PRE-REMEDIAL DESIGN INVESTIGATION 3 DATA REPORT

Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Prepared for: Port of Bellingham

Project No. AS210368B-11 • September 16, 2024 FINAL

Aspect
A Geosyntec Company

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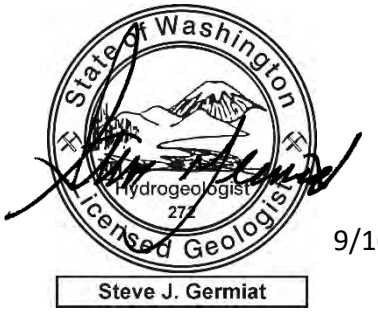

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Acronyms

ASB	Aerated Stabilization Basin
Aspect	Aspect Consulting
bgs	below ground surface
CAP	Cleanup Action Plan
CPS	Construction Plans and Specifications
Ecology	Washington State Department of Ecology
EDR	Engineering Design Report
EPA	United States Environmental Protection Agency
FS	Feasibility Study
GP	Georgia-Pacific
IDP	Inadvertent Discovery Plan
ISN	*in situ* neutralization
ISS	*in situ* solidification
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
ORP	oxidation-reduction potential
PRDI	Pre-Remedial Design Investigation
RAU	Remedial Action Unit
RI	Remedial Investigation
SM	Standard Method
TCLP	toxicity characteristic leaching procedure
TOC	total organic carbon
WSB	Wastewater Settling Basin
XRF	x-ray fluorescence

1 Introduction

In August 2009, the Washington State Department of Ecology (Ecology) and the Port of Bellingham (Port) entered into Agreed Order No. DE 6834 (Order) to conduct a Remedial Investigation (RI) and Feasibility Study (FS) for the GP West Site. In August 2013, an amendment to the Order separated the GP West Site into the Pulp/Tissue Mill and Chlor-Alkali Remedial Action Units (RAUs) shown on Figure 1. The Order was amended again February 2019 to include preparation of a Cleanup Action Plan (CAP) and remedial design for the Chlor-Alkali RAU. In September 2021, Ecology issued the final CAP for the Chlor-Alkali RAU (Ecology, 2021). In March 2022, Ecology issued a minor modification to the Order that revised the Schedule of Deliverables for Remedial Design for the RAU, including preparation of this Pre-Remedial Design Investigation (PRDI) 3 Data Report as Deliverable D.4b (Ecology, 2022).

The PRDI 3 activities, conducted in accordance with the PRDI 3 Project Plan (Aspect, 2023a), are a basis of design for the following three CAP components:

- ***In Situ* Neutralization (ISN) of Caustic Core Groundwater.** Because mercury mobility is increased by high pH, ISN of groundwater within the Caustic Core—the area of shallow Fill Unit groundwater with highest pH (>10 standard units)—will be conducted to control a source of mercury migration in groundwater. The ISN concept in the CAP involves placing a neutralizing reagent below the water table in a series of trenches oriented perpendicular to the groundwater flow direction within the Caustic Core area. The impacted groundwater will passively flow through the ISN trenches, reducing groundwater pH and thereby enhancing the attenuation of dissolved mercury in groundwater downgradient of the Caustic Core area.
- **Soil Removal from Wastewater Settling Basin (WSB) Area.** Soils containing mercury concentrations exceeding the CAP's 300 milligrams per kilogram (mg/kg) remediation level within the northern portion of the historical WSB, adjacent to the Log Pond shoreline, will be excavated and disposed of off Site.
- **Soil Capping for Various Areas.** Following completion of the CAP's other cleanup components, all areas of the RAU where soil contaminant concentrations exceed cleanup levels will be capped by pavement or equivalent "hard cap" surfaces.

The completed PRDI 3 activities supporting groundwater ISN design are as follows:

- **Initial Groundwater Sampling (April 2023).** Because the last groundwater quality sampling in the Caustic Core and surrounding area occurred in 2015 (Aspect, 2015), a monitoring well inventory and groundwater sampling event was completed in April 2023 to define current groundwater quality conditions (wet season) and thereby help scope PRDI 3 activities and contribute to the basis of

the ISN design. The April 2023 sampling results were presented in the PRDI 3 Project Plan (Aspect, 2023a).

- **Monitoring Well Installation and Groundwater Sampling (September 2023).** Based on the April 2023 groundwater sampling results, three new Fill Unit groundwater monitoring wells were installed to refine the extent of groundwater pH exceeding the remediation level of pH 10 (Caustic Core). After the three new Fill Unit monitoring wells were installed and developed, a second groundwater sampling event was conducted in September 2023 to capture dry-season conditions.

- **Two Supplemental Rounds of Groundwater Sampling (March and June 2024).** Two additional groundwater monitoring events were conducted in March and June 2024 to verify an anomalous 2023 groundwater pH reading and the Caustic Core extents for purposes of ISN design, and to supplement the geochemical data for key locations.

- **ISN Treatability Testing.** ISN treatability testing consisted of two phases: (1) bench-scale pH titrations using Site groundwater and soil-groundwater slurry, and (2) column testing to evaluate performance of various chemical reagents to neutralize Caustic Core groundwater.

Other components of PRDI 3 work included:

- Supplemental soil sampling and analysis from the former WSB area to inform the design for excavation of soils exceeding the CAP's 300 mg/kg remediation level. The sampling results refine the excavation lateral and vertical extents, and provide analytical data for waste designation of the mercury-contaminated soils to be excavated.

- Test pits were conducted to document dimensions and conditions of subsurface structures and utilities that may represent obstructions to excavation, or may require physical protection (or temporary removal and replacement), in areas planned for excavation during the *in situ* solidification (ISS)[1] and ISN components of the Chlor-Alkali RAU cleanup action.

- Test pits were also conducted to better delineate lateral extents of the Chemfix area, which is to remain capped in perpetuity per the CAP.

- A mapping and reconnaissance of current surface conditions was conducted within CAP-required areas of soil capping to inform cap remedial design for the RAU.

Figure 1 depicts the areas within which PRDI 3 data collection occurred.

This Data Report presents the PRDI 3 activities conducted to inform the remedial design for ISN of Caustic Core groundwater, removal of mercury-impacted soils from the WSB Area, and RAU-wide soil capping. The Engineering Design Report (EDR; Order

[1] PRDI 2 addressed ISS of mercury-contaminated soils but did not include test pitting (Aspect, 2024).

Deliverable D.6) will present the remedial design for all elements of the Chlor-Alkali RAU cleanup.

The following sections of this report are as follows:

- Section 2: Field Data Collection Supporting ISN Design
- Section 3: ISN Treatability Testing
- Section 4: Wastewater Settling Basin Soil Sampling
- Section 5: Test Pits to Document Subsurface Obstructions in ISS and ISN Areas
- Section 6: Field Data Collection to Inform Cap Design
- Section 7: Schedule and Reporting

2 Field Data Collection Supporting ISN Design

This section reports the monitoring well inventory, monitoring well installations, and groundwater monitoring, completed to support remedial design for ISN for Caustic Core groundwater.

2.1 Monitoring Well Inventory

Prior to PRDI 3, the most recent available RAU groundwater data were collected in late August and early September of 2015 (Aspect, 2015). Given the Port's land use during the intervening 8 years, a monitoring well inventory was necessary to verify the existence and condition of the RAU monitoring wells. Based on existing project information, a total of 41 monitoring wells within the RAU had not been previously decommissioned: 30 monitoring wells in the Fill Unit and 11 in the deeper Lower Sand.

The completed monitoring well inventory was conducted from March 27 through 29, 2023, prior to preparation of the PRDI 3 Project Plan. The completed monitoring well inventory (see Figure 2) located 19 monitoring wells completed in the Fill Unit (the target for ISN treatment) and 10 monitoring wells completed in the Lower Sand (not the subject of ISN treatment). The 14 other monitoring wells could not be located, with several inaccessible due to being covered with staged materials.

For each monitoring well located, depth to water and depth to well bottom measurements were collected (Table 1). In Table 1, the located Fill Unit wells are highlighted in orange, located Lower Sand wells are highlighted in blue, and wells not located during the inventory are highlighted in gray.

2.2 April 2023 Groundwater Sampling and Analysis

Prior to preparation of the PRDI 3 Project Plan, a first round of groundwater monitoring was conducted on April 17 and 18, 2023, to define current Fill Unit groundwater conditions and inform scoping of additional PRDI 3 activities. Out of the 19 Fill Unit

monitoring wells that were located in the well inventory, 15 Fill Unit monitoring wells were monitored (Figure 2). Prior to groundwater sampling, groundwater depth-to-water measurements were collected at each of the monitoring wells as quickly as practicable to allow interpretation of Fill Unit groundwater flow directions.

Groundwater samples were collected using low-flow sampling techniques with a peristaltic pump and dedicated polyethylene and Teflon tubing. During purging prior to sample collection for each well, field parameters (pH, temperature, specific electrical conductance, dissolved oxygen, and oxidation-reduction potential [ORP]) were measured using an In Situ AquaTROLL 500 multiparameter sonde with flow-through cell.

The groundwater samples were transmitted under chain-of-custody protocols to ALS, Inc. of Everett, Washington, an Ecology-accredited analytical laboratory, for chemical analysis. All sample analysis included low-level dissolved mercury by the United States Environmental Protection Agency (EPA) Method 1631[2]. For the 12 monitoring well locations exceeding pH and/or mercury remediation levels in the 2015 sampling, samples were also analyzed for conventional geochemical parameters including:

- Dissolved metals (iron, manganese, aluminum) by EPA Method 200.8
- Common dissolved cations (calcium, potassium, magnesium, sodium) by EPA Method 200.8
- Common anions (chloride, nitrate, nitrite, sulfate) by EPA Method 300.0
- Sulfide by EPA Method 376.1
- Total alkalinity by Standard Method (SM) SM 2320B
- Total organic carbon (TOC) by SM 5310C

Groundwater investigation-derived waste (purge water) was discharged to the vault at the Port's dockside pump station for the Aerated Stabilization Basin (ASB) stormwater treatment system.

2.3 Caustic Core Monitoring Well Installation (September 2023)

After the April 2023 groundwater sampling, a primary data gap identified in the PRDI 3 Project Plan was defining the areal extent of groundwater exceeding the groundwater remediation level of pH 10—the area requiring ISN treatment. To address that data gap, three new Fill Unit monitoring wells, CP-MW101, CP-MW-102, and CP-MW103, were installed to refine the Caustic Core areal extent as follows (Figure 3):

1. CP-MW101 located near the southern[3] extent of the Caustic Core as defined based on the 2015 data;

[2] The EPA Method 1631 analyses were performed by ALS's Kelso laboratory.
[3] Directional references in this report use the "mill-north" (aka "project-north") system, in which mill-north is 45 degrees west of true north (refer to north arrows on figures).

2. CP-MW102 located approximately 100 feet south (downgradient) of AMW-03, which had the highest groundwater pH measured in April 2023; and
3. CP-MW103 approximately 100 feet west (downgradient[4]) of CP-MWA1 in the direction of the shoreline.

Prior to drilling, a public one-call utility locate was requested, and a private utility locating service was subcontracted to identify utility locations to the extent practicable and clear the proposed areas of subsurface exploration.

The three monitoring wells were drilled and constructed in September 2023 by a Washington State-licensed resource protection well driller using direct-push drilling methods. Each well was constructed with 2-inch Schedule 40 polyvinyl chloride (PVC) casing and a 10-foot screen (0.010-inch screen slots and 20-40 sand filter pack placed at depths of approximately 5 to 15 feet below ground surface (bgs), with slight adjustments depending on conditions encountered in the field. The completed monitoring wells were developed using surge and purge methods. As-built monitoring well construction details, locations, and drilling observations are included in Appendix C.

Investigative-derived waste (IDW) soil cuttings generated during drilling were containerized, sampled, profiled, and disposed of at an approved off-Site disposal facility.

2.4 September 2023 Groundwater Sampling and Analysis

Following installation and development of the three new monitoring wells, groundwater sampling of the same 15 Fill Unit monitoring wells sampled in April 2023 plus the three new monitoring wells was conducted in September 2023 to verify the data collected in April and assess potential seasonal changes. Prior to groundwater sampling, groundwater depth-to-water measurements were collected at each of the monitoring wells as quickly as practicable to allow interpretation of Fill Unit groundwater flow directions.

After the water level gauging, groundwater was purged and sampled from the 18 Fill Unit monitoring wells using the same low-flow sampling methods used in April 2023 (Section 2.2). The samples were analyzed by ALS for the same parameters as the April 2023 samples (dissolved mercury and geochemical parameters).

During the September 2023 groundwater monitoring event, an additional volume of groundwater was collected from AMW-03 to conduct the ISN treatability testing described in Section 3.

Aspect performed independent data quality validation for the two rounds of groundwater analytical data. Based on the validation, the analytical data as qualified are usable for their intended purposes, and no data were rejected.

[4] The semi-radial groundwater flow directions in this area are described in Section 2.6.1.

2.5 Supplemental Groundwater Monitoring (March and June 2024)

As proposed and agreed to by Ecology in the PRDI 3 Project Plan Preliminary Results and Recommendations Memorandum (Aspect, 2023b), two additional groundwater monitoring events were conducted in March and June 2024 to verify the anomalous groundwater pH observed at CP-MWC1, to verify the Caustic Core extents, and to supplement the geochemical data for key locations. Water levels and field parameters including pH were measured for each of the 18 Fill Unit monitoring wells that were monitored in April and September 2023. Of the 18 monitoring wells, five were sampled for dissolved mercury and the geochemical parameters analyzed during the 2023 events to verify water quality for ISN remedial design. The five monitoring wells sampled in 2024 include the three Caustic Core wells (AMW-03, CP-MWA1, EMW-19S); CP-MWC1, which had anomalous pH readings in 2023; and EMW-14S, which had a somewhat anomalous dissolved mercury result in September 2023. The groundwater sampling and analytical methods for these two additional sampling events were consistent with those conducted in the 2023 events.

Aspect performed independent data quality validation for the two rounds of groundwater analytical data. Based on the validation, the analytical data as qualified are usable for their intended purposes, and no data were rejected.

Appendix A includes the data validation reports and the laboratory data reports for the four 2023-2024 groundwater sampling events.

2.6 Current Fill Unit Groundwater Conditions

This section describes the groundwater flow direction and groundwater quality information obtained during the 2023-2024 groundwater monitoring events that, for purposes of ISN design, represents baseline conditions. Table 2 presents groundwater elevation data collected in 2023 and 2024. Table 3 presents the groundwater analytical and field parameter data collected in 2023 and 2024.

2.6.1 Groundwater Flow Directions

As described in the Site RI (Aspect, 2013), based on 2009-2010 water level data, Fill Unit groundwater in this area of the RAU flows semi-radially—with a component of flow southward toward a large storm drain corridor beneath Cornwall Avenue, and a component of flow westward toward Bellingham Bay. The 2023 and 2024 water level data corroborate this interpretation, as illustrated on Figures 2 through 5. The groundwater pH data also confirm a southward groundwater flow component toward the Cornwall Avenue storm drain, as discussed below. Table 2 provides the raw water level data for the four 2023 and 2024 events.

The 2023-2024 data confirm seasonal fluctuations in Fill Unit water table elevation, consistent with conditions observed during the RI monitoring (Aspect, 2013). The magnitude of seasonal change varied by well, but during the 2023 monitoring, water levels were typically in the range of 0.9 to 3.7 feet higher in April (wet season) than 6 months later in September (peak dry season). The 2024 monitoring events were conducted at a 3-month interval, instead of the 6-month interval in 2023. The June 2023

water table elevations were lower than in March 2024 at each well monitored, with declines ranging from 0.1 to 1.0 feet (Table 2).

