total/NA	Water	8290A	713366
180-195596-49	BLANK T04	Total/NA	Water	8290A	713366
180-195596-50	BLANK T05	Total/NA	Water	8290A	713366

Prep Batch: 739401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-15	S2-10PC T06	Total/NA	Water	8290A	
180-195596-16	S2-10PC T07	Total/NA	Water	8290A	
180-195596-17	S2-10PC T08	Total/NA	Water	8290A	
180-195596-18	S2-10PC T09	Total/NA	Water	8290A	
180-195596-33	S2-3PC-7BFS T06	Total/NA	Water	8290A	
180-195596-34	S2-3PC-7BFS T07	Total/NA	Water	8290A	
180-195596-35	S2-3PC-7BFS T08	Total/NA	Water	8290A	
180-195596-36	S2-3PC-7BFS T09	Total/NA	Water	8290A	
180-195596-51	BLANK T06	Total/NA	Water	8290A	
180-195596-52	BLANK T07	Total/NA	Water	8290A	
180-195596-53	BLANK T08	Total/NA	Water	8290A	
180-195596-54	BLANK T09	Total/NA	Water	8290A	

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Specialty Organics (Continued)

Prep Batch: 739401 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-739401/1-A	Method Blank	Total/NA	Water	8290A	
LCS 410-739401/2-A	Lab Control Sample	Total/NA	Water	8290A	

Analysis Batch: 742203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-15	S2-10PC T06	Total/NA	Water	8290A	739401
180-195596-16	S2-10PC T07	Total/NA	Water	8290A	739401
180-195596-17	S2-10PC T08	Total/NA	Water	8290A	739401
180-195596-18	S2-10PC T09	Total/NA	Water	8290A	739401
180-195596-33	S2-3PC-7BFS T06	Total/NA	Water	8290A	739401
180-195596-34	S2-3PC-7BFS T07	Total/NA	Water	8290A	739401
180-195596-35	S2-3PC-7BFS T08	Total/NA	Water	8290A	739401
MB 410-739401/1-A	Method Blank	Total/NA	Water	8290A	739401
LCS 410-739401/2-A	Lab Control Sample	Total/NA	Water	8290A	739401

Analysis Batch: 742291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-36	S2-3PC-7BFS T09	Total/NA	Water	8290A	739401
180-195596-51	BLANK T06	Total/NA	Water	8290A	739401
180-195596-52	BLANK T07	Total/NA	Water	8290A	739401
180-195596-54	BLANK T09	Total/NA	Water	8290A	739401

Analysis Batch: 743257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-53	BLANK T08	Total/NA	Water	8290A	739401

Metals

Prep Batch: 706337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-10	S2-10PC T01	Total Recoverable	Water	3005A	
180-195596-46	BLANK T01	Total Recoverable	Water	3005A	
MB 410-706337/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-706337/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-195596-46 MS	BLANK T01	Total Recoverable	Water	3005A	
180-195596-46 MSD	BLANK T01	Total Recoverable	Water	3005A	
180-195596-10 DU	S2-10PC T01	Total Recoverable	Water	3005A	
180-195596-46 DU	BLANK T01	Total Recoverable	Water	3005A	

Prep Batch: 706341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-12	S2-10PC T03	Total Recoverable	Water	3005A	
180-195596-28	S2-3PC-7BFS T01	Total Recoverable	Water	3005A	
180-195596-30	S2-3PC-7BFS T03	Total Recoverable	Water	3005A	
180-195596-48	BLANK T03	Total Recoverable	Water	3005A	
MB 410-706341/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-706341/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-195596-12 DU	S2-10PC T03	Total Recoverable	Water	3005A	
180-195596-28 DU	S2-3PC-7BFS T01	Total Recoverable	Water	3005A	
180-195596-30 DU	S2-3PC-7BFS T03	Total Recoverable	Water	3005A	

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Metals

Prep Batch: 707074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-11	S2-10PC T02	Total Recoverable	Water	3005A	
180-195596-29	S2-3PC-7BFS T02	Total Recoverable	Water	3005A	
180-195596-47	BLANK T02	Total Recoverable	Water	3005A	
MB 410-707074/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-707074/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-195596-11 DU	S2-10PC T02	Total Recoverable	Water	3005A	
180-195596-29 DU	S2-3PC-7BFS T02	Total Recoverable	Water	3005A	

Analysis Batch: 707557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-11	S2-10PC T02	Total Recoverable	Water	6020B	707074
180-195596-29	S2-3PC-7BFS T02	Total Recoverable	Water	6020B	707074
180-195596-47	BLANK T02	Total Recoverable	Water	6020B	707074
MB 410-707074/1-A	Method Blank	Total Recoverable	Water	6020B	707074
LCS 410-707074/2-A	Lab Control Sample	Total Recoverable	Water	6020B	707074
180-195596-11 DU	S2-10PC T02	Total Recoverable	Water	6020B	707074
180-195596-29 DU	S2-3PC-7BFS T02	Total Recoverable	Water	6020B	707074

Analysis Batch: 708461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-12	S2-10PC T03	Total Recoverable	Water	6020B	706341
180-195596-28	S2-3PC-7BFS T01	Total Recoverable	Water	6020B	706341
180-195596-30	S2-3PC-7BFS T03	Total Recoverable	Water	6020B	706341
180-195596-48	BLANK T03	Total Recoverable	Water	6020B	706341
MB 410-706341/1-A	Method Blank	Total Recoverable	Water	6020B	706341
LCS 410-706341/2-A	Lab Control Sample	Total Recoverable	Water	6020B	706341
180-195596-12 DU	S2-10PC T03	Total Recoverable	Water	6020B	706341
180-195596-28 DU	S2-3PC-7BFS T01	Total Recoverable	Water	6020B	706341
180-195596-30 DU	S2-3PC-7BFS T03	Total Recoverable	Water	6020B	706341

Analysis Batch: 711173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-10	S2-10PC T01	Total Recoverable	Water	6020B	706337
180-195596-46	BLANK T01	Total Recoverable	Water	6020B	706337
MB 410-706337/1-A	Method Blank	Total Recoverable	Water	6020B	706337
LCS 410-706337/2-A	Lab Control Sample	Total Recoverable	Water	6020B	706337
180-195596-46 MS	BLANK T01	Total Recoverable	Water	6020B	706337
180-195596-46 MSD	BLANK T01	Total Recoverable	Water	6020B	706337
180-195596-10 DU	S2-10PC T01	Total Recoverable	Water	6020B	706337
180-195596-46 DU	BLANK T01	Total Recoverable	Water	6020B	706337

Prep Batch: 712510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-13	S2-10PC T04	Total Recoverable	Water	3005A	
180-195596-31	S2-3PC-7BFS T04	Total Recoverable	Water	3005A	
180-195596-49	BLANK T04	Total Recoverable	Water	3005A	
MB 410-712510/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-712510/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-195596-13 MS	S2-10PC T04	Total Recoverable	Water	3005A	
180-195596-13 MSD	S2-10PC T04	Total Recoverable	Water	3005A	
180-195596-13 DU	S2-10PC T04	Total Recoverable	Water	3005A	

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Metals (Continued)

Prep Batch: 712510 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-31 DU	S2-3PC-7BFS T04	Total Recoverable	Water	3005A	

Prep Batch: 712518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-14	S2-10PC T05	Total Recoverable	Water	3005A	
180-195596-32	S2-3PC-7BFS T05	Total Recoverable	Water	3005A	
180-195596-50	BLANK T05	Total Recoverable	Water	3005A	
MB 410-712518/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-712518/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-195596-14 DU	S2-10PC T05	Total Recoverable	Water	3005A	
180-195596-32 DU	S2-3PC-7BFS T05	Total Recoverable	Water	3005A	

Analysis Batch: 713404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-13	S2-10PC T04	Total Recoverable	Water	6020B	712510
180-195596-31	S2-3PC-7BFS T04	Total Recoverable	Water	6020B	712510
180-195596-49	BLANK T04	Total Recoverable	Water	6020B	712510
MB 410-712510/1-A	Method Blank	Total Recoverable	Water	6020B	712510
LCS 410-712510/2-A	Lab Control Sample	Total Recoverable	Water	6020B	712510
180-195596-13 MS	S2-10PC T04	Total Recoverable	Water	6020B	712510
180-195596-13 MSD	S2-10PC T04	Total Recoverable	Water	6020B	712510
180-195596-13 DU	S2-10PC T04	Total Recoverable	Water	6020B	712510
180-195596-31 DU	S2-3PC-7BFS T04	Total Recoverable	Water	6020B	712510