2.6.2 Fill Unit Groundwater pH

The Site RI/FS Work Plan (Aspect, 2009) originally defined the term "Caustic Plume" as "the area of soil and groundwater impacted by high pH and mercury adjacent to the former Chlorine Plant," with the understanding that mercury mobility is enhanced in alkaline pH conditions. The Caustic Plume encompasses groundwater within and downgradient of the former Chlorine Plant that exceeds the pH 8.5 cleanup level based on protection of marine water. Figures 6 through 9 depict the Fill Unit groundwater pH measured during the four rounds of 2023-2024 monitoring.

In the CAP, the portion of the Caustic Plume with highest pH (pH >10), termed the Caustic Core, encompassed four wells based on 2015 monitoring data: AMW-02, CP-MWA1, EMW-19S, and AMW-03. Of those wells, AMW-02 was interpreted to be at the northern edge of the Caustic Core, with pH measured between 9.7 and 10.0 over the four rounds of RI/FS monitoring. Based on the 2023-2024 data, the pH at AMW-02 is demonstrated to now be less than 10 (9.28 to 9.62; Table 3); therefore, the interpreted Caustic Core extent has decreased accordingly. This decrease is illustrated on Figures 6 through 9.

With the benefit of new well CP-MW102, the southern component of high pH transport toward the Cornwall Avenue storm drain corridor is apparent from the September 2023 data (pH 9.65; Figure 7. However, during both 2024 monitoring events, the pH at CP-MW102 was less than the pH 8.5 cleanup level. In addition, during all four of the 2023-2024 monitoring events, the pH measured at wells CP-MW08 and CP-MW09, located closer to Cornwall Avenue, was less than the pH 8.5 cleanup level (Figures 6 through 9). Although a portion of the groundwater from the Caustic Core area reaches Bellingham Bay via permeable pipe bedding beneath the Cornwall Avenue storm drain, no groundwater pH or mercury impacts were observed in monitoring well CP-MW12, which was installed into that pipe bedding near the shoreline (Figure 6), during the RI sampling (Aspect, 2013).

2.6.2.1 Groundwater pH at Well CP-MWC1

An anomalous finding from the 2023 groundwater monitoring showed well CP-MWC1 with a pH >10 (10.40 and 10.02 during April and September, respectively; Table 3). This location, approximately 280 feet north of, and cross-gradient to, the Caustic Core extent, had exhibited pH < 10 in the three monitoring events prior to 2023.[5] Groundwater pH <10 was again measured at CP-MWC1 in the March and June 2024 monitoring events (9.35 and 9.24, respectively; Table 3). Because the median and mean[6] groundwater pH at CP-MWC1 over the four 2023-2024 events—representing current conditions—are <10 (pH 9.57 and 9.54, respectively), well CP-MWC1 is considered not part of the Caustic Core requiring ISN treatment.

[5] pH 9.62, 9.77, and 9.58 in 2009, 2010, and 2015, respectively (see Table 4).
[6] Because pH is a logarithmic value (= -log (hydrogen ion concentration [H+]), pH values are first converted to [H+] for calculation of mean or median, and calculated [H+] values are then converted back to log space as pH values for presentation.

2.6.2.2 Assessment of Groundwater pH Attenuation Over Time

Overall, groundwater pH within the Caustic Plume, including the Caustic Core, has slowly but gradually decreased over time. Table 4 calculates, for each well with a measured pH value > 8.5 when monitored in 2023-2024 and/or in one or more prior (pre-2016) events, the median pH for combined 2023-2024 monitoring events versus the combined pre-2016 events.[7] The wells are separated into three groups for analysis:

1. Those with pH >10 based on the 2023-2024 monitoring, defining the Caustic Core
2. Those in the Caustic Plume but outside of the Caustic Core
3. Those outside the Caustic Plume

Of the 12 individual wells in the analysis, nine had a lower median pH in 2023-2024 than in pre-2016 readings. The three wells with higher current median pH than in pre-2016 events are:

- AMW-03, the Caustic Core well with highest pH on the Site (change from 11.82 to 12.25)
- CP-MW06, located within the Caustic Plume north of the Caustic Core (change from 9.06 to 9.30)
- CP-MW09, located south of the Caustic Plume near Cornwall Avenue (change from 7.06 to 7.57)

Using the median pH calculated for each well, the pre-2016 and current (2023-2024) median pH was also calculated for each of the three well groupings to assess a generalized trend. As shown in Table 4, the median pH for the three Caustic Core wells declined from 11.06 (2009-2015 data) to 10.59 in 2023-2024. Because pH is on a logarithmic scale, the 0.47 pH-unit decrease represents a 193 percent increase in hydrogen ion concentration [H^+]. The 1993-1994 data from well EMW-13S (up to pH 13.2) demonstrate the longer-term pH attenuation that has occurred. For the seven Caustic Plume wells located outside the Caustic Core, the median pH for those same time periods declined from 9.58 to 9.24 (119 percent increase in [H^+]). For wells CP-MW09 and EMW-14S located outside the Caustic Plume, the median pH for those time periods declined from 8.48 to 7.57; this comparison is less meaningful in that it is a limited dataset and each well has had only one pH reading >8.5 over the 14-year period of monitoring.

2.6.3 Dissolved Mercury in Fill Unit Groundwater

Of the 18 wells sampled for mercury in 2023-2024 monitoring, six had dissolved mercury detected at concentrations less than the 0.059 micrograms per liter (µg/L) cleanup level: CP-MW08 and CP-MW09 located south of the Caustic Plume, EMW-04S located upgradient of the Caustic Plume, and the three wells (CP-MW101, CP-MW102, and CP-MW103) positioned around the perimeter of the Caustic Core (Figure 5).

[7] Wells with pH >8.5 in historical or current monitoring events (CP-MW08, CP-MW13, EMW-4S) and new wells CP-MW101, CP-MW102, and CP-MW103 are excluded from the evaluation.

Of the 12 wells with mercury exceeding the cleanup level during the 2023-2024 monitoring, the following three wells also exceeded the groundwater mercury remediation level of 7.6 µg/L applicable at wells along the Bellingham Bay shoreline[8]:

- EMW-19S, located within the Caustic Core. This well had exceedances of the remediation level in each of the four monitoring events.
- CP-MW22, located near the northeastern edge of the Caustic Plume. The April 2023 mercury concentration (8.2 µg/L) at this well exceeded the remediation level but the September 2023 sample (5.2 µg/L), and the median of the two samples (6.7 µg/L), were below it (median concentrations described in the following section and presented in Table 5).
- EMW-14S, located adjacent to CP-MW22 but with pH consistently less than 8.5 throughout the current monitoring. Mercury exceeded the remediation level in two of four 2023-2024 monitoring samples from this well (up to 10 µg/L), but the median concentration from the four events is below it (5.8 µg/L).

2.6.3.1 Assessment of Groundwater Mercury Attenuation Over Time

Consistent with groundwater pH, dissolved mercury concentrations in Caustic Plume groundwater have generally decreased since 2015. Table 5 presents, for dissolved mercury, the same comparative analysis of current versus historical concentration by well grouping, as described for pH in the preceding section.

Of the 13 individual wells in the analysis, the three wells with higher median mercury concentrations in current (2023-2024) sampling than in pre-2016 sampling are those that currently exceed the shoreline remediation level as listed above:

- EMW-19S, which increased from 14 to 23 µg/L
- CP-MW22, which increased from 5.6 to 6.7 µg/L
- EMW-14S, which increased from 3.8 to 5.8 µg/L

The median dissolved mercury concentration for the group of three Caustic Core wells declined from 13 µg/L (2009-2015 data) to 3.0 µg/L in 2023-2024; mean mercury concentrations for this group show the same decreasing trend but a smaller change (14 to 11 µg/L). The 1993-1994 data from well EMW-19S (460 µg/L) demonstrate the significant longer-term mercury attenuation that has occurred within the Caustic Core.

For the seven Caustic Plume wells outside the Caustic Core, the median dissolved mercury concentration declined from 3.1 to 0.66 µg/L (mean mercury concentrations declined from 9.8 to 1.6 µg/L). For wells CP-MW09, CP-MW13, and EMW-14S, located outside the Caustic Plume but with a mercury exceedance(s) in historical or current monitoring, the median dissolved mercury concentration for those time periods declined from 1.7 to 0.28 µg/L (mean mercury concentrations decreased from 4.4 to 2.8 µg/L).

[8] The groundwater remediation level applies at shoreline monitoring wells located upgradient of the conditional point of compliance for the Caustic Plume area (refer to Section 5.2 of the CAP [Ecology, 2021]).

2.6.4 Geochemical Parameters

The ISN treatment will reduce pH and therefore change the precipitation and dissolution equilibrium of non-mercury inorganic parameters, which is an important consideration in the basis of ISN design. Therefore, in addition to pH and dissolved mercury, groundwater geochemical parameters were analyzed during the 2023-2024 sampling. In addition to high pH, the water quality data demonstrate that Caustic Core groundwater is anaerobic and reducing, as indicated by the TOC and sulfide concentrations (Table 3).

High concentrations of sodium are also present in the groundwater, with the highest concentrations detected in Caustic Core (and adjacent) wells AMW-02 (up to 4,300 milligrams per liter [mg/L]), AMW-03 (up to 2,900 mg/L), and CP-MWA1 (up to 6,600 mg/L) during the 2023-2024 monitoring. The elevated sodium concentrations are attributable to the Chlorine Plant's use of sodium chloride brine in the chlor-alkali process that produced both sodium hydroxide (source of high pH) and chlorine gas products.

High alkalinity (up to 11,000 mg/L) also corresponds to high groundwater pH in the Caustic Core except for well EMW-19S (median alkalinity of 730 mg/L), which may be attributable to sulfuric acid indicated by the tank pad on the GP historical engineering plans (and further suggested by the highest detected sulfate concentrations). Additionally, the alkalinity at well CP-MWC1 (with spatial outlier groundwater pH) is significantly lower (up to 760 mg/L) than at the Caustic Core wells (Table 3).

2.6.5 Basis of Design for ISN

The 2023-2024 Fill Unit groundwater data indicate that the natural attenuation of high pH and dissolved mercury documented in the RI/FS (Aspect, 2013 and 2018) is continuing gradually, and the areal extent of the Caustic Core has decreased relative to that estimated from the 2015 data evaluated in the FS. However, decades after releases of sodium hydroxide (strong base) occurred within the Chlorine Plant area, groundwater pH exceeding the remediation level of pH 10 persists within the Caustic Core at three Fill Unit monitoring wells (CP-MWA1, EMW-19S, and AMW-03). These wells are the target for the ISN cleanup action.

Table 6 presents the 2023-2024 groundwater pH data for the three well groupings. It also presents, for each of the four monitoring events, the calculated median and mean pH for the three wells within the Caustic Core and for the nine wells within the Caustic Plume but outside the Caustic Core as a very generalized analysis of seasonality in measured pH. For both groups of wells, the highest median and mean pH were measured during the September 2023 (peak dry season) monitoring event. Therefore, to be conservative, the interpreted September 2023 groundwater pH distribution (Figure 7) will represent the baseline condition for purposes of ISN design in the EDR.

3 ISN Treatability Testing

The ISN cleanup action will neutralize Fill Unit groundwater pH exceeding the remediation level of pH 10 to control a source of mercury migration in groundwater. The current attenuation of dissolved mercury in lower-pH groundwater downgradient of the Caustic Core area is associated with increased adsorption with mineral surfaces. Under

suitable redox and pH conditions, dissolved inorganic mercury precipitates as the mercury-sulfide mineral metacinnabar, a relatively stable and insoluble mercury-sulfide (HgS), or in solid solution with other sulfides such as pyrite (FeS_2) (EPA, 1997; Skyllberg, 2008; Bloom et al., 2003; Liu et al., 2008). The relative stability and insolubility of the immobilized mercury was observed in Site soils and presented in the RI (Aspect, 2013).

The ISN cleanup action relies on pH adjustment for treatment of Caustic Core groundwater; therefore, treatability testing was focused on the evaluation of pH adjustment with the following objectives:

- Comparatively evaluate performance of different chemical reagents at reducing Caustic Core groundwater pH
- Quantify chemical reagents required to neutralize a unit volume of Caustic Core groundwater
- Verify the ability to effectively neutralize pH in Caustic Core groundwater
- Evaluate geochemical changes in Caustic Core groundwater quality resulting from pH neutralization

The following sections describe the test sample collection, titration tests, and column tests comprising the ISN treatability testing program.

3.1 Soil and Groundwater Collection for Treatability Testing

This section describes the field collection of Site-specific soil and groundwater used for the treatability testing.

3.1.1 Soil Sampling

During the September 2023 drilling of well CP-MW101 described in Section 2.3, saturated soil samples (below water table) were collected for use in the ISN treatability testing. The soil samples were sealed inside a Mylar bag with oxygen-adsorbing packets to preserve their reducing conditions (prevent oxidation) to the extent practicable, labeled, and retained inside a cooler on Site for treatability testing.

3.1.2 Groundwater Sampling

Following the September 2023 groundwater monitoring event and prior to the start of treatability testing, approximately 5 gallons of groundwater were collected from Site well AMW-03, which exhibited the highest pH when measured in the April and September 2023 monitoring, for use in titration tests. The groundwater sample was unfiltered and collected in 1-gallon cubitainers without preservative. The cubitainers were then sealed inside a Mylar bag with oxygen-adsorbing packets, labeled, and retained inside a cooler on Site for treatability testing.

3.2 Titration Tests

The titration tests were conducted with 200 milliliters (mL) of AMW-03 groundwater by itself, and with two slurries of soil homogenate and AMW-03 groundwater. Slurry titrates were prepped at a liquid-to-solid ratio of 100-to-1 and 10-to-1. The 100-to-1 slurry titrate was prepared with 200 mL of AMW-03 groundwater and 2 grams of CP-MW101 soil homogenate, and the 10-to-1 slurry titrate was prepared with 200 mL of AMW-03 groundwater and 20 grams of CP-MW101 soil homogenate.

The titrations were performed in 250-mL glass flasks using four soluble chemical reagents prepared from dry products. Each chemical was diluted in potable water to create a 0.1 molar (M) titrant solution with the following pHs:

1) 0.1 M Ferrous Sulfate titrant solution with pH of 4.52 standard units
2) 0.1 M Ferric Sulfate titrant solution with pH of 1.71 standard units
3) 0.1 M Aluminum Sulfate titrant solution with pH of 2.86 standard units
4) 0.1 M Ferric Chloride titrant solution with pH of 1.53 standard units

Each titrating reagent was added in up to 5 mL volume increments and the pH measured at each increment until the pH was less than 8.5 standard units. The volume of acidic reagent was recorded at each increment, from which the reagent mass and reagent concentration in the titrate were calculated (Table E-1 in Appendix E).

All four reagents were effective at reducing the pH below 8.5 as shown on Figure E-1. The pH of the ferric sulfate and ferric chloride solution is more acidic (1 to 3 standard units less than the ferrous sulfate and aluminum sulfate solutions), and results in sharp pH reduction below 8.5.

A second phase of titration tests was conducted using the less-acidic titrant solutions ferrous sulfate and aluminum sulfate. The second phase of titrations were performed to titrate pH beyond 8.5 standard units and identify the second pH inflection point (Table E-2). For comparison of the different molecular-weight reagents, the titration curves are presented as mass of reagent added in milligrams, and by volume of 0.1M titrant added (Figure E-2).

The following summarizes the results of titration tests:

- At the liquid to solid ratios of 100:1 and 10:1 tested, the presence of Site soils in the titrate slurries do not appear to influence the titration.
- The ferric sulfate and ferric chloride reagents and titrant solutions are the most acidic (1.71 and 1.53 standard units, respectively) and risk over-adjustment of pH beyond neutral to acidic conditions.
- The second phase of titrations identify the pH inflection point and stable-adjusted pH for ferrous sulfate and aluminum sulfate titrant solutions as 7.1 and 3.9 standard units, respectively.

3.3 Column Tests

Flow-through column tests were also conducted to evaluate pH neutralization using low-solubility chemical reagents. The column testing was conducted at the Site using Fill Unit monitoring well EMW-19S groundwater, which had the highest dissolved mercury concentration measured in 2023. The testing was conducted on Site because groundwater at the Site is anaerobic and reducing as described above, and it was impracticable to maintain those geochemical conditions of the required groundwater volume *ex situ*. Flow-through columns were operated by in-line groundwater routing from the well to minimize exposure to air and maintain the *in situ* groundwater redox potential to the greatest extent practicable.

Chemical reagents of iron carbonate (the mineral siderite) and Evonik's proprietary Metafix® reagents were evaluated in column tests. Additionally, the soluble chemical reagents, ferrous sulfate and aluminum sulfate, were evaluated in the column testing. The columns were constructed of PVC with dimensions of 3 inches diameter by 36 inches long. Each column was constructed with sample ports located in the influent, middle, and effluent of the column. Aliquots of dry chemical reagent and sand at specified mixtures were packed vertically in lift sections to achieve a homogeneous mixture of the following columns:

1) Control Column (CC): 100% inert sand
2) Column No. 2 (C2): 10% by weight siderite and 90% by weight sand
3) C3: Metafix®: 10% by weight Metafix® and 90% by weight sand
4) C4: 50% by weight aluminum sulfate and 50% by weight sand
5) C5: 20% by weight aluminum sulfate and 80% by weight sand
6) C6: 20% by weight ferrous sulfate and 80% by weight sand

Product specification sheets for the aluminum sulfate, ferrous sulfate, siderite, and Metafix® reagents used for column testing are included in Appendix F.

Groundwater from well EMW-19S was then introduced to the bottom[9] of the columns using discrete peristaltic pumps drawing from the well and targeting a flow rate between 100 and 350 milliliters per minute.

Field parameters (temperature, pH, dissolved oxygen, ORP, and electrical conductivity) were measured at the influent (sample suffix -I), mid-column port (-P), and effluent (-E) locations using a YSI meter with a flow-through cell. Aqueous samples were collected during the flowing conditions and submitted for laboratory analysis of:

- Low-level dissolved mercury by EPA Method 1631
- Dissolved metals (iron, manganese, aluminum) by EPA Method 200.8

[9] Forcing upward flow within the column provides the best assurance for complete saturation and contact with the reagent media.

- Common dissolved cations (calcium, potassium, magnesium, sodium) by EPA Method 200.8
- Common anions (chloride, nitrate, nitrite, sulfate) by EPA Method 300.0
- Sulfide by EPA Method 376.1
- Total alkalinity by SM 2320B
- TOC by SM 5310C

The samples for dissolved mercury and metals analysis were field-filtered using a 0.45 micron in-line filter during sample collection. Effluent from the columns was containerized and discharged to the vault at the Port's dockside pump station for the ASB stormwater treatment system.

The PRDI 3 Project Plan estimates of bulk density, porosity, and pore volume were not re-estimated because of the challenges with the flowing columns, including the rapid dissolution of the insoluble reagents.

The field logs, photographs of the column test set up with sample ports identified, and the laboratory analytical reports from the column tests are included in Appendix F. The laboratory analytical and the corresponding field parameters are in Table 7.

The column test results are summarized as follows:

- The EMW-19S groundwater influent to columns was sampled twice on October 24th and 25th; the groundwater pH was 10.56 standard units during both events and the dissolved mercury concentration was 57 and 20 µg/L.
- The control column (CC) was used to establish water quality changes in the presence of clean sand, so that water quality from columns with reagent added can be distinguished from the effect of the sand alone.
- The column packed with siderite (C2) was operated for approximately 16 hours and the effluent sampled for laboratory analysis on October 25th and 26th. The effluent water quality during both events indicates the siderite was not effective at reducing the pH below the remediation level of 10 standard units (Table 7).
- The column packed with Metafix® (C3) would not allow flow due to the fine particle size of the Metafix® (relative to the sand), which plugged the column and sample ports; therefore, no aqueous samples were collected from C3. To evaluate the pH change from Metafix®, a batch reactor test was applied using a 500 mL vessel with 400 mL of groundwater and 40 grams of Metafix®, equating to an approximately 10:1 liquid-to-solid ratio. The batch reactor was agitated for 2 hours and aqueous samples were collected for dissolved mercury, dissolved metals, and sulfide. The measured pH (7.36 standard units) and dissolved mercury concentration (0.033 µg/L) from this batch reactor test were both below their respective cleanup level (Table 7).
- The column packed with 50 percent aluminum sulfate (C4) was operated for just a couple of hours and sampled from the port, and field parameters were collected

from the effluent before being stopped. Because of the unexpectedly high solubility of the aluminum sulfate, all reagent dissolved and the column was only half full of the remaining sand, with turbid water occupying the remainder of the column. Because the alum had entirely dissolved away, the solutions at the mid-column and effluent ports were inferred to be virtually identical, so a sample of the effluent was not collected.

Column testing is intended for evaluating insoluble reagents; however, given the titration test results, and in accordance with the Project Plan, two additional columns were packed and flowed to evaluate water quality in the presence of 20 percent-by-weight ferrous sulfate and aluminum sulfate. Those results are summarized as:

- The column packed with 20 percent aluminum sulfate (C5) was operated for approximately an hour and a half. This flowing operation allowed for sample collection from both the port and the effluent (Table 7). The port and effluent pH fell below the acidic range of the pH cleanup level (6.2) to 3.56 and 3.1 standard units, respectively. The dissolved mercury concentration at the port and effluent was 0.57 and 0.19 µg/L, which is greater than the 0.059 µg/L cleanup level and less than the 7.6 µg/L remediation level applicable at shoreline wells.
- The column packed with 20 percent ferrous sulfate (C6) was operated at a lower flow rate (than C5) for approximately 2 and a half hours. This flowing operation allowed for sample collection from both the port and the effluent. Like C5, the port and effluent pH fell below the 6.2 cleanup level to 3.11 and 3.38 standard units, respectively. The dissolved mercury concentration at the port and effluent was 0.0052 and 0.0058 µg/L, which is less than the 0.059 µg/L cleanup level (Table 7).

3.4 ISN Treatability Test Results

All four acidic reagents were effective at titrating groundwater pH to less than 8.5 standard units. The 0.1 M ferric sulfate and ferric chloride titrant had pHs of 1.71 and 1.53 standard units and would not be effective for a buffered pH adjustment to within the cleanup level of 6.2 to 8.5 standard units. The aluminum sulfate titrant resulted in a stable pH of approximately 3.9 standard units, below the cleanup level of 6.2 standard units (i.e., not complying). The ferrous sulfate was effective at adjusting pH to the cleanup level of 6.2 to 8.5 standard units, with a stable and neutral pH of approximately 7.1 standard units.

The column testing evaluated insoluble reagents siderite and Metafix®. The siderite was not effective at reducing pH, which may be due to limited solubility of the mineral in the timeframe of the test. The proprietary Metafix® has a grain size that was not effectively filtered by the sand and was unable to be evaluated in column testing. The batch reactor test indicated the Metafix® does reduce the pH and dissolved mercury concentration to below cleanup levels.

Column testing of soluble reagents ferrous sulfate and aluminum sulfate was conducted to evaluate water quality to supplement the titration test results. The pH was reduced below the cleanup level of 6.2 standard units in both columns, which is due to the

supersaturation of reagent in the water sampled. This result will be considered with the stable pHs achieved during the titration test using equal 0.1 M solutions (Figure E-2), which is considered more representative of bulk *in situ* neutralization.

As expected, the reagent cations (aluminum and iron) are evident in the C5 and C6 port and effluent results and are important secondary water quality considerations for ISN engineering design. The dissolved mercury concentration in the 20 percent ferrous sulfate column (C6) port and effluent was below the cleanup level and two orders of magnitude less than the same sample results in the 20 percent aluminum sulfate column (C5).

3.4.1 Optimal Reagent for ISN: Ferrous Sulfate

The ISN treatability test results identify ferrous sulfate as the most effective reagent for the ISN cleanup action. The titration test demonstrates its effectiveness at achieving the pH cleanup level of 6.2 to 8.5 standard units, and the column testing indicated that the adjusted pH results in a four order-of-magnitude reduction in dissolved mercury concentration.

Ferrous sulfate has very high solubility making it not ideal for granular media emplaced in a trench to intercept high pH groundwater (permeable reactive barrier). If ferrous sulfate were emplaced in trenches, the geotechnical design would need to consider the rapid dissolution and settling of the trench backfill, which could be mitigated by allowing dissolution during construction to ensure sufficient inert backfill is emplaced to prevent consolidation after construction. This design consideration may also be avoided by relying on the high solubility properties and delivering the ferrous sulfate as a solution via infiltration galleries (horizontal piping in trenches) or using injection-based delivery (especially where subsurface obstructions prevent trenching). The design for ISN reagent delivery will be developed in the EDR.

4 Wastewater Settling Basin Soil Sampling

This section describes the drilling and soil sample collection performed to refine the lateral and vertical extents for the WSB soil removal component of the cleanup, and to provide analytical data for waste designation of the mercury-contaminated soils to be excavated. The investigation was conducted in two phases.

4.1 Drilling and Soil Sampling Completed

4.1.1 First Phase of Sampling (October 2023)

During the first phase of investigation in October 2023, 13 soil borings (WSB-101 through WSB-113; Figure 10) were advanced to a depth of 20 feet for soil sampling and analysis.

All borings were advanced to a depth of 20 feet bgs by a Washington State-licensed resource protection well driller using direct-push drilling methods. Continuous sample cores were collected. Based on the pre-existing data included in the RI/FS, and an understanding for how the settling basin operated and was backfilled, five soil samples were collected from each boring at the following approximate depth intervals bgs:

- 5 to 6 feet
- 8 to 9 feet
- 11 to 12 feet
- 13 to 14 feet
- 16 to 17 feet

For each boring, the sample depth intervals were adjusted based on field screening and/or the quantity of soil recovery in the core. Field screening included watching for visual indications of suspected wastewater sludge residual, and use of a hand-held x-ray fluorescence (XRF) spectrometer to estimate concentrations of mercury in soils across the entire length of soil core retrieved. The visual and XRF screening information was used to help select sample depth intervals for laboratory analysis. The selected soil samples were submitted to ALS-Everett for analysis of total mercury (EPA Method 7471).

The first-phase sampling results successfully defined the vertical extent of mercury exceeding the 300 mg/kg remediation level at each location but failed to define the lateral extent of exceedances along the southwest side (WSB-112 exceeded) and to the east side of the former WSB (WSB-104, -107, and -109 each exceeded) (Figure 10)[10]. Given the depth of remediation level exceedances, the unbound lateral limits represented a considerable uncertainty in excavation quantities and thus costs. In the November 2023 meeting of the Port, Ecology, and Aspect, the parties agreed to conduct a second phase of drilling to step-out laterally in these unbounded areas in an effort to laterally bound the remediation level exceedance limits, and thereby establish a basis of design and cost estimating for the WSB soil removal component of the cleanup.

4.1.2 Second Phase of Sampling (December 2023)

During the second phase of sampling in December 2023, six additional 20-foot borings were initially advanced for soil sampling and analysis: WSB-114 and -115 to the south and southwest of boring WSB-112, and WSB-116, -117, -118, and -119 approximately 20 feet east or northeast of borings WSB-104, -107, and -109 (Figure 10). The same drilling, field screening, and sample collection procedures applied during the first phase were applied for the second phase. At northeastern-most boring WSB-119, an approximately 3-inch-thick layer of black sludge-like material with high XRF reading was observed at a depth of 17.5 feet bgs. Therefore, an additional boring WSB-120 was advanced approximately 15 feet east of WSB-119 (Figure 10). The same 3-inch-thick layer of black sludge-like material with high XRF reading was observed at a depth of 16.5 feet bgs at WSB-120. Because of physical access and time constraints, another farther-east boring was not conducted. The selected soil samples from the second-phase borings were submitted to ALS-Everett for analysis of total mercury (EPA Method 7471).

[10] The vertical extent of soil mercury > 300 mg/kg was not defined in sampling at RI exploration CP-MW03. Adjacent borings did define the vertical extent, and that information will be integrated into the excavation design in the EDR.

To support waste profiling, the four samples with highest mercury concentrations were also analyzed for RCRA 8 metals (EPA Method 6020), diesel- and oil-range petroleum hydrocarbons (Method NWTPH-Dx) and semivolatile organic compounds (SVOCs; EPA Method 8270). In addition, 22 samples in which total mercury was detected at a concentration exceeding the "20-times rule of thumb" value for the toxicity characteristic (4 mg/kg), were submitted for toxicity characteristic leaching procedure (TCLP) analysis for mercury (EPA Methods 1311 and 7470).

Aspect performed independent data quality validation for the two rounds of soil analytical data. Based on the validation, the analytical data as qualified are usable for their intended purposes, and no data were rejected. Appendix B includes the data validation reports and the laboratory data reports for the WSB soil sampling.

4.2 WSB Soil Quality Results

As illustrated on Figure 10, the soils containing mercury concentrations exceeding the 300 mg/kg remediation level are distributed adjacent to and east-northeast of the historical inlet pipe that discharged mercury-containing wastewaters from the Chlorine Plant into the WSB between 1970 and 1980.[11] With one exception, the soil samples with remediation level exceedances occur at depth due to the presence of solids that settled out of the wastewaters and accumulated as sludge at the bottom of the WSB. The sludge in the WSB was excavated twice: first in 1976 (the removed sludge was treated by the Chemfix method and placed on Site to create the Chemfix Area), and again in 1980 when the WSB was closed and filled (that removed sludge was landfilled; refer to Section 2.2 of Aspect, 2023a). However, the soil sample data demonstrate that the sludge removal efforts did not remove all of the mercury-contaminated material from the bottom and sidewalls of the WSB. Table 8 presents the total mercury data collected during PRDI 3.

The data indicate the accumulation of soil exceeding the remediation level is thickest near the WSB's inlet pipe, thinning from there toward the north and east. At the two borings located closest to the historical inlet pipe (WSB-110 and -112), mercury concentrations exceeding the remediation level were detected in two samples spanning a combined depth range of approximately 11 to 17 feet bgs. At eight of the other nine borings with remediation exceedances, the exceedances were detected in a single sample at depths ranging between approximately 8 and 18 feet bgs (Figure 10). The variable depths at which the remediation level exceedances occur is likely due to a combination of how the WSB was constructed (internally sloping earthen sidewalls and variable bottom depths) and differences in the depth and completeness of excavation during the two sludge removal efforts.

At the two northeastern-most borings, WSB-119 and -120, the remediation level exceedances were limited to a 3-inch layer of black sludge-like material observed at depths of 17.5 and 16.5 ft bgs, respectively. The available historical documentation for the WSB indicates how wastewaters entered the basin (inlet pipe) but does not indicate how liquid discharged from it. Based on the observations and data, liquids may have discharged from the WSB in the area of borings WSB-119 and -120.

[11] The depicted boundary of the WSB, and the location of inlet structure, were derived largely from unscaled figures in ENSR (1994), and therefore are approximate.

The one exception to mercury remediation level exceedances occurring at depth is boring WSB-109, located near the east side of the WSB. At that location, a mercury concentration of 1,700 mg/kg was detected in a 3-inch layer of black sludge-like material encountered within fill material at a depth of 1.5 feet bgs (a remediation level exceedance of 450 mg/kg was also detected in the 10-foot sample from this boring; Figure 10). The presence of sludge-like material and soil mercury concentrations exceeding the remediation level were not observed in shallow soils at any other boring in the WSB area during either the PRDI 3 or prior investigations. The WSB-109 occurrence is isolated and is likely due to inadvertent mixing of a small amount of excavated sludge-like material into backfill soils during the 1980 WSB closure project.

The EDR will present the excavation plan for the WSB including the need for shoring, given the large excavation depth in proximity to the Log Pond, and the segregation and handling of "overburden" (soil with total mercury concentrations less than the remediation level), which will potentially be stockpiled and reused as excavation backfill in accordance with the CAP.