Analysis Batch: 718449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-14	S2-10PC T05	Total Recoverable	Water	6020B	712518
180-195596-32	S2-3PC-7BFS T05	Total Recoverable	Water	6020B	712518
180-195596-50	BLANK T05	Total Recoverable	Water	6020B	712518
MB 410-712518/1-A	Method Blank	Total Recoverable	Water	6020B	712518
LCS 410-712518/2-A	Lab Control Sample	Total Recoverable	Water	6020B	712518
180-195596-14 DU	S2-10PC T05	Total Recoverable	Water	6020B	712518
180-195596-32 DU	S2-3PC-7BFS T05	Total Recoverable	Water	6020B	712518

Prep Batch: 719868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-15	S2-10PC T06	Total Recoverable	Water	3005A	
180-195596-33	S2-3PC-7BFS T06	Total Recoverable	Water	3005A	
180-195596-51	BLANK T06	Total Recoverable	Water	3005A	
MB 410-719868/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-719868/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-195596-15 DU	S2-10PC T06	Total Recoverable	Water	3005A	
180-195596-33 DU	S2-3PC-7BFS T06	Total Recoverable	Water	3005A	

Analysis Batch: 720552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-15	S2-10PC T06	Total Recoverable	Water	6020B	719868
180-195596-33	S2-3PC-7BFS T06	Total Recoverable	Water	6020B	719868
180-195596-51	BLANK T06	Total Recoverable	Water	6020B	719868
MB 410-719868/1-A	Method Blank	Total Recoverable	Water	6020B	719868
LCS 410-719868/2-A	Lab Control Sample	Total Recoverable	Water	6020B	719868

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QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Metals (Continued)

Analysis Batch: 720552 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-15 DU	S2-10PC T06	Total Recoverable	Water	6020B	719868
180-195596-33 DU	S2-3PC-7BFS T06	Total Recoverable	Water	6020B	719868

Prep Batch: 726014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-16	S2-10PC T07	Total Recoverable	Water	3005A	
180-195596-34	S2-3PC-7BFS T07	Total Recoverable	Water	3005A	
180-195596-52	BLANK T07	Total Recoverable	Water	3005A	
MB 410-726014/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-726014/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-195596-16 DU	S2-10PC T07	Total Recoverable	Water	3005A	
180-195596-34 DU	S2-3PC-7BFS T07	Total Recoverable	Water	3005A	

Analysis Batch: 727667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-34	S2-3PC-7BFS T07	Total Recoverable	Water	6020B	726014
180-195596-52	BLANK T07	Total Recoverable	Water	6020B	726014
MB 410-726014/1-A	Method Blank	Total Recoverable	Water	6020B	726014
LCS 410-726014/2-A	Lab Control Sample	Total Recoverable	Water	6020B	726014
180-195596-34 DU	S2-3PC-7BFS T07	Total Recoverable	Water	6020B	726014

Analysis Batch: 727683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-16	S2-10PC T07	Total Recoverable	Water	6020B	726014
180-195596-16 DU	S2-10PC T07	Total Recoverable	Water	6020B	726014

Prep Batch: 728523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-17	S2-10PC T08	Total Recoverable	Water	3005A	
180-195596-35	S2-3PC-7BFS T08	Total Recoverable	Water	3005A	
MB 410-728523/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-728523/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-195596-17 DU	S2-10PC T08	Total Recoverable	Water	3005A	
180-195596-35 DU	S2-3PC-7BFS T08	Total Recoverable	Water	3005A	

Prep Batch: 729282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-53	BLANK T08	Total Recoverable	Water	3005A	
MB 410-729282/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-729282/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 729473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-17	S2-10PC T08	Total Recoverable	Water	6020B	728523
180-195596-35	S2-3PC-7BFS T08	Total Recoverable	Water	6020B	728523
MB 410-728523/1-A	Method Blank	Total Recoverable	Water	6020B	728523
LCS 410-728523/2-A	Lab Control Sample	Total Recoverable	Water	6020B	728523
180-195596-17 DU	S2-10PC T08	Total Recoverable	Water	6020B	728523
180-195596-35 DU	S2-3PC-7BFS T08	Total Recoverable	Water	6020B	728523