4.2.1 Non-Hazardous Waste Designation

Each of the 22 sample TCLP mercury results were less than the 0.2 mg/L toxicity characteristic threshold, and the supplemental analyses for other constituents in the four first-phase samples with highest total mercury concentrations had concentrations less than respective "20-times rule of thumb" values for the toxicity characteristic.[12] As such, all of the WSB soil with mercury exceeding the remediation level will designate as non-hazardous waste once excavated. Table 8 presents all of the TCLP mercury data (with total mercury data), and Table 9 presents the four first-phase samples' more-complete analytical data collected for waste designation purposes.

5 Test Pits to Document Subsurface Obstructions in ISS and ISN Areas

Test pits were conducted to document approximate dimensions and condition of subsurface structures and/or utilities that may represent obstructions to excavation or may require physical protection (including temporary removal and replacement) in areas planned for excavation as part of the RAU remedy. The goal for the test pit explorations was to be able to include in the future project construction plans and specifications (CPS) photographic and dimensional information regarding type, condition, and size of subsurface structures/utilities to be managed during the cleanup construction activities. Making known these conditions in the contract documents reduces uncertainty for project bidders and later chances for contractor change orders during project construction.

The first task was to complete a desktop review of Georgia-Pacific's available historical drawings for structures within planned excavation areas, as well as available information

[12] https://archive.epa.gov/epawaste/hazard/web/html/faq_tclp.html

regarding subsurface utilities in the areas. Data from the desktop review helped inform test pit exploration locations.

Test pits to document subsurface obstructions were warranted in the following areas of the historical Chlorine Plant, as depicted on Figure 11:

- The four locations planned for *in situ* solidification (ISS) of soils containing visible elemental mercury outside of the former mercury cell building footprint. A total of nine test locations (ATP-13 through ATP-21) were completed within the four ISS locations. Based on the observations at each test, supplemental test pit locations were installed at each location to better document the subject subsurface features are identified with -A, -B test pit location suffixes. In total, ten test pits were completed. The logs are included in Appendix D-1.
- Three test pits (ATP-01z through ATP-03z) were completed to verify subsurface structures along the preliminary-design ISN layout, as proposed in the PRDI 3 Project Plan Preliminary Results and Recommendations Memorandum (Aspect, 2023b). The logs are included in Appendix D-2.

Prior to test pitting, a public one-call utility locating service was used, and a private utility locating service was subcontracted to identify utility locations to the extent practicable, as well as to clear the proposed areas of subsurface exploration.

Test pits were completed by an excavation operator, under subcontract to Aspect, to depths of approximately 6 feet below grade or shallower if a structure or utility expected at the location was observed clearly enough at a shallower depth to allow its accurate documentation. Given the shallow water table across the area of interest, dewatering was conducted at the ISS test pits as needed to expose subsurface obstructions in unsaturated conditions for documentation. The water generated from excavation dewatering was collected and conveyed to the Port's pump station for the ASB.

Each test pit was logged and photographed by an Aspect field geologist. The test pit work was completed in accordance with the Inadvertent Discovery Plan (IDP) included as Appendix C to PRDI 3 Project Plan (Aspect, 2023a). During the ISS test pit excavation, Aspect also conducted air monitoring for mercury within the breathing zone for the purpose of worker health and safety using a hand-held Jerome® mercury vapor analyzer. Measured mercury vapor concentrations in the breathing zone did not exceed the 100 micrograms per cubic meter ($\mu g/m^3$) Occupational Safety and Health Administration (OSHA) permissible exposure limit, therefore application of mercury vapor suppression methods was not required.

All investigation-derived excavated soils were backfilled into the test pit and lightly compacted by tamping with the backhoe bucket. After placement of the backfill, the excavation operator restored the test area by constructing a hot mix asphalt (HMA) pavement section[13] to match the surrounding existing surface grade. Appendix C includes logs and photos for the test pits conducted in the ISS and ISN areas.

[13] A minimum of 3 inches of crushed surfacing base course overlain by 3 inches of HMA Class ½", PG 64-22.

The test pits were useful in verifying locations and general dimensions of subsurface structures within the planned ISS and ISN excavation areas, which will be incorporated into design of the ISS and ISN cleanup components in the EDR. Notably, very large concrete footers,[14] which supported historical above-ground chlorine storage tanks, were verified in ISN test pits ATP-01z through ATP-03z; those monolithic subsurface obstructions are a significant ISN design consideration likely supporting treatment using injection of solution and precluding the construction of trenches, to be developed in the EDR (2023b).

6 Field Data Collection to Inform Cap Design

The CAP requires installation and maintenance of hard caps (minimum 3-inch-thick pavement or building foundation/slab that is at grade) in all areas of the RAU where contaminant concentrations exceed soil cleanup levels. The intent of the hard caps is to control stormwater infiltration through, control direct contact exposure to, and erosion of, soil exceeding cleanup levels. Figure 12 depicts areas of the RAU that require hard capping of soils per the CAP.[15] Portions of the hard cap areas will first have intrusive cleanup actions (e.g., WSB excavation and ISS) completed prior to conducting capping. While soil capping is included as the final component of the RAU cleanup action (Project D) in the CAP, utility or structural improvements occurring outside of the intrusive cleanup action areas may dictate completion of the capping in phases.

The data collection informing cap design included a visual survey of existing surface conditions and test pitting around the perimeter of the Chemfix area to better delineate its extents, each of which is described below.

6.1 Visual Survey of Surface Conditions

Most of the areas required for capping are currently covered with pavement that may or may not have a thickness and condition[16] that adequately isolates underlying contaminated soil to achieve environmental protection. The surface conditions within the CAP-defined soil capping areas were therefore surveyed as part of PRDI 3 to inform design of the soil cap for each required capping area of the RAU.

Within each capping area defined in the CAP, in October 2023 Aspect conducted a visual survey of existing surface conditions including the type of surface (e.g., concrete, asphalt, unpaved) and its general condition (e.g., competent versus degraded). The information was recorded in the GPS-enabled ArcGIS Field Maps application that included linework

[14] Approximate dimensions of 14.5 feet wide by 70 feet long by 5 feet deep.
[15] The CAP also required capping of cPAH-contaminated soils within the Lignin Operable Unit (OU) of the RAU. However, Ecology's July 2022 CAP for the Lignin OU changed that remedy from soil capping to soil removal, which was completed in December 2022. Therefore, capping is no longer required for that OU.
[16] Lack of significant cracks or voids.

from Wilson Engineering's 2023 topographic and utilities survey of the RAU, including some information on surface type.

Figure 12 depicts the condition of the current surface cover and condition within the required capping areas based on the visual survey, divided into three categories:

- Category 1: Hard Cap In Suitable Condition
- Category 2: Hard Cap Absent or In Unsuitable Condition
- Category 3: Surface Obscured, Condition Uncertain

Table 10 presents field observations of surface conditions for the 25 numbered areas shown on Figure 12. The surface-condition information will be used in the EDR to determine areas with suitable hard cap that can be retained (Category 1) and areas that require new hard capping to meet CAP requirements (Categories 2 and 3[17]). As stated above, capping design will also be integrated with planning and design for future redevelopment structures and utilities as such information becomes available. In addition, depending on when hard cap construction is completed, and the type and location of activities that have occurred within capping areas, additional visual survey of surface conditions may be warranted for some areas during preparation of the CPS for the hard capping construction project.

6.2 Test Pitting within Chemfix Area

The location of the Chemfix area (requiring capping) was based on Georgia-Pacific's sketches from the time the material was placed (mid-1970s) as represented in ENSR (1994). Its exact dimensions are uncertain and warrant better delineation to ensure any new capping required adequately covers it, and to inform potential future subsurface utility or other intrusive work in that area; therefore, the PRDI 3 work included shallow test pitting around the reported perimeter of the Chemfix area. As described in the Site RI (Aspect, 2013), the solidified Chemfix material was capped with (from bottom up): a layer of bank run fill, a geotextile membrane extending 10 feet beyond the lateral extent of Chemfix, a 6-inch layer of sand, and two layers of asphalt together totaling 5 to 6 inches in thickness.

In October 2023, a series of shallow test pits were completed in and around the currently defined Chemfix area to observe and define the limits of the geotextile beneath the asphalt and sand/base course without disrupting the geotextile or underlying materials to the extent practicable. The test pitting methods included sawcutting the asphalt, using a small excavator to remove the asphalt, and when needed, hand methods (shovel) to remove underlying base course material and uncover the geotextile. Once each test pit was completed, the excavated base course was backfilled into the excavation and lightly compacted by tamping with the backhoe bucket, followed by paving with HMA to match the existing surface grade.

[17] Given the collective information, the EDR will assume Category 3 areas will require construction of new hard cap; that assumption may be revisited during preparation of construction plans/specs for the hard capping project.

Initially, 11 test pit locations were planned around the perimeter of the Chemfix area as currently understood from the historical sketches; however, several locations were not accessible due to materials staged within ABC Recycling's lease area and the fence around that area. If the geotextile was not observed at a location, another test pit was conducted in a direction toward the Chemfix interior, generally perpendicular to the Chemfix boundary, to observe for presence of geotextile and thus better define the geotextile extent. Conversely, if the geotextile was observed at a location, another test pit was conducted in a direction away from the Chemfix interior. The test pits along each such transect/grouping were assigned different letter suffixes after the test pit number (e.g., ATP-04A and ATP-04B). In total, 30 test pits (ATP-01 through ATP-11D) were completed for this effort. Table 11 presents the coordinates of each test pit and the observed presence/absence of the geotextile membrane. Figure 13 depicts the test pit locations including which did and did not encounter the geotextile (green and red symbols respectively). The test pit logs are included in Appendix D-3.

As illustrated on Figure 13, the test pits did not locate the geotextile membrane on the western side of the Chemfix area. Therefore, one deep test pit, ATP-11D, was advanced within the expected footprint of the Chemfix to a total depth of approximately 7 feet bgs, which confirmed the presence of the Chemfix material (light gray cementitious-like material), beginning at approximately 5 feet bgs, with no overlying geotextile. The test pits also indicate the Chemfix area extends roughly 30 feet farther north, and roughly 20 feet less far to the east, than indicated by the historical information (Figure 13).

Based on the test pit results, the Chemfix area polygon presented in the CAP has been refined based on these test pit results for purposes of capping design and notification for future redevelopment projects, as shown on Figure 13. The lack of geotextile on the western side of the Chemfix area will be factored into cap design in the EDR.

7 Schedule and Reporting

This Report, once approved by Ecology, will serve as a primary basis for the ISN, WSB soil removal, and capping components of the cleanup action remedial design to be described in the EDR for the Chlor-Alkali RAU cleanup action. The design will then be refined in the CPS for the following three cleanup projects, as identified in the Chlor-Alkali RAU CAP:

- Project A: Soil removal from Wastewater Settling Basin, and Consolidation/capping of Stormwater Swale soils
- Project B: *In situ* neutralization of Caustic Core groundwater
- Project D: Capping following completion of other cleanup elements.

The EDR will include a schedule for implementation of the four planned cleanup construction projects based on best-available information at that time. Multiple factors may affect schedule for bidding and construction of the four cleanup construction projects as the full RAU cleanup progresses.

8 References

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9 Limitations

Work for this project was performed for the Port of Bellingham (Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

TABLES

Table 1. Inventory of Existing Monitoring Wells in Historical Chlorine Plant Area

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Well ID	Unit Screened	Reported Installed Total Depth (ft bgs)	Screened Interval (ft bgs)	Casing Diameter (in)	Depth to Water (ft bTOC)	Total Well Depth (ft bTOC)	Able to Locate (Y/N)
AMW-02	Fill Unit	15	10-15	2	3.91	12.94	Y
AMW-03	Fill Unit	15	10-15	2	2.28	14.34	Y
CP-DW1	Lower Sand	48	28-48	6	8.05	51.90	Y
CP-DW2	Lower Sand	48	28-48	8	5.55	52.78	Y
CP-DW3	Lower Sand	48	28-48	8	6.97	51.34	Y
CP-DW4	Lower Sand	48	28-48	8	8.10	52.39	Y
CP-DW5	Lower Sand	48	28-48	8	7.76	52.98	Y
CP-DW6	Lower Sand	48	28-48	4	8.35	47.38	Y
CP-MW01	Fill Unit	15	10-15	0.75	5.02	14.86	Y
CP-MW04	Lower Sand	40	30-40	2	7.74	40.11	Y
CP-MW06	Fill Unit	17	12-17	0.75	2.12	16.59	Y
CP-MW08	Fill Unit	15	10-15	0.75	5.07	14.60	Y
CP-MW09	Fill Unit	16	11-16	0.75	5.48	15.96	Y
CP-MW10	Fill Unit	12	7-12	0.75	0.53	11.72	Y
CP-MW12	Fill Unit	11	6-11	0.75	6.14	11.23	Y
CP-MW13	Fill Unit	16	11-16	0.75	1.05	15.79	Y
CP-MW21	Lower Sand	45	35-45	2	7.53	44.83	Y
CP-MW22	Fill Unit	15	10-15	2	2.41	13.71	Y
CP-MW23	Lower Sand	48	38-48	2	8.33	39.80	Y
CP-MW24	Fill Unit	15	5-15	2	2.21	15.12	Y
CP-MWA1	Fill Unit	16	11-16	2	4.17	15.34	Y
CP-MWB1	Fill Unit	16	11-16	2	5.86	15.41	Y
CP-MWC1	Fill Unit	14	9-14	2	4.28	13.58	Y
EMW-04S	Fill Unit	18	8-18	2	NM	NM	Y
EMW-08S	Fill Unit	20	5-20	2	NM	NM	Y
EMW-14S	Fill Unit	14	4-14	2	2.19	15.18	Y
EMW-19S	Fill Unit	15	5-15	2	1.33	15.13	Y
EMW-28D	Lower Sand	40	30-40	2	6.96	39.42	Y
EMW-29D	Lower Sand	40	30-40	2	NM	NM	N
L1-MW03	Fill Unit	19	14-19	0.75	5.34	19.27	Y
CP-MW05	Lower Sand	40	30-40	2	NM	NM	N
CP-MW07	Fill Unit	17	12-17	0.75	NM	NM	N
CP-MW11	Fill Unit	15	10-15	0.75	NM	NM	N
CP-MWA2	Fill Unit	16	11-16	2	NM	NM	N
CP-MWA3	Fill Unit	14	9-14	2	NM	NM	N
CP-MWB2	Fill Unit	15	10-15	0.75	NM	NM	N
CP-MWB3	Fill Unit	16	11-16	0.75	NM	NM	N
CP-MWC2	Fill Unit	16	11-16	2	NM	NM	N
CP-MWC3	Fill Unit	14.9	9.9-14.9	2	NM	NM	N
EMW-01S	Fill Unit	10	5-10	2	NM	NM	N
EMW-15S	Fill Unit	13	3-13	2	NM	NM	N
LAW-3	Fill Unit	14.5	5-14.5	2	NM	NM	N
LAW-4	Fill Unit	14	4-14.5	2	NM	NM	N
LAW-8	Fill Unit	12.5	3-12.5	2	NM	NM	N

Notes:

Wells previously decommissioned are not listed.

Measurements collected March 27-29, 2023.

NM - not measured. TOC - top of casing. bTOC - below top of casing. bgs - below ground surface.

ft - feet. In - inches.

Table 2. Groundwater Elevations for 2023 and 2024

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Well ID	Top of Casing Elevation (NAVD88)	Date	Depth to Water (ft bTOC)	Groundwater Elevation (NAVD88)	Seasonal Change (ft)
AMW-02	14.16	4/18/2023	3.92	10.24	1.7
		9/19/2023	5.66	8.50	
		3/6/2024	3.53	10.63	0.9
		6/12/2024	4.42	9.74	
AMW-03	14.36	4/18/2023	2.28	12.08	2.2
		9/19/2023	4.51	9.85	
		3/6/2024	2.46	11.90	0.1
		6/12/2024	2.57	11.79	
CP-MW01	14.42	4/17/2023	5.02	9.40	1.6
		9/19/2023	6.64	7.78	
		3/6/2024	5.05	9.37	0.4
		6/12/2024	5.46	8.96	
CP-MW06	15.39	4/17/2023	2.02	13.37	2.3
		9/19/2023	4.36	11.03	
		3/6/2024	1.93	13.46	0.6
		6/12/2024	2.49	12.90	
CP-MW08	13.11	4/17/2023	5.21	7.90	0.9
		9/19/2023	6.13	6.98	
		3/6/2024	4.84	8.27	0.6
		6/12/2024	5.46	7.65	
CP-MW09	15.17	4/17/2023	5.87	9.30	NA
		9/19/2023	--	--	
		3/6/2024	6.18	8.99	0.2
		6/12/2024	6.41	8.76	
CP-MW13	14.32	4/17/2023	1.01	13.31	2.5
		9/19/2023	3.50	10.82	
		3/6/2024	1.02	13.30	0.4
		6/12/2024	1.39	12.93	
CP-MW22	15.27	4/17/2023	2.59	12.68	2.0
		9/19/2023	4.58	10.69	
		3/6/2024	2.12	13.15	0.3
		6/12/2024	2.39	12.88	
CP-MW24	15.7	4/17/2023	2.11	13.59	2.6
		9/19/2023	4.69	11.01	
		3/6/2024	2.01	13.69	0.7
		6/12/2024	2.72	12.98	
CP-MW101	15.3	9/19/2023	4.73	10.57	NA
		3/6/2024	1.82	13.48	0.6
		6/12/2024	2.43	12.87	
CP-MW102	14.34	9/19/2023	6.37	7.97	NA
		3/6/2024	4.95	9.39	1.0
		6/12/2024	5.92	8.42	
CP-MW103	14.21	9/19/2023	6.93	7.28	NA
		3/6/2024	5.44	8.77	0.4
		6/12/2024	5.81	8.40	

Table 2. Groundwater Elevations for 2023 and 2024

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Well ID	Top of Casing Elevation (NAVD88)	Date	Depth to Water (ft bTOC)	Groundwater Elevation (NAVD88)	Seasonal Change (ft)
CP-MWA1	14.16	4/18/2023	4.10	10.06	1.8
		9/19/2023	5.92	8.24	
		3/6/2024	4.18	9.98	0.1
		6/12/2024	4.24	9.92	
CP-MWB1	14.71	4/18/2023	5.81	8.90	2.0
		9/19/2023	7.80	6.91	
		3/6/2024	5.52	9.19	0.3
		6/12/2024	5.80	8.91	
CP-MWC1	13.74	4/18/2023	4.12	9.62	1.8
		9/19/2023	5.96	7.78	
		3/6/2024	4.06	9.68	0.2
		6/12/2024	4.24	9.50	
EMW-04S	14.71	4/17/2023	1.55	13.16	3.7
		9/19/2023	5.24	9.47	
		3/6/2024	1.74	12.97	0.5
		6/12/2024	2.23	12.48	
EMW-14S	15.82	4/18/2023	2.51	13.31	3.2
		9/19/2023	5.74	10.08	
		3/6/2024	1.62	14.20	0.8
		6/12/2024	2.43	13.39	
EMW-19S	14.83	4/18/2023	1.34	13.49	2.7
		9/19/2023	4.05	10.78	
		3/6/2024	1.17	13.66	0.7
		6/12/2024	1.89	12.94	

Notes:

An accurate depth to water measurement was not collected at CP-MW09 in September 2023.
ft bTOC = feet below top of casing
NA = Seasonal difference not calculated because only one round of measurements available.
Note that the 2023 seasonal difference spans 5 months (April to September), whereas it spans 3 months for 2024 (March to June).

Table 3. 2023 and 2024 Groundwater Sampling Results

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Analyte	Unit	Groundwater Cleanup Level	Groundwater Remediation Level	AMW-02				AMW-03				CP-MW01			
				04/18/2023	09/19/2023	03/06/2024	06/12/2024	04/18/2023	09/20/2023	03/06/2024	06/13/2024	04/17/2023	09/19/2023	03/06/2024	06/12/2024
Dissolved Metals															
Mercury	ug/L	0.059	7.6	**5.4**	**0.053**	--	--	**2.2**	**0.072**	**3.2**	**2.3**	**0.13**	**0.13**	--	--
Geochemical Parameters[1]															
Alkalinity, Total	mg/L			**3600**	**5900**	--	--	**4600**	**3900**	**3800**	**4000**	**1600**	**2800**	--	--
Aluminum (Dissolved)	mg/L			**2.1**	**3.4**	--	--	**0.31**	**0.32**	0.25 U	**0.28**	0.050 U	**0.11**	--	--
Calcium (Dissolved)	mg/L			**12**	**11**	--	--	**6.9**	**8.5**	**6.1**	**6.8**	**35**	**42**	--	--
Chloride	mg/L			**1700**	**2600**	--	--	**250**	**230**	**200**	**200**	**90**	**200**	--	--
Iron (Dissolved)	mg/L			**2.3**	**3.9**	--	--	**5.1**	**3.7**	**3.5**	**4.0**	**0.84**	**1.7**	--	--
Magnesium (Dissolved)	mg/L			**1.6**	**1.2**	--	--	0.12 U	**0.15**	0.25 U	0.25 U	**19**	**29**	--	--
Manganese (Dissolved)	mg/L			**0.16**	**0.11**	--	--	**0.025**	**0.04**	**0.034**	**0.029**	**1.1**	**1.3**	--	--
Nitrate as Nitrogen	mg/L			0.76 U	0.76 U	--	--	0.76 U	0.15 UJ	--	--	0.15 U	0.15 U	--	--
Nitrate-Nitrite	mg/L			--	--	--	--	--	--	0.14 U	0.14 U	--	--	--	--
Nitrite as Nitrogen	mg/L			2.5 U	0.71 U	--	--	0.71 U	0.14 UJ	--	--	0.5 UJ	0.14 U	--	--
Potassium (Dissolved)	mg/L			**12**	**19**	--	--	**20**	**13**	**12**	**13**	**13**	**20**	--	--
Sodium (Dissolved)	mg/L			**2500**	**4300**	--	--	**2900**	**2100**	**2000**	**2100 J**	**740**	**1200**	--	--
Sulfate	mg/L			**2.2**	**6.4**	--	--	**22**	**15**	0.26 U	**4.7**	**0.6**	**0.93**	--	--
Sulfide (Total)[2]	mg/L			**70**	**100**	--	--	**72**	**69**	**65**	**38**	--	**6.4**	--	--
Total Organic Carbon	mg/L			**630**	**620**	--	--	**700**	**350**	**450**	**580**	--	**160**	--	--
Field Parameters															
Temperature	deg C			**12.09**	**17.78**	**9.53**	**16.23**	**13.04**	**18.72**	**12.1**	**15.16**	**11.69**	**18.18**	**11.76**	**13.9**
Specific Conductance	uS/cm			**10551**	**16316**	**2323**	**4284**	**7071.70**	**6675.6**	**7426**	**6846.2**	**2895.40**	**4834.1**	**3763**	**4780**
Dissolved Oxygen	mg/L			0	**0.05**	0	**0.02**	0	**0.03**	**0.04**	**0.01**	0	**0.06**	**0.02**	**0.17**
pH	Std units	8.5	10	**9.62**	**9.62**	**9.28**	**9.59**	**12.17**	**12.34**	**12.19**	**11.95**	**8.43**	**9.46**	**8.87**	**8.89**
Oxidation Reduction Potential	mV			**-391.1**	**-517.1**	**-339**	**-353**	**-400.6**	**-543.2**	**-455.7**	**-499.3**	**-294.7**	**-355.5**	**-348**	**-645**
Turbidity	NTU			**4.5**	**8.91**	**2.3**	**4.1**	**12.5**	**20.9**	**12.6**	**7.6**	**15.6**	**14.6**	**10.2**	**8.8**

Notes:

1) Conventionals metals (not mercury) were not field filtered at EMW-14S in September 2023, and are reported as total instead of dissolved.

2) Sulfide was field filtered at CP-MWB1 and EMW-14S in September 2023 and is reported as dissolved instead of total.

Groundwater cleanup levels and remediation levels are described in Section 5.2 of the CAP (Ecology, 2021). Groundwater remediation levels apply at shoreline monitoring wells located upgradient of the conditional point of compliance for the Caustic Plume area.

Bold - detected

Blue Shaded - Detected result exceeded cleanup level

Orange Shaded - Detected result exceeded remediation level

U - Analyte not detected at or above Reporting Limit (RL) shown

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

Table 3. 2023 and 2024 Groundwater Sampling Results

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Analyte	Unit	Groundwater Cleanup Level	Groundwater Remediation Level	CP-MW06				CP-MW08				CP-MW09			
				04/17/2023	09/20/2023	03/06/2024	06/12/2024	04/17/2023	09/21/2023	03/06/2024	06/12/2024	04/17/2023	09/21/2023	03/06/2024	06/12/2024
Dissolved Metals															
Mercury	ug/L	0.059	7.6	**0.93**	**0.8**	--	--	**0.01**	**0.0051**	--	--	0.0005 U	0.00050 U	--	--
Geochemical Parameters[1]															
Alkalinity, Total	mg/L			**1400**	**1400**	--	--	--	**370**	--	--	--	**170**	--	--
Aluminum (Dissolved)	mg/L			**3.6**	**7.9**	--	--	--	0.050 U	--	--	--	0.050 U	--	--
Calcium (Dissolved)	mg/L			**6.7**	**7.2**	--	--	--	**57**	--	--	--	**52**	--	--
Chloride	mg/L			**810**	**840**	--	--	--	**24**	--	--	--	**7.4**	--	--
Iron (Dissolved)	mg/L			**5.5**	**8.9**	--	--	--	**0.89**	--	--	--	**0.3**	--	--
Magnesium (Dissolved)	mg/L			**0.72**	**1.7**	--	--	--	**15**	--	--	--	**2.2**	--	--
Manganese (Dissolved)	mg/L			**0.093**	**0.13**	--	--	--	**0.2**	--	--	--	**0.18**	--	--
Nitrate as Nitrogen	mg/L			0.15 U	0.15 UJ	--	--	--	0.15 U	--	--	--	0.15 U	--	--
Nitrate-Nitrite	mg/L			--	--	--	--	--	--	--	--	--	--	--	--
Nitrite as Nitrogen	mg/L			2.5 U	0.14 UJ	--	--	--	0.14 U	--	--	--	0.14 U	--	--
Potassium (Dissolved)	mg/L			**2.3**	**2.7**	--	--	--	**12**	--	--	--	**2.2**	--	--
Sodium (Dissolved)	mg/L			**1200**	**1100**	--	--	--	**74**	--	--	--	**19**	--	--
Sulfate	mg/L			**1.2**	**0.72**	--	--	--	0.26 U	--	--	--	**6.0**	--	--
Sulfide (Total)[2]	mg/L			0.05 U	0.050 U	--	--	--	0.050 U	--	--	--	**0.23**	--	--
Total Organic Carbon	mg/L			**220**	**110**	--	--	--	**9.5**	--	--	--	**2.4**	--	--
Field Parameters															
Temperature	deg C			**12.36**	**17.9**	**13.22**	**14.6**	**12.22**	**20.07**	**11.8**	**15.14**	**10.3**	**17.2**	**11.8**	**14.26**
Specific Conductance	uS/cm			**5595.80**	**4600**	**4154**	**4368**	**775.92**	**606.58**	**838**	**566**	**168.14**	**288.8**	**525**	**395**
Dissolved Oxygen	mg/L			0	**0.56**	**0.02**	**0.15**	**0.08**	**0.17**	**0.68**	**0.1**	**0.04**	**0.11**	**0.53**	**0.08**
pH	Std units	8.5	10	**9.4**	**9.3**	**9.3**	**9.19**	**7.34**	**7.33**	**7.27**	**7.16**	**8.16**	**7.82**	**7.38**	**7.41**
Oxidation Reduction Potential	mV			**-215.2**	**-349.9**	**-209**	**-300**	**63.8**	**-116.4**	**-194**	**-87**	**-8.5**	**-165.1**	**-183**	**-124**
Turbidity	NTU			**74.3**	**43.1**	**40**	**34.6**	**4.55**	**2.02**	**3.1**	**3.9**	**6.62**	**0.78**	**2.1**	**4.7**

Table 3. 2023 and 2024 Groundwater Sampling Results

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Analyte	Unit	Groundwater Cleanup Level	Groundwater Remediation Level	CP-MW101			CP-MW102			CP-MW103			CP-MW13			
				09/20/2023	03/06/2024	06/12/2024	09/21/2023	03/06/2024	06/12/2024	09/19/2023	03/06/2024	06/12/2024	04/17/2023	09/21/2023	03/06/2024	06/12/2024
Dissolved Metals																
Mercury	ug/L	0.059	7.6	**0.024 J**	--	--	0.0025 U	--	--	**0.0025**	--	--	**0.23**	**0.28**	--	--
Geochemical Parameters[1]																
Alkalinity, Total	mg/L			**2100**	--	--	**1700**	--	--	**720**	--	--	**450**	**430**	--	--
Aluminum (Dissolved)	mg/L			**1.4**	--	--	**0.86**	--	--	0.050 U	--	--	0.050 U	**0.19**	--	--
Calcium (Dissolved)	mg/L			**19**	--	--	**47**	--	--	**140**	--	--	**39**	**9.8**	--	--
Chloride	mg/L			**36**	--	--	**140**	--	--	**47**	--	--	**670**	**410**	--	--
Iron (Dissolved)	mg/L			**9.7**	--	--	**6.9**	--	--	**10**	--	--	**0.41**	**0.43**	--	--
Magnesium (Dissolved)	mg/L			**1.9**	--	--	**25**	--	--	**25**	--	--	**5**	**1.9**	--	--
Manganese (Dissolved)	mg/L			**0.12**	--	--	**0.91**	--	--	**1.5**	--	--	**0.26**	**0.13**	--	--
Nitrate as Nitrogen	mg/L			0.15 UJ	--	--	0.15 U	--	--	0.15 U	--	--	0.15 U	0.15 U	--	--
Nitrate-Nitrite	mg/L			--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrite as Nitrogen	mg/L			0.14 UJ	--	--	0.14 U	--	--	0.14 U	--	--	2.5 U	0.14 U	--	--
Potassium (Dissolved)	mg/L			**8**	--	--	**17**	--	--	**16**	--	--	**11**	**6.4**	--	--
Sodium (Dissolved)	mg/L			**920**	--	--	**800**	--	--	**120**	--	--	**590**	**430**	--	--
Sulfate	mg/L			**2.8**	--	--	**3.9**	--	--	0.26 U	--	--	**1.6**	0.26 U	--	--
Sulfide (Total)[2]	mg/L			**14**	--	--	**16**	--	--	0.050 U	--	--	--	**0.092**	--	--
Total Organic Carbon	mg/L			**200**	--	--	**160**	--	--	**14**	--	--	--	**7.4**	--	--
Field Parameters																
Temperature	deg C			**21.45**	**11.1**	**16.22**	**17.73**	**12.8**	**14.03**	**19.71**	**10.7**	**15.58**	**12.44**	**19.8**	**11.02**	**16.26**
Specific Conductance	uS/cm			**2993.8**	**1506**	**1327**	**2848.7**	**2932**	**2231**	**1343.6**	**1434**	**898**	**2650.30**	**4492**	**1953**	**1402**
Dissolved Oxygen	mg/L			**0.05**	**0.05**	**0.03**	**0.04**	**0.07**	**0.04**	**0.11**	**0.2**	**0.06**	**0.06**	**0.08**	**0.19**	**0.09**
pH	Std units	8.5	10	**9.97**	**9.51**	**9.31**	**9.65**	**7.17**	**7.32**	**7.55**	**6.57**	**6.67**	**7.79**	**7.63**	**7.54**	**7.67**
Oxidation Reduction Potential	mV			**-418.8**	**-267**	**-261**	**-667.9**	**-215**	**-190**	**-86.2**	**-105**	**-89**	**-95.2**	**-230.6**	**-197**	**-120**
Turbidity	NTU			**45.8**	**38**	**54.6**	**60.6**	**4.8**	**7**	**8.13**	**2.9**	**3.7**	**5.67**	**7.78**	**3.4**	**8.1**