Eurofins Pittsburgh

QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

Metals

Analysis Batch: 730303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-53	BLANK T08	Total Recoverable	Water	6020B	729282
MB 410-729282/1-A	Method Blank	Total Recoverable	Water	6020B	729282
LCS 410-729282/2-A	Lab Control Sample	Total Recoverable	Water	6020B	729282

Prep Batch: 735790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-18	S2-10PC T09	Total Recoverable	Water	3005A	
180-195596-36	S2-3PC-7BFS T09	Total Recoverable	Water	3005A	
180-195596-54	BLANK T09	Total Recoverable	Water	3005A	
MB 410-735790/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-735790/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-195596-18 DU	S2-10PC T09	Total Recoverable	Water	3005A	
180-195596-36 DU	S2-3PC-7BFS T09	Total Recoverable	Water	3005A	

Analysis Batch: 737143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-18	S2-10PC T09	Total Recoverable	Water	6020B	735790
180-195596-36	S2-3PC-7BFS T09	Total Recoverable	Water	6020B	735790
180-195596-54	BLANK T09	Total Recoverable	Water	6020B	735790
MB 410-735790/1-A	Method Blank	Total Recoverable	Water	6020B	735790
LCS 410-735790/2-A	Lab Control Sample	Total Recoverable	Water	6020B	735790
180-195596-18 DU	S2-10PC T09	Total Recoverable	Water	6020B	735790
180-195596-36 DU	S2-3PC-7BFS T09	Total Recoverable	Water	6020B	735790

General Chemistry

Leach Batch: 502925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-1	S2-10PC T01	Leach	Solid	1315	
180-195596-19	S2-3PC-7BFS T01	Leach	Solid	1315	
180-195596-37	BLANK T01	Leach	Solid	1315	

Leach Batch: 503070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-2	S2-10PC T02	Leach	Solid	1315	
180-195596-20	S2-3PC-7BFS T02	Leach	Solid	1315	
180-195596-38	BLANK T02	Leach	Solid	1315	
180-195596-38 DU	BLANK T02	Leach	Solid	1315	

Leach Batch: 503071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-3	S2-10PC T03	Leach	Solid	1315	
180-195596-21	S2-3PC-7BFS T03	Leach	Solid	1315	
180-195596-39	BLANK T03	Leach	Solid	1315	
180-195596-3 DU	S2-10PC T03	Leach	Solid	1315	

Leach Batch: 503072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-4	S2-10PC T04	Leach	Solid	1315	
180-195596-22	S2-3PC-7BFS T04	Leach	Solid	1315	
180-195596-40	BLANK T04	Leach	Solid	1315	

Eurofins Pittsburgh

QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

General Chemistry

Leach Batch: 503073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-5	S2-10PC T05	Leach	Solid	1315	
180-195596-23	S2-3PC-7BFS T05	Leach	Solid	1315	
180-195596-41	BLANK T05	Leach	Solid	1315	

Leach Batch: 503074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-6	S2-10PC T06	Leach	Solid	1315	
180-195596-24	S2-3PC-7BFS T06	Leach	Solid	1315	
180-195596-42	BLANK T06	Leach	Solid	1315	

Leach Batch: 503075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-7	S2-10PC T07	Leach	Solid	1315	
180-195596-25	S2-3PC-7BFS T07	Leach	Solid	1315	
180-195596-43	BLANK T07	Leach	Solid	1315	

Leach Batch: 503076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-8	S2-10PC T08	Leach	Solid	1315	
180-195596-26	S2-3PC-7BFS T08	Leach	Solid	1315	
180-195596-44	BLANK T08	Leach	Solid	1315	

Leach Batch: 503077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-9	S2-10PC T09	Leach	Solid	1315	
180-195596-27	S2-3PC-7BFS T09	Leach	Solid	1315	
180-195596-45	BLANK T09	Leach	Solid	1315	
180-195596-9 DU	S2-10PC T09	Leach	Solid	1315	