Table 3. 2023 and 2024 Groundwater Sampling Results

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Analyte	Unit	Groundwater Cleanup Level	Groundwater Remediation Level	CP-MW22				CP-MW24				CP-MWA1			
				04/17/2023	09/21/2023	03/06/2024	06/12/2024	04/17/2023	09/20/2023	03/06/2024	06/12/2024	04/18/2023	09/20/2023	03/06/2024	06/13/2024
Dissolved Metals															
Mercury	ug/L	0.059	7.6	**8.2**	**5.2**	--	--	**0.66**	**0.73**	--	--	**2.7**	**0.024**	**4.3**	**1.4**
Geochemical Parameters[1]															
Alkalinity, Total	mg/L			**1200**	**1500**	--	--	**580**	**860**	--	--	**8000**	**11000**	**10000**	**11000**
Aluminum (Dissolved)	mg/L			**0.27**	**0.15**	--	--	**0.97**	**0.81**	--	--	**0.28**	**0.35**	0.50 U	0.50 U
Calcium (Dissolved)	mg/L			**25**	**27**	--	--	**8.4**	**8.2**	--	--	**10**	**6.4**	**6.8**	**6.4**
Chloride	mg/L			**1900**	**2200**	--	--	**190**	**400**	--	--	**1600**	**2100**	**1900**	**1700**
Iron (Dissolved)	mg/L			**0.67**	**0.55**	--	--	**2.2**	**2.9**	--	--	**9.2**	**11**	**11**	**11**
Magnesium (Dissolved)	mg/L			**12**	**14**	--	--	**1.6**	**1.6**	--	--	**0.16**	**0.27**	0.50 U	0.50 U
Manganese (Dissolved)	mg/L			**0.11**	**0.084**	--	--	**0.076**	**0.081**	--	--	**0.021**	**0.019**	**0.021**	0.050 U
Nitrate as Nitrogen	mg/L			0.15 U	0.15 U	--	--	0.15 U	0.15 UJ	--	--	0.76 UJ	0.76 UJ	--	--
Nitrate-Nitrite	mg/L			--	--	--	--	--	--	--	--	--	--	**30**	0.71 U
Nitrite as Nitrogen	mg/L			2.5 U	0.14 U	--	--	1 U	0.14 UJ	--	--	2.5 U	0.71 UJ	--	--
Potassium (Dissolved)	mg/L			**13**	**15**	--	--	**3.8**	**5.2**	--	--	**60**	**65**	**60**	**61**
Sodium (Dissolved)	mg/L			**1800**	**2000**	--	--	**360**	**610**	--	--	**6300**	**6600**	**6200**	**6100 J**
Sulfate	mg/L			**31**	**6.5**	--	--	0.26 U	**0.96**	--	--	**4.9**	**46**	**6.3**	**8.0**
Sulfide (Total)[2]	mg/L			--	**0.60**	--	--	**0.21**	**0.36**	--	--	**120**	**130**	**140**	**200**
Total Organic Carbon	mg/L			--	**110**	--	--	**35**	**69**	--	--	**1200**	**690**	**1500**	**260**
Field Parameters															
Temperature	deg C			**12.47**	**20**	**10.62**	**16.4**	**12.59**	**18.9**	**11.35**	**15.5**	**12.29**	**22.1**	**12**	**15.11**
Specific Conductance	uS/cm			**6607.50**	**19596**	**6806**	**7531**	**1502.50**	**2576**	**1689**	**1944**	**12872**	**18586**	**18387**	**18660**
Dissolved Oxygen	mg/L			**0.27**	**0.93**	**0.1**	**0.11**	**0.04**	**0.09**	**0.02**	**0.14**	0	**0.08**	**0.04**	**0.01**
pH	Std units	8.5	10	**9.71**	**8.93**	**9.36**	**9.03**	**9.24**	**9.21**	**8.71**	**8.71**	**10.55**	**10.84**	**10.49**	**10.48**
Oxidation Reduction Potential	mV			**-1.5**	**-196.3**	**-52**	**-291**	**14.1**	**-354**	**-230**	**-282**	**-413.2**	**-414.8**	**-470.8**	**-441.6**
Turbidity	NTU			**42.4**	**4.41**	**175**	**88**	**31.6**	**19.2**	**23**	**30**	**12.5**	**11**	**12.3**	**12.3**

Table 3. 2023 and 2024 Groundwater Sampling Results

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Analyte	Unit	Groundwater Cleanup Level	Groundwater Remediation Level	CP-MWB1				CP-MWC1				EMW-04S			
				04/18/2023	09/19/2023	03/06/2024	06/12/2024	04/18/2023	09/19/2023	03/06/2024	06/13/2024	04/17/2023	09/20/2023	03/06/2024	06/12/2024
Dissolved Metals															
Mercury	ug/L	0.059	7.6	**0.097**	**0.11**	--	--	**0.2**	**0.66**	**0.88**	**0.77**	**0.0009**	**0.0013**	--	--
Geochemical Parameters[1]															
Alkalinity, Total	mg/L			**970**	**1100**	--	--	**190**	**760**	**730**	**710**	**1000**	**1100**	--	--
Aluminum (Dissolved)	mg/L			0.50 U	0.50 U	--	--	**0.58**	**0.59**	**0.48**	**0.67**	--	0.050 U	--	--
Calcium (Dissolved)	mg/L			**8.4**	**11**	--	--	**2.9**	**6.0**	**3.0**	**3.1**	--	**160**	--	--
Chloride	mg/L			**230**	**480**	--	--	**10**	**140**	**150**	**120**	--	**200**	--	--
Iron (Dissolved)	mg/L			**0.071**	**0.12**	--	--	**0.82**	**0.84**	**0.88**	**1.0**	--	**12**	--	--
Magnesium (Dissolved)	mg/L			**3.6**	**3.5**	--	--	**0.43**	**1.3**	**0.59**	**0.7**	--	**49**	--	--
Manganese (Dissolved)	mg/L			**0.019**	**0.025**	--	--	**0.02**	**0.051**	**0.041**	**0.046**	--	**1.4**	--	--
Nitrate as Nitrogen	mg/L			0.15 U	0.15 U	--	--	**0.28**	0.15 U	--	--	--	0.15 UJ	--	--
Nitrate-Nitrite	mg/L			--	--	--	--	--	--	**2.3**	**0.16**	--	--	--	--
Nitrite as Nitrogen	mg/L			1 U	0.14 U	--	--	0.14 U	0.14 U	--	--	--	0.14 UJ	--	--
Potassium (Dissolved)	mg/L			**4.9**	**5.5**	--	--	**0.96**	**2.4**	**1.7**	**1.7**	--	**33**	--	--
Sodium (Dissolved)	mg/L			**640**	**620**	--	--	**120**	**400**	**410**	**410 J**	--	**290**	--	--
Sulfate	mg/L			0.26 U	0.26 U	--	--	**2**	0.26 U	**1.0**	**0.50**	--	0.26 U	--	--
Sulfide (Total)[2]	mg/L			**0.2**	**0.33**	--	--	--	**2.7**	**2.0**	**2.7**	--	**0.063**	--	--
Total Organic Carbon	mg/L			**23**	**26**	--	--	--	**34**	**36**	**38**	--	**28**	--	--
Field Parameters															
Temperature	deg C			**11.52**	**19**	**11.74**	**15.1**	**11.24**	**20.62**	**11.35**	**16.2**	**11.34**	**20.69**	**10.67**	**15.9**
Specific Conductance	uS/cm			**2280.50**	**2911**	**2185**	**2374**	**302.21**	**1699.8**	**1595.4**	**1688**	**2026.90**	**2046.9**	**1937**	**2315**
Dissolved Oxygen	mg/L			**0.1**	**0.034**	**0.06**	**0.19**	**0.58**	**0.08**	**0.02**	**0.06**	**0.04**	**0.12**	**0.07**	**0.13**
pH	Std units	8.5	10	**8.33**	**8.35**	**8.3**	**8.07**	**10.4**	**10.02**	**9.35**	**9.24**	**6.46**	**6.47**	**6.55**	**6.32**
Oxidation Reduction Potential	mV			**42.5**	**-293.1**	**-82**	**-300**	**59.4**	**-233.4**	**-147.8**	**-208.7**	**-35.7**	**-75.9**	**-63**	**-237**
Turbidity	NTU			**5.31**	**5.86**	**6.7**	**4.8**	**233**	**16.5**	**18.2**	**16.7**	**23.1**	**5.73**	**4.4**	**26.7**

Table 3. 2023 and 2024 Groundwater Sampling Results

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Analyte	Unit	Groundwater Cleanup Level	Groundwater Remediation Level	EMW-14S				EMW-19S			
				04/18/2023	09/19/2023	03/06/2024	06/13/2024	04/18/2023	09/20/2023	03/06/2024	06/13/2024
Dissolved Metals											
Mercury	ug/L	0.059	7.6	**0.28**	**10**	**3.2**	**8.4**	**30**	**67**	**16**	**8.4**
Geochemical Parameters[1]											
Alkalinity, Total	mg/L			**220**	**380**	**190**	**270**	**720**	**740**	**360**	**410**
Aluminum (Dissolved)	mg/L			**0.55**	--	**0.12**	**0.49**	**0.66**	**1.1**	**0.49**	**0.51**
Calcium (Dissolved)	mg/L			**13**	--	**12**	**9.9**	**1.9**	**10**	**2.8**	**2.4**
Chloride	mg/L			**150**	**300**	**91**	**140**	**45**	**55**	**18**	**15**
Iron (Dissolved)	mg/L			**1.1**	--	**0.39**	**1.2**	**4.9**	**6.5**	**2.4**	**2.5**
Magnesium (Dissolved)	mg/L			**1.8**	--	**1.7**	**1.2**	**0.064**	**0.95**	**0.16**	**0.11**
Manganese (Dissolved)	mg/L			**0.067**	--	**0.039**	**0.061**	**0.047**	**0.12**	**0.04**	**0.036**
Nitrate as Nitrogen	mg/L			**3**	0.15 U	--	--	0.15 U	0.15 UJ	--	--
Nitrate-Nitrite	mg/L			--	--	**0.63**	**1.1**	--	--	0.14 U	**0.16**
Nitrite as Nitrogen	mg/L			0.5 U	0.14 U	--	--	0.14 U	0.14 UJ	--	--
Potassium (Dissolved)	mg/L			**1.1**	--	**0.8**	**1.2**	**1.7**	**4.5**	**1.3**	**1.4**
Sodium (Dissolved)	mg/L			**200**	--	**130**	**210 J**	**460**	**510**	**220**	**270 J**
Sulfate	mg/L			**6.1**	**2.4**	**3.8**	**3.2**	**160**	**180**	**130**	**91**
Sulfide (Total)[2]	mg/L			--	**0.43**	0.050 U	**0.17**	**0.55**	**1.9**	**0.79**	**1.1**
Total Organic Carbon	mg/L			--	**38**	**12**	**22**	**32**	**22**	**14**	**16**
Field Parameters											
Temperature	deg C			**11.12**	**19.5**	**10.3**	**15.35**	**11.78**	**19.1**	**10.8**	**15.1**
Specific Conductance	uS/cm			**659.64**	**1522**	**659**	**881.25**	**1769.20**	**1841**	**963**	**1032**
Dissolved Oxygen	mg/L			**0.16**	**0.008**	**1.42**	**0.46**	0	**0.06**	**0.05**	**0.06**
pH	Std units	8.5	10	**7.25**	**7.85**	**7.16**	**8.3**	**10.64**	**10.55**	**10.32**	**10.14**
Oxidation Reduction Potential	mV			**76.1**	**-290.3**	**-111.1**	**-95.2**	**-287.1**	**-392**	**-250.2**	**-180.6**
Turbidity	NTU			**13.7**	**8.84**	**16.7**	**15.6**	**8.75**	**11.2**	**22.9**	**28.5**

Table 4. Assessment of pH Change Over Time within Caustic Core and Broader Caustic Plume

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Caustic Core Wells

Analyte	CP-MWA1						AMW-03							EMW-19S							
	Oct-09	Apr-10	Apr-23	Sep-23	Mar-24	Jun-24	Oct-09	Apr-10	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24	Dec-93	Feb-94	Oct-09	Apr-10	Aug-14	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24
pH	11.04	11.06	10.55	10.84	10.49	10.48	11.82	12.24	11.22	12.17	12.34	12.19	11.95	11.93	13.19	10.92	11.14	10.48	10.50	10.64	10.55	10.32	10.14
Median pH, pre-2016 vs 2023-24	11.05		10.67				11.82			12.25				12.21		10.66				10.59			

Median pH for Caustic Core Wells:

pre-2016 (excluding 1993-1994): 11.06
2023-2024: 10.59
= 193% Increase in [H+] concentration

Caustic Plume Wells Outside Caustic Core

Analyte	AMW-02								CP-MW01							CP-MW06						
	Oct-09	Apr-10	Aug-14	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24	Oct-09	Apr-10	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24	Oct-09	Apr-10	Apr-23	Sep-23	Mar-24	Jun-24	
pH	10.00	9.77	9.68	9.88	9.62	9.62	9.28	9.59	9.95	9.79	8.99	8.43	9.46	8.87	8.89	9.33	8.90	9.40	9.30	9.30	9.19	
Median pH, pre-2016 vs 2023-24	9.82				9.60				9.79			8.88				9.06		9.30				

Analyte	CP-MW22							CP-MW24							CP-MWB1						
	Mar-13	Jul-13	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24	Jul-13	Aug-14	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24	Oct-09	Apr-10	Aug-15	Apr-23	Sep-23	Mar-24	Jun-24
pH	10.11	9.56	8.45	9.71	8.93	9.36	9.03	9.46	9.17	9.35	9.24	9.21	8.71	8.71	9.49	9.74	9.08	8.33	8.35	8.30	8.07
Median pH, pre-2016 vs 2023-24	9.56			9.16				9.35			8.89				9.49			8.31			

Analyte	CP-MWC1						
	Oct-09	Apr-10	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24
pH	9.62	9.77	9.58	10.40	10.02	9.35	9.24
Median pH, pre-2016 vs 2023-24	9.62			9.57			

Median pH for Wells in Caustic Plume Outside Caustic Core:

pre-2016: 9.58
2023-2024: 9.24
= 119% Increase in [H+] concentration

Table 4. Assessment of pH Change Over Time within Caustic Core and Broader Caustic Plume

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

	Wells Outside Caustic Plume													
	CP-MW09						EMW-14S							
Analyte	Apr-10	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24	Dec-93	Oct-09	Apr-10	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24
pH	9.05	6.76	8.16	7.82	7.38	7.41	7.90	8.47	9.19	8.50	7.25	7.85	7.16	8.30
Median pH, pre-2016 vs 2023-24	7.06		7.57				8.48				7.45			
Median pH for Wells Outside Caustic Plume:														
pre-2016: 8.48														
2023-2024: 7.57														

Notes:

Excluded from this evaluation are wells with no pH >8.5 in historical or current monitoring (CP-MW08, CP-MW13, EMW-4S) and new wells CP-MW101, CP-MW102, and CP-MW103.