Analysis Batch: 503088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-1	S2-10PC T01	Leach	Solid	EPA 9040C	502925
180-195596-19	S2-3PC-7BFS T01	Leach	Solid	EPA 9040C	502925
180-195596-37	BLANK T01	Leach	Solid	EPA 9040C	502925
LCS 180-503088/24	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 503154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-1	S2-10PC T01	Leach	Solid	SM 2580B	502925
180-195596-2	S2-10PC T02	Leach	Solid	SM 2580B	503070
180-195596-19	S2-3PC-7BFS T01	Leach	Solid	SM 2580B	502925
180-195596-20	S2-3PC-7BFS T02	Leach	Solid	SM 2580B	503070
180-195596-37	BLANK T01	Leach	Solid	SM 2580B	502925
180-195596-38	BLANK T02	Leach	Solid	SM 2580B	503070
LCS 180-503154/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 503160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-2	S2-10PC T02	Leach	Solid	EPA 9040C	503070
180-195596-20	S2-3PC-7BFS T02	Leach	Solid	EPA 9040C	503070
180-195596-38	BLANK T02	Leach	Solid	EPA 9040C	503070

Eurofins Pittsburgh

QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

General Chemistry (Continued)

Analysis Batch: 503160 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-503160/24	Lab Control Sample	Total/NA	Solid	EPA 9040C	
180-195596-38 DU	BLANK T02	Leach	Solid	EPA 9040C	503070

Analysis Batch: 503244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-3	S2-10PC T03	Leach	Solid	EPA 9040C	503071
180-195596-21	S2-3PC-7BFS T03	Leach	Solid	EPA 9040C	503071
180-195596-39	BLANK T03	Leach	Solid	EPA 9040C	503071
LCS 180-503244/24	Lab Control Sample	Total/NA	Solid	EPA 9040C	
180-195596-3 DU	S2-10PC T03	Leach	Solid	EPA 9040C	503071

Analysis Batch: 503426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-3	S2-10PC T03	Leach	Solid	SM 2580B	503071
180-195596-21	S2-3PC-7BFS T03	Leach	Solid	SM 2580B	503071
180-195596-39	BLANK T03	Leach	Solid	SM 2580B	503071
LCS 180-503426/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 503466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-4	S2-10PC T04	Leach	Solid	EPA 9040C	503072
180-195596-22	S2-3PC-7BFS T04	Leach	Solid	EPA 9040C	503072
180-195596-40	BLANK T04	Leach	Solid	EPA 9040C	503072
LCS 180-503466/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	
LCS 180-503466/24	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 503506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-4	S2-10PC T04	Leach	Solid	SM 2580B	503072
180-195596-22	S2-3PC-7BFS T04	Leach	Solid	SM 2580B	503072
180-195596-40	BLANK T04	Leach	Solid	SM 2580B	503072
LCS 180-503506/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Leach Batch: 503678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 180-503678/1-A	Method Blank	Leach	Solid	EPA 1312	

Analysis Batch: 503863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-5	S2-10PC T05	Leach	Solid	SM 2580B	503073
180-195596-23	S2-3PC-7BFS T05	Leach	Solid	SM 2580B	503073
180-195596-41	BLANK T05	Leach	Solid	SM 2580B	503073
LCS 180-503863/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 503939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-5	S2-10PC T05	Leach	Solid	EPA 9040C	503073
180-195596-23	S2-3PC-7BFS T05	Leach	Solid	EPA 9040C	503073
180-195596-41	BLANK T05	Leach	Solid	EPA 9040C	503073
LB 180-503678/1-A	Method Blank	Leach	Solid	EPA 9040C	503678
LCS 180-503939/47	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Eurofins Pittsburgh

QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

General Chemistry

Analysis Batch: 504622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-6	S2-10PC T06	Leach	Solid	EPA 9040C	503074
180-195596-24	S2-3PC-7BFS T06	Leach	Solid	EPA 9040C	503074
180-195596-42	BLANK T06	Leach	Solid	EPA 9040C	503074
LCS 180-504622/47	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 504699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-6	S2-10PC T06	Leach	Solid	SM 2580B	503074
180-195596-24	S2-3PC-7BFS T06	Leach	Solid	SM 2580B	503074
180-195596-42	BLANK T06	Leach	Solid	SM 2580B	503074
LCS 180-504699/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 505434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-7	S2-10PC T07	Leach	Solid	SM 2580B	503075
180-195596-25	S2-3PC-7BFS T07	Leach	Solid	SM 2580B	503075
180-195596-43	BLANK T07	Leach	Solid	SM 2580B	503075
LCS 180-505434/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 505616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-7	S2-10PC T07	Leach	Solid	EPA 9040C	503075
180-195596-25	S2-3PC-7BFS T07	Leach	Solid	EPA 9040C	503075
180-195596-43	BLANK T07	Leach	Solid	EPA 9040C	503075
LCS 180-505616/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 505842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-8	S2-10PC T08	Leach	Solid	SM 2580B	503076
180-195596-26	S2-3PC-7BFS T08	Leach	Solid	SM 2580B	503076
180-195596-44	BLANK T08	Leach	Solid	SM 2580B	503076
LCS 180-505842/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 505848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-8	S2-10PC T08	Leach	Solid	EPA 9040C	503076
180-195596-26	S2-3PC-7BFS T08	Leach	Solid	EPA 9040C	503076
180-195596-44	BLANK T08	Leach	Solid	EPA 9040C	503076
LCS 180-505848/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 506656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-9	S2-10PC T09	Leach	Solid	SM 2580B	503077
180-195596-27	S2-3PC-7BFS T09	Leach	Solid	SM 2580B	503077
180-195596-45	BLANK T09	Leach	Solid	SM 2580B	503077
LCS 180-506656/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-195596-9 DU	S2-10PC T09	Leach	Solid	SM 2580B	503077

Analysis Batch: 506723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-9	S2-10PC T09	Leach	Solid	EPA 9040C	503077

Eurofins Pittsburgh

QC Association Summary

Client: ENTACT LLC
Project/Site: Glacier NW ISS Treatability Study

Job ID: 180-195596-1

General Chemistry (Continued)

Analysis Batch: 506723 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-195596-27	S2-3PC-7BFS T09	Leach	Solid	EPA 9040C	503077
180-195596-45	BLANK T09	Leach	Solid	EPA 9040C	503077
LCS 180-506723/47	Lab Control Sample	Total/NA	Solid	EPA 9040C	

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301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 983-7058 Phone (412) 983-2468

Ver: 05/06/2024

Chain of Custody Record

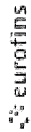
Acetaminophen

100

180-194461 Chain of Custody

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301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468



Chain of Custody Record

Client Information		Lab PM:		Carrier Tracking No(s):		COC No:																																					
Nick Darrow		Gamber, Carne L				180-112297-19672.1																																					
Phone		E-Mail		State of Origin		Page:																																					
412-915-2731		Carne.Gamber@et.eurofinsus.com				Page 1 of 1																																					
Company		PWSID		Job #:																																							
Entact, LLC.				Preservation Codes:																																							
Address		Due Date Requested.		Analysis Requested																																							
701 Fifth Ave. Suite 4200																																											
City		TAT Requested (days):																																									
Seattle																																											
State, Zip		Compliance Project: ☐ Yes ☐ No																																									
WA, 98104																																											
Phone		PO #:																																									
541-256-0037		E9447																																									
Email		WO #:																																									
rcan@entact.com, rkilkenny@entact.com, ndarrow@entact.com																																											
Project Name:		Project #:																																									
Glacier NW ISS Treatability Study		18029834																																									
Site		SSOW#:																																									
Glacier NW - Water Testing																																											
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=Water, S=Solid, O=Owast/Oil, BT=Tissue, A=Air)		Preservation Code:		Field Filtered Sample (Yes or No)		pH		Total Dissolved Solids		Salinity		Specific Conductance		Sulfate		Pentachlorophenol, Low Level		Arsenic and Copper by ICPMS		Dioxins/Furans, 17 Isomers		Redox Potential		Electrical Conductivity		Dissolved Oxygen		Turbidity		Total Number of Containers		Special Instructions/Note:			
Water #3 - Lab Provided Deionized Water Made Anaerobic by Nitrogen Sparging														☒		☒																								Testing to be performed prior to use for soil leach testing			
To Be tested before use for attached 1315 leach testing																																						C7 #25 CF+O.1 28.4/28.5 NO ICE					
Possible Hazard Identification		☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B		☐ Unknown ☐ Radiological																																		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Deliverable Requested: I, II, III, IV, Other (specify)																																				Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months							
Empty Kit Relinquished by		Date:		Time:		Method of Shipment:																																					
Relinquished by		Date/Time		Date/Time		Company																														Received by: <i>[Signature]</i> 8/14/25 14:25 Company: <i>[Signature]</i>							
Relinquished by		Date/Time		Date/Time		Company																														Received by: <i>[Signature]</i> 8/14/25 14:25 Company: <i>[Signature]</i>							
Relinquished by		Date/Time		Date/Time		Company																														Received by: <i>[Signature]</i> 8/14/25 14:25 Company: <i>[Signature]</i>							
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:																																		Cooler Temperature(s) °C and Other Remarks							

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301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

[illegible]

 eurofins | Environment Testing

12/19/2025

Chain of Custody Record

[illegible]

Eurofins Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-548156.1			
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1			
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-195596-1			
Address: 2425 New Holland Pike,		Due Date Requested: 10/14/2025		Analysis Requested						Preservation Codes:	
City: Lancaster		TAT Requested (days): N/A									
State, Zip: PA, 17601											
Phone: 717-656-2300(Tel)		PO #: N/A									
Email: N/A		WO #: N/A									
Project Name: Glacier NW ISS Treatability Study		Project #: 18030470		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of containers		Other: N/A	
Site: N/A		SSOW#: N/A		60208/0005A(MOD) Copy Analysis		8290A/0290_P_Sep8290 17 Isomers					
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (Water, Solid, Overstool, GT=Tissue, AnAkr)		Special Instructions/Note:	
						Preservation Code:					
S2-10PC T05 (180-195596-14)		10/1/25		07:50 Atlantic		G		Water		2	
S2-10PC T05 (180-195596-14DU)		10/1/25		07:50 Atlantic		G		Water		1	
S2-3PC-7BFS T05 (180-195596-32)		10/1/25		07:50 Atlantic		G		Water		2	
S2-3PC-7BFS T05 (180-195596-32DU)		10/1/25		07:50 Atlantic		G		Water		1	
BLANK T05 (180-195596-50)		10/1/25		07:50 Atlantic		G		Water		2	
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed						☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months					
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:					
Empty Kit Relinquished by:						Method of Shipment:					
Relinquished by:						Received by:					
Relinquished by:						Received by:					
Relinquished by:						Received by:					
Custody Seals Intact: ☒ Yes ☐ No						Cooler Temperature(s) and Other Remarks: 21.7 C 1.6					

Eurofins Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-546902.1															
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1															
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-195596-1															
Address: 2425 New Holland Pike,		Due Date Requested: 10/28/2025		Analysis Requested						Preservation Codes:													
City: Lancaster		TAT Requested (days): N/A								Other: N/A													
State, Zip: PA, 17601		PO #: N/A																					
Phone: 717-656-2300(Tel)		WO #: N/A																					
Email: N/A		Project #: 18030470																					
Project Name: Glacier NW ISS Treatability Study		SSOW#: N/A																					
Site: N/A																							
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=soils/sed, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		6020B/3005A (MOD) Copy Analyses		8290A/8290_P_Sep8290 17 Isomers		Total Number of containers		Special Instructions/Note:			
						Preservation Code:																	
S2-10PC T06 (180-195596-15)		10/15/25		07:50 Atlantic		G		Water				X		X						2			
S2-10PC T06 (180-195596-15DU)		10/15/25		07:50 Atlantic		G		Water				X								1			
S2-3PC-7BFS T06 (180-195596-33)		10/15/25		07:50 Atlantic		G		Water				X		X						2			
S2-3PC-7BFS T06 (180-195596-33DU)		10/15/25		07:50 Atlantic		G		Water				X								1			
BLANK T06 (180-195596-51)		10/15/25		07:50 Atlantic		G		Water				X		X						2			
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.																							
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)													
Unconfirmed										☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months													
Deliverable Requested: I, II, III, IV, Other (specify)										Primary Deliverable Rank: 2													
Special Instructions/QC Requirements:																							
Empty Kit Relinquished by:										Date:		Time:		Method of Shipment:									
Relinquished by: James J. Hinkelmann										Date/Time: 10/15/25 15:00		Company: EPI/HNE		Received by: MGA									
Relinquished by: MGA										Date/Time: 10/15/25 1800		Company: EPI/E		Received by: [Signature]									
Relinquished by:										Date/Time:		Company:		Received by: [Signature]									
Custody Seals Intact: ☐ Yes ☐ No										Custody Seal No.: _____													
										Cooler Temperature(s) °C and Other Remarks: R: 3.1 C: 3.0													