Blue Shaded - Detected result exceeded cleanup level

Orange Shaded - Detected result exceeded remediation level

Table 5. Assessment of Dissolved Mercury Change Over Time within Caustic Core and Broader Caustic Plume

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Caustic Core Wells

Analyte	CP-MWA1						AMW-03						EMW-19S							
	Oct-09	Apr-10	Apr-23	Sep-23	Mar-24	Jun-24	Oct-09	Apr-10	Apr-23	Sep-23	Mar-24	Jun-24	Dec-93	Feb-94	Oct-09	Apr-10	Aug-14	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24
Mercury (ug/L)	10.8	14.3	2.7	0.02	4.3	1.4	14.1	11.1	2.2	0.072	3.2	2.3	460	460	18.5	28.5	6.92	8.61	30	67	16	8.4
Median Mercury, pre-2016 vs 2023-24	13		2.1				13		2.3				460		14				23			

Comparison of Current vs Historical Mercury Concentrations for Caustic Core Wells:

	Median	Mean
pre-2016 (excluding 1993-1994):	13	14
2023-2024:	3.0	11

Caustic Plume Wells Outside Caustic Core

Analyte	AMW-02								CP-MW01						CP-MW06					
	Oct-09	Apr-10	Aug-14	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24	Oct-09	Apr-10	Apr-23	Sep-23	Mar-24	Jun-24	Oct-09	Apr-10	Apr-23	Sep-23	Mar-24	Jun-24
Mercury (ug/L)	41.7	28.1	27.6	35.6	5.40	0.053	--	--	6.61	1.32	0.13	0.13	--	--	4.90	8.65	0.93	0.80	--	--
Median Mercury, pre-2016 vs 2023-24	32				2.7				4.0		0.13				6.8		0.80			

Analyte	CP-MW22						CP-MW24							CP-MWB1						
	Mar-13	Jul-13	Apr-23	Sep-23	Mar-24	Jun-24	Jul-13	Aug-14	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24	Oct-09	Apr-10	Aug-15	Apr-23	Sep-23	Mar-24	Jun-24
Mercury (ug/L)	7.75	3.54	8.2	5.2	--	--	1.30	0.70	1.23	0.66	0.73	--	--	1.24	1.71	0.29	0.10	0.11	--	--
Median Mercury, pre-2016 vs 2023-24	5.6		6.7				1.2			0.70				1.2			0.10			

Analyte	CP-MWC1					
	Oct-09	Apr-10	Apr-23	Sep-23	Mar-24	Jun-24
Mercury (ug/L)	1.84	2.75	0.20	0.66	0.88	0.77
Median Mercury, pre-2016 vs 2023-24	2.3		0.72			

Comparison of Current vs Historical Mercury Concentrations for Wells in Caustic Plume Outside Caustic Core:

	Median	Mean
pre-2016:	3.1	9.8
2023-2024:	0.66	1.6

Table 5. Assessment of Dissolved Mercury Change Over Time within Caustic Core and Broader Caustic Plume

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

	Wells Outside Caustic Plume																
	CP-MW09					CP-MW13					EMW-14S							
Analyte	Apr-10	Apr-23	Sep-23	Mar-24	Jun-24	Apr-10	Apr-23	Sep-23	Mar-24	Jun-24	Dec-93	Oct-09	Apr-10	Sep-15	Apr-23	Sep-23	Mar-24	Jun-24
Mercury (ug/L)	0.164	0.0005 U	0.0005 U	--	--	0.406	0.23	0.28	--	--	0.96	2.53	5.03	17.6	0.28	10	3.2	8.4
Median Mercury, pre-2016 vs 2023-24	0.16	0.0005 U				0.41	0.26				3.8				5.8			

Comparison of Current vs Historical Mercury Concentrations for Wells Outside Caustic Plume:

	Median	Mean	assigning nondetects = 1/2 reporting limit
pre-2016:	1.7	4.4	
2023-2024:	0.28	2.8	

Notes:

Excluded from this evaluation are wells with no mercury exceedances of cleanup level in historical or current monitoring (CP-MW08, EMW-4S) and new wells CP-MW101, CP-MW102, and CP-MW103.

Blue Shaded - Detected result exceeded cleanup level

Orange Shaded - Detected result exceeded remediation level

U - Analyte not detected at or above Reporting Limit (RL) shown

Table 6. Groundwater pH Summary for 2023-2024 Monitoring

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Well ID	Groundwater pH in Standard Units			
	Apr-23	Sep-23	Mar-24	Jun-24
Wells Within Caustic Core				
AMW-03	12.17	12.34	12.19	11.95
CP-MWA1	10.55	10.84	10.49	10.48
EMW-19S	10.64	10.55	10.32	10.14
Median pH:	**10.64**	**10.84**	**10.49**	**10.48**
Mean pH:	**10.76**	**10.84**	**10.57**	**10.45**
Wells Within Caustic Plume Outside Caustic Core				
AMW-02	9.62	9.62	9.28	9.59
CP-MW01	8.43	9.46	8.87	8.89
CP-MW06	9.40	9.30	9.30	9.19
CP-MW101	NM	9.97	9.51	9.31
CP-MW102	NM	9.65	7.17	7.32
CP-MW22	9.71	8.93	9.36	9.03
CP-MW24	9.24	9.21	8.71	8.71
CP-MWC1	10.40	10.02	9.35	9.24
EMW-14S	7.25	7.85	7.16	8.30
Median pH:	**9.40**	**9.46**	**9.28**	**9.03**
Mean pH:	**8.06**	**8.71**	**7.80**	**8.18**

Wells Outside Caustic Plume				
CP-MW08	7.34	7.33	7.27	7.16
CP-MW09	8.16	7.82	7.38	7.41
CP-MW13	7.79	7.63	7.54	7.67
CP-MW103	NM	7.55	6.57	6.67
CP-MWB1	8.33	8.35	8.30	8.07
EMW-04S	6.46	6.47	6.55	6.32

Notes:

NM: No measurement because well did not yet exist.

Well CP-MW102 is included within the Caustic Plume based on its September 2023 pH reading.

Table 7. Column Test Analytical Results

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

				Influent		Control Column		Siderite Column			50% Aluminum Sulfate		20% Aluminum Sulfate		20% Ferrous Sulfate		Metafix Batch Reactor
	Location	Groundwater Cleanup Level	Groundwater Remediation Level	CC-In	CC-In	CC-P	CC-Eff	C2-Eff	C2-Eff	C2-Eff	C4-P	C4-Eff	C5-P	C5-Eff	C6-P	C6-Eff	Metafix
	Date			10/24/2023	10/25/2023	10/24/2023	10/25/2023	10/24/2023	10/25/2023	10/26/2023	10/24/2023	10/24/2023	10/25/2023	10/25/2023	10/26/2023	10/26/2023	10/27/2023
	Sample ID			CC-IN-102423	CC-IN-102523	CC-P-102423	102523	102423	102523	102623	C4-P-102423	102423	C5-P-102523	102523	C6-P-102623	102623	METAFIX-102723
Analyte	Unit																
Dissolved Metals																	
Mercury	ug/L	0.059	7.6	**57**	**20**	**24**	**14**	**--**	**11**	**20**	**28**	--	**0.57**	**0.19**	**0.0052**	**0.0058**	**0.033**
Aluminum	ug/L			**780**	**300**	**290**	**120**	--	**130**	**600**	**11000**	--	**420000**	**17000000**	**620**	500 U	50 U
Iron	ug/L			**5000**	**1100**	**1800**	**460**	--	**870**	**4500**	**4200**	--	**530**	**13000**	**5200000**	**8100000**	50 U
Manganese	ug/L			**50**	**21**	**16**	**6.3**	--	**7.9**	**36**	**44**	--	**220**	**4300**	**13000**	**14000**	**1700**
Geochemical Parameters																	
Alkalinity, Total	mg/L			**720**	**260**	**680**	**340**	--	**590**	**730**	**610**	--	2.0 U	2.0 U	2.0 U	2.0 U	--
Calcium	ug/L			**2500**	**790**	**16000**	**6000**	--	**13000**	**10000**	**2100**	--	**28000**	**290000**	**60000**	**52000**	**11000**
Chloride	mg/L			**43**	**16**	**49**	**27**	--	**37**	**56**	**70**	--	**34**	9.2 U	**49**	**63**	--
Magnesium	ug/L			**110**	**77**	**3000**	**1200**	--	**3200**	**2000**	**140**	--	**5000**	**91000**	**13000**	**5500**	**5300**
Nitrate-Nitrite	mg/L			0.29 U	0.29 U	0.29 U	0.29 U	--	0.29 U	0.29 U	0.29 U	--	2.9 U	14 U	5.7 U	2.9 U	--
Potassium	ug/L			**1700**	**960**	**1500**	**930**	--	**1700**	**1600**	**1100**	--	**1600**	**17000**	**3400**	**3000**	**1300**
Sodium	ug/L			**370000**	**180000**	**390000**	**230000**	--	**340000**	**440000**	**370000**	--	**310000**	**340000**	**340000**	**230000**	**380000**
Sulfate	mg/L			**160**	**48**	**160**	**77**	--	**150**	**170**	**290**	--	**12000**	**160000**	**68000**	**16000**	--
Sulfide	mg/L			0.050 U	0.050 U	0.050 U	0.050 U	--	0.050 U	0.050 U	0.050 U	--	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Total Organic Carbon	mg/L			**34**	**16**	**35**	**20**	--	**30**	**35**	**59**	--	**22**	**44**	**5.5**	**10**	--
Field Parameters																	
Temperature	deg C			**13.38**	**14.38**	**13.44**	--	**13.52**	**15.66**	**16.95**	**12.97**	**11.93**	**13.76**	**18.09**	**9.22**	**10.65**	**14.64**
Specific Conductance	uS/cm			**1169**	**629**	**1366**	**887**	**1291**	**1421**	**1630**	**1276**	**5190**	**8772**	**27840**	**38144**	**38237**	**1586**
Dissolved Oxygen	mg/L			**1.36**	**1.36**	**0.73**	**0.49**	**0.59**	**0.16**	**0**	**3.42**	**1.95**	**1.58**	**3.21**	**7.12**	**8.73**	**10.41**
pH	pH units	6.2-8.5	10.0	**10.56**	**10.56**	**10.3**	**10.43**	**10.34**	**10.49**	**10.25**	**9.88**	**3.96**	**3.56**	**3.1**	**3.11**	**3.38**	**7.36**
Oxidation Reduction Potentia	mV			**-68.1**	**-133**	**-184**	**-216**	**-218**	**-238**	**-417**	**-226.5**	**-34.3**	**416**	**487**	**286**	**266**	**136.8**

Notes:

The suffix in sample ID indicates the following: "In" = influent to the columns; "P" = column mid-point port; "Eff" = effluent exiting the column.
Blue Shaded - Detected result exceeded cleanup level
Orange Shaded - Detected result exceeded remediation level
Bold - detected
U - Analyte not detected at or above Reporting Limit (RL) shown
"--" - indicates results not available
mV = millivolts
µS/cm = microSiemens per centimeter
deg C = degrees Celsius
mg/L = milligram per liter
ug/L = microgram per liter

Table 8. Soil Mercury Analytical Data for Wastewater Settling Basin Area

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

		Analyte	**Total Mercury**	**TCLP Mercury**
		Unit	mg/kg	mg/L
		Soil Remediation Level	300	
		Characteristic Waste Designation Level		0.2
Location	**Date**	**Depth**		
WSB-101	10/31/2023	2 ft	**0.31 J**	--
	10/31/2023	5.5 ft	**3.0**	--
	10/31/2023	11 ft	**2.2**	--
	10/31/2023	16 ft	**5.4**	--
	10/31/2023	20 ft	**0.34**	--
WSB-102	10/31/2023	1.5 ft	**19**	--
	10/31/2023	6 ft	**170**	--
	10/31/2023	11.5 ft	**200**	--
	10/31/2023	17 ft	**130**	--
	10/31/2023	19 ft	**14**	--
WSB-103	10/30/2023	2 ft	**1.8**	--
	10/30/2023	6.5 ft	**11**	--
	10/30/2023	12 ft	**7.9**	--
	10/30/2023	15.5 ft	**15**	--
	10/30/2023	18 ft	**8.7**	--
WSB-104	10/30/2023	2 ft	**62**	--
	10/30/2023	7.5 ft	**180**	--
	10/30/2023	11.5 ft	**110**	--
	10/30/2023	15.5 ft	**540**	**0.0017**
	10/30/2023	18 ft	**0.77**	--
WSB-105	10/31/2023	1.5 ft	**33**	--
	10/31/2023	5.5 ft	**3.4**	--
	10/31/2023	10.5 ft	**15**	--
	10/31/2023	16 ft	**30**	--
	10/31/2023	19 ft	**0.30**	--
WSB-106	10/30/2023	3 ft	**0.58**	--
	10/30/2023	6.5 ft	**9.2**	--
	10/30/2023	13 ft	**320**	**0.00054**
	10/30/2023	17.5 ft	**130**	--
	10/30/2023	20 ft	**61**	--
WSB-107	10/30/2023	1.5 ft	**27**	--
	10/30/2023	6.5 ft	**32**	--
	10/30/2023	11 ft	**350**	**0.00024**
	10/30/2023	16 ft	**150**	--
	10/30/2023	18 ft	**79**	--
WSB-108	10/31/2023	1.5 ft	**20**	--
	10/31/2023	6 ft	**6.7**	--
	10/31/2023	11 ft	**130**	--
	10/31/2023	16 ft	**21**	--
	10/31/2023	17.5 ft	**0.55**	--
WSB-109	10/30/2023	1.5 ft	**1700**	**0.067**
	10/30/2023	7 ft	**0.20**	--
	10/30/2023	10 ft	**470**	**0.00082**
	10/30/2023	13 ft	**4.3**	--
	10/30/2023	15 ft	**2.4**	--
WSB-110	11/01/2023	1.5 ft	**0.56**	--
	11/01/2023	6.5 ft	**8.4**	--
	11/01/2023	12 ft	**560**	**0.0036**
	11/01/2023	16 ft	**440**	**0.0013**
	11/01/2023	19.5 ft	**26**	--
WSB-111	10/31/2023	1.5 ft	**160**	--
	10/31/2023	6 ft	**2.3**	--
	10/31/2023	11.5 ft	**14**	--
	10/31/2023	16.5 ft	**120**	--
	10/31/2023	20 ft	**48**	--

Table 8. Soil Mercury Analytical Data for Wastewater Settling Basin Area

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

		Analyte	**Total Mercury**	**TCLP Mercury**
		Unit	mg/kg	mg/L
		Soil Remediation Level	300	
		Characteristic Waste Designation Level		0.2
Location	**Date**	**Depth**		
WSB-112	11/01/2023	1.5 ft	**1.4**	--
	11/01/2023	7 ft	**2.6**	--
	11/01/2023	11 ft	**410**	**0.0054**
	11/01/2023	16.5 ft	**580**	**0.0019**
	11/01/2023	20 ft	**9.1**	--
WSB-113	10/30/2023	2 ft	**130**	--
	10/30/2023	6 ft	**2.8**	--
	10/30/2023	13 ft	**61**	--
	10/30/2023	16.5 ft	**57**	--
	10/30/2023	19 ft	**220**	--
WSB-114	12/11/2023	0.5 ft	**60**	**0.0078**
	12/11/2023	6 ft	**190**	**0.0015**
	12/11/2023	13 ft	**52**	**0.0023**
	12/11/2023	17.5 ft	**46**	**0.00076**
	12/11/2023	19.5 ft	**1.1**	--
WSB-115	12/11/2023	2.5 ft	**53**	**0.00065**
	12/11/2023	6 ft	**97**	**0.0020**
	12/11/2023	10.5 ft	**22**	0.00020 U
	12/11/2023	15.5 ft	**9.9**	0.00020 U
	12/11/2023	20 ft	**3.9**	--
WSB-116	12/11/2023	1.5 ft	**1.5**	--
	12/11/2023	8 ft	**0.67**	--
	12/11/2023	11.5 ft	**0.54**	--
	12/11/2023	16 ft	**0.036**	--
	12/11/2023	18 ft	**0.058**	--
WSB-117	12/11/2023	2 ft	**2.1**	--
	12/11/2023	7 ft	**0.083**	--
	12/11/2023	11 ft	**0.18**	--
	12/11/2023	15 ft	**0.23**	--
	12/11/2023	17 ft	**0.93**	--
WSB-118	12/11/2023	1.5 ft	**0.33 J**	--
	12/11/2023	5 ft	**17**	0.00020 U
	12/11/2023	12 ft	**0.10**	--
	12/11/2023	16 ft	**0.58**	--
	12/11/2023	18 ft	**2.6**	--
WSB-119	12/11/2023	1 ft	**76**	**0.00049**
	12/11/2023	5 ft	**14**	0.00020 U
	12/11/2023	12 ft	**0.59**	--
	12/11/2023	17.5 ft	**630**	**0.012**
	12/11/2023	19 ft	**1.2**	--
WSB-120	12/11/2023	2 ft	**0.22**	--
	12/11/2023	7 ft	**0.10**	--
	12/11/2023	14 ft	**0.28**	--
	12/11/2023	16.5 ft	**780**	**0.020**
	12/11/2023	19 ft	**0.82**	--

Notes:

Bold: Detected.