301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

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Eurofins Pittsburgh

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Chain of Custody Record



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Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Gamber, Carrie L		Carrier Tracking No(s): N/A		COC No: 180-549134.1			
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Carrie.Gamber@et.eurofinsus.com		State of Origin: Puerto Rico		Page: Page 1 of 1			
Company: Eurofins Lancaster Laboratories Environm				Accreditations Required (See note): N/A				Job #: 180-195596-1			
Address: 2425 New Holland Pike,		Due Date Requested: 12/4/2025		Analysis Requested						Preservation Codes: -	
City: Lancaster		TAT Requested (days): N/A									
State, Zip: PA, 17601											
Phone: 717-656-2300(Tel)		PO #: N/A									
Email: N/A		WO #: N/A									
Project Name: Glacier NW ISS Treatability Study		Project #: 18030470									
Site: N/A		SSOWN: N/A								Other: N/A	
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3005A(MOD) Copy Analytes	8290A/8290_P_Sep8290 17 Isomers	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
S2-10PC T09 (180-195596-18)		11/19/25	07:50 Atlantic	G	Water			X	X	2	
S2-10PC T09 (180-195596-18DU)		11/19/25	07:50 Atlantic	G	Water			X		1	
S2-3PC-7BFS T09 (180-195596-36)		11/19/25	07:50 Atlantic	G	Water			X	X	2	
S2-3PC-7BFS T09 (180-195596-36DU)		11/19/25	07:50 Atlantic	G	Water			X		1	
BLANK T09 (180-195596-54)		11/19/25	07:50 Atlantic	G	Water			X	X	2	
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed						☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:					
Primary Deliverable Rank: 2											
Empty Kit Relinquished by:						Method of Shipment:					
Relinquished by: <i>James T. Hinkelman</i>						Received by: <i>MQA</i>					
Date/Time: <i>11/19/25 13:00</i>						Date/Time: <i>11-19-25 1400</i>					
Company: <i>EP-HNE</i>						Company: <i>ELI</i>					
Relinquished by: <i>MQA</i>						Received by: <i>[Signature]</i>					
Date/Time: <i>11-19-25 1900</i>						Date/Time: <i>11/19/25 1900</i>					
Company: <i>ELI</i>						Company: <i>ELI</i>					
Relinquished by: <i>[Signature]</i>						Received by: <i>[Signature]</i>					
Date/Time: <i>11/19/25</i>						Date/Time: <i>11/19/25</i>					
Company: <i>ELI</i>						Company: <i>ELI</i>					
Custody Seals Intact: ☐ Yes ☐ No						Cooler Temperature(s) °C and Other Remarks: <i>R: 1.7/C: 6.8</i>					
Custody Seal No.:											

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Number: 1

Creator: Say, Thomas C

List Source: Eurofins Pittsburgh

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

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 2

List Creation: 09/17/25 10:41 PM

Creator: McDonald, Teigan

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 3

List Creation: 09/19/25 10:57 AM

Creator: Williams, Aeric

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 4

List Creation: 09/20/25 11:20 AM

Creator: Santiago, Nathaniel

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 5

List Creation: 09/24/25 09:32 AM

Creator: Ballard, Megan

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 6

List Creation: 10/01/25 01:52 PM

Creator: Cyms, Carolyn M

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 7

List Creation: 10/15/25 09:46 PM

Creator: McDonald, Teigan

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 8

List Creation: 10/30/25 05:42 AM

Creator: Onate, Maggie

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 9

List Creation: 11/06/25 09:15 AM

Creator: Onate, Maggie

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: ENTACT LLC

Job Number: 180-195596-1

Login Number: 195596

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 10

List Creation: 11/20/25 12:54 AM

Creator: Onate, Maggie

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	