Blue highlight: Exceeds 300 mg/kg remediation level.

U: Not detected at associated reporting limit.

J: Estimated concentration.

--: No analysis conducted.

Table 9. Soil Analytical Data for Waste Designation of Wastewater Settling Basin Area Soils

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

	Location	WSB-104	WSB-109	WSB-110	WSB-112
	Date	10/30/2023	10/30/2023	11/01/2023	11/01/2023
	Depth	15.5 ft	1.5 ft	12 ft	16.5 ft
Analyte	Unit				
RCRA 8 Metals					
Arsenic	mg/kg	**5.3**	**25**	**4.6**	**3.8**
Barium	mg/kg	**180**	**78**	**86**	**93**
Cadmium	mg/kg	**0.66**	**0.72**	**0.32**	**0.31**
Chromium	mg/kg	**57**	**25**	**30**	**25**
Lead	mg/kg	**68**	**93**	**18**	**17**
Mercury	mg/kg	**540**	**1700**	**560**	**580**
Selenium	mg/kg	1.0 U	1.0 U	1.0 U	1.0 U
Silver	mg/kg	**0.29**	**0.44**	**0.13**	**0.12**
TCLP Metals					
TCLP Mercury	mg/L	**0.0017**	**0.067**	**0.0036**	**0.0019**
TPHs					
Diesel Range Organics	mg/kg	**130**	**60**	**40**	**41**
Motor Oil Range Organics	mg/kg	**190**	**150**	**200**	**160**
PAHs					
1-Methylnaphthalene	ug/kg	640 U	440 U	380 U	370 U
2-Methylnaphthalene	ug/kg	560 U	380 U	330 U	320 U
Acenaphthene	ug/kg	100 U	**160**	100 U	100 U
Acenaphthylene	ug/kg	100 U	100 U	100 U	100 U
Anthracene	ug/kg	100 U	100 U	100 U	100 U
Benzo(g,h,i)perylene	ug/kg	120 U	100 U	100 U	100 U
Fluoranthene	ug/kg	**250**	**520**	**200**	100 U
Fluorene	ug/kg	130 U	**130**	100 U	100 U
Naphthalene	ug/kg	100 U	**110**	100 U	100 U
Phenanthrene	ug/kg	100 U	**590**	**170**	100 U
Pyrene	ug/kg	**190**	**320**	**150**	100 U
Benz(a)anthracene	ug/kg	100 U	100 U	100 U	100 U
Benzo(a)pyrene	ug/kg	100 U	100 U	100 U	100 U
Benzo(b)fluoranthene	ug/kg	100 U	100 U	100 U	100 U
Benzo(k)fluoranthene	ug/kg	150 U	100 U	100 U	100 U
Chrysene	ug/kg	110 U	**130**	100 U	100 U
Dibenzo(a,h)anthracene	ug/kg	100 U	100 U	100 U	100 U
Indeno(1,2,3-cd)pyrene	ug/kg	100 U	100 U	100 U	100 U
Other SVOCs					
1,2,4-Trichlorobenzene	ug/kg	260 U	180 U	150 U	150 U
1,2-Dichlorobenzene	ug/kg	100 U	100 U	100 U	100 U
1,3-Dichlorobenzene	ug/kg	100 U	100 U	100 U	100 U
1,4-Dichlorobenzene	ug/kg	100 U	100 U	100 U	100 U
2,3,4,6-Tetrachlorophenol	ug/kg	180 U	120 U	110 U	100 U
2,4,5-Trichlorophenol	ug/kg	140 U	100 U	100 U	100 U
2,4,6-Trichlorophenol	ug/kg	140 U	100 U	100 U	100 U
2,4-Dichlorophenol	ug/kg	890 U	610 U	530 U	510 U
2,4-Dimethylphenol	ug/kg	230 U	160 U	140 U	130 U
2,4-Dinitrophenol	ug/kg	190 UJ	130 UJ	110 UJ	110 UJ
2,4-Dinitrotoluene	ug/kg	100 U	100 U	100 U	100 U
2,6-Dichlorophenol	ug/kg	670 U	460 U	390 U	380 U
2,6-Dinitrotoluene	ug/kg	140 U	100 U	100 U	100 U
2-Chloronaphthalene	ug/kg	120 U	100 U	100 U	100 U
2-Chlorophenol	ug/kg	360 U	250 U	250 U	250 U
2-Methylphenol	ug/kg	120 U	100 U	100 U	100 U
2-Nitroaniline	ug/kg	100 U	100 U	100 U	100 U

Table 9. Soil Analytical Data for Waste Designation of Wastewater Settling Basin Area Soils

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

	Location	WSB-104	WSB-109	WSB-110	WSB-112
	Date	10/30/2023	10/30/2023	11/01/2023	11/01/2023
	Depth	15.5 ft	1.5 ft	12 ft	16.5 ft
Analyte	Unit				
2-Nitrophenol	ug/kg	110 U	100 U	100 U	100 U
3 & 4 Methylphenol	ug/kg	160 U	110 U	100 U	100 U
3,3'-Dichlorobenzidine	ug/kg	620 U	430 U	370 U	360 U
3-Nitroaniline	ug/kg	2100 U	1500 U	1200 U	1200 U
4,6-Dinitro-2-methylphenol	ug/kg	100 U	100 U	100 U	100 U
4-Bromophenyl phenyl ether	ug/kg	130 U	100 U	100 U	100 U
4-Chloro-3-methylphenol	ug/kg	1200 U	810 U	690 U	670 U
4-Chloroaniline	ug/kg	2100 U	1400 U	1200 U	1200 U
4-Chlorophenyl phenyl ether	ug/kg	150 U	100 U	100 U	100 U
4-Nitroaniline	ug/kg	460 U	320 U	270 U	260 U
4-Nitrophenol	ug/kg	200 U	140 U	120 U	110 U
Aniline	ug/kg	170 U	120 U	100 U	100 U
Azobenzene	ug/kg	160 U	110 U	100 U	100 U
Benzoic acid	ug/kg	2600 U	1800 U	1500 U	1500 U
Benzyl alcohol	ug/kg	190 U	130 U	110 U	110 U
Benzyl butyl phthalate	ug/kg	100 U	100 U	100 U	100 U
Bis(2-chloroethoxy)methane	ug/kg	440 U	300 U	260 U	250 U
Bis(2-chloroethyl) ether	ug/kg	350 U	250 U	250 U	250 U
bis(2-Chloroisopropyl)ether	ug/kg	460 U	310 U	270 U	260 U
Bis(2-ethylhexyl) phthalate	ug/kg	**280**	**230**	**140**	**140**
Carbazole	ug/kg	390 U	270 U	250 U	250 U
Dibenzofuran	ug/kg	120 U	100 U	100 U	100 U
Diethyl phthalate	ug/kg	150 U	110 U	100 U	100 U
Dimethyl phthalate	ug/kg	150 U	110 U	100 U	100 U
Other SVOCs (Continued)					
Di-n-butyl phthalate	ug/kg	120 U	100 U	100 U	100 U
Di-n-octyl phthalate	ug/kg	100 U	100 U	100 U	100 U
Hexachlorobenzene	ug/kg	130 U	**1400**	**180**	**100**
Hexachlorobutadiene	ug/kg	500 U	500 U	500 U	500 U
Hexachlorocyclopentadiene	ug/kg	100 UJ	100 UJ	100 UJ	100 UJ
Hexachloroethane	ug/kg	100 U	100 U	100 U	100 U
Isophorone	ug/kg	260 U	180 U	150 U	150 U
Nitrobenzene	ug/kg	100 U	100 U	100 U	100 U
N-Nitrosodimethylamine	ug/kg	100 U	100 U	100 U	100 U
N-Nitroso-di-n-propylamine	ug/kg	340 U	250 U	250 U	250 U
N-Nitrosodiphenylamine	ug/kg	120 U	100 U	100 U	100 U
Pentachlorophenol	ug/kg	530 U	500 U	500 U	500 U
Phenol	ug/kg	140 U	100 U	100 U	100 U
Pyridine	ug/kg	200 U	200 U	200 U	200 U

Notes:

Bold: Detected.

U: Not detected at associated reporting limit.

J: Estimated concentration.

Table 10. Observations from Surface Conditions Survey

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Area	Observations Regarding Surface Conditions (Oct. 10-11, 2023)
1	Asphalt thickness measured 5" at exposed edge. Condition good.
2	Asphalt over apparent buried tank slab, asphalt thickness measured 4" at exposed edge, condition generally degraded (unsuitable hard cap).
3	Within ABC lease area: degraded asphalt, measured 3-5" thick in some areas. Severe surface distress (unsuitable hard cap).
4	Within ABC lease area: mix of degraded asphalt, gravel base material, soil cover (unsuitable hard cap).
5	West of ABC lease area: area had open excavation to 3' bgs, no asphalt present (unsuitable hard cap).
6	Open excavation to 3.5' bgs. No asphalt (unsuitable hard cap).
7	West of ABC lease area: area had open excavation to 3' bgs, no asphalt present (unsuitable hard cap).
8	Asphalt confirmed, newer and generally in good condition, minor surface distress.
9	Inside ABC lease area: degraded asphalt (unsuitable hard cap).
10	Surface obstructed by staged materials. Based on surrounding conditions, likely degraded asphalt (unsuitable hard cap).
11	Area north of ABC lease area: degraded asphalt under 2-3" of vegetated soil cover. Some areas did not encounter pavement (unsuitable hard cap).
12	Mix of concrete slabs, and bare soil (unsuitable hard cap).
13	Mix of damaged/degraded asphalt and concrete (unsuitable hard cap).
14	Combination of asphalt and concrete slabs: some surface distress and cracks, overall good condition.
15	Gravel fill area, no asphalt observed (unsuitable hard cap).
16	Open excavation/utility trench (unsuitable hard cap).
17	Area obscured by fill pile - surface conditions could not be observed.
18	Combined polygons 18,19,20: concrete circular tank slabs with soil fill in between, some degraded asphalt surrounding concrete. Tank slabs are adequate, soil and degraded asphalt between them is not.
19	
20	
21	Combined polygons 21,22: Railroad ballast, could not verify asphalt under fill material (unsuitable hard cap).
22	
23	Active construction zone; currently unsuitable hard cap but requires evaluation post-construction.
24	Inside ABC lease area, north of entrance driveway: asphalt not present under vegetation cover to depth of 4-5" bgs (unsuitable hard cap).
25	Area could not be accessed due to obstructions, surface conditions could not be observed.

Notes:

The areas referenced are shown on Figure 12.

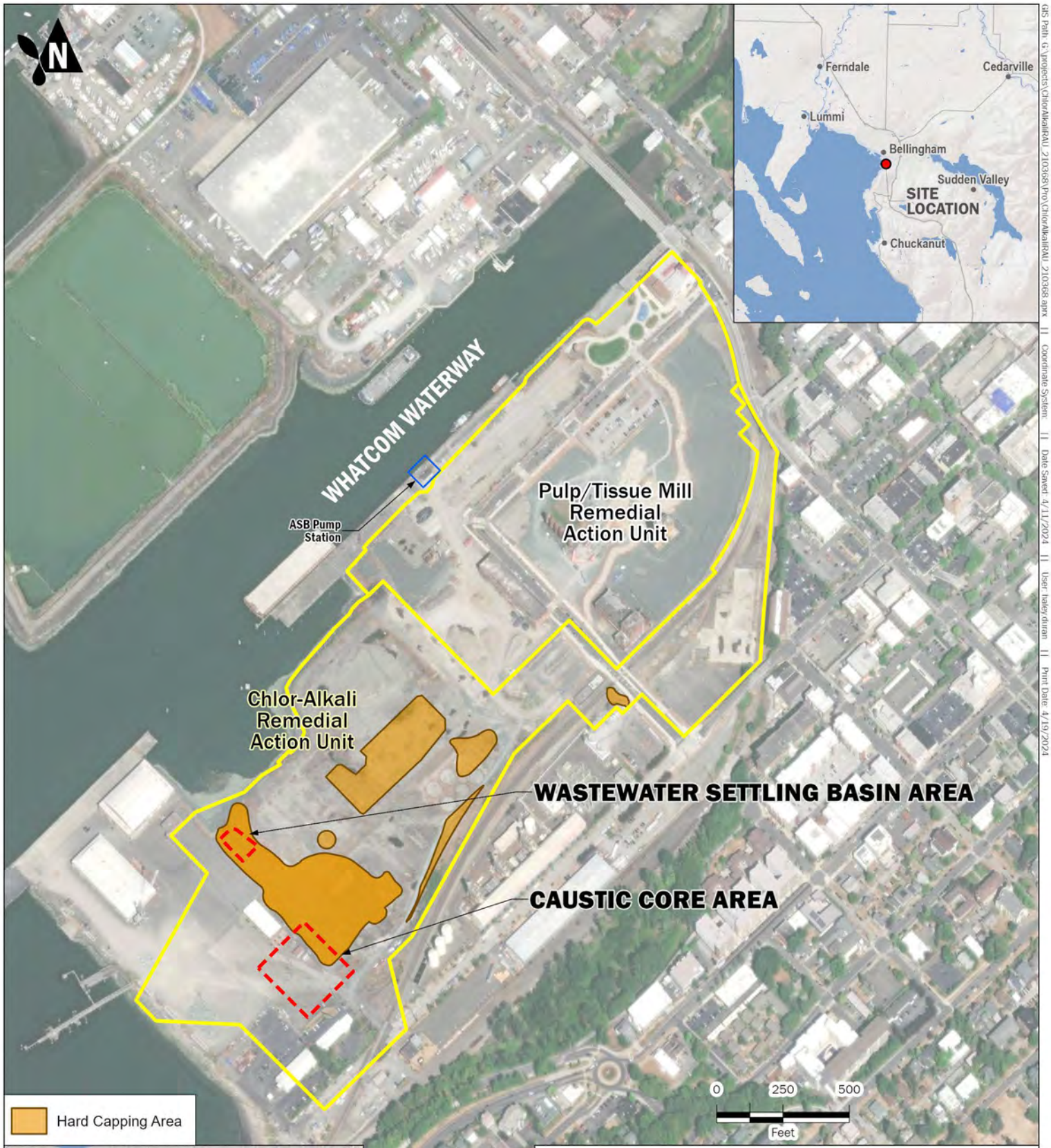
bgs: Below ground surface.

Table 11. Summary of Test Pits within Chemfix Area

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Location	Latitude	Longitude	Geotextile Present?	Other Notes
ATP-01	48.74654031	-122.488315	YES	
ATP-02A	48.7459654	-122.4886304	NO	
ATP-04A	48.74668508	-122.4876716	YES	
ATP-04B	48.74660713	-122.4875991	NO	
ATP-05A	48.74683318	-122.4875742	NO	
ATP-05B	48.74681919	-122.4876454	YES	
ATP-06A	48.74700294	-122.4877198	NO	
ATP-06B	48.7470202	-122.4877939	NO	
ATP-06C	48.74696547	-122.4878764	YES	
ATP-06D	48.7469489	-122.4877863	YES	
ATP-08A	48.74680162	-122.4887017	NO	
ATP-08B	48.74671763	-122.4886784	YES	
ATP-09A	48.7463235	-122.4888771	NO	
ATP-09B	48.74628697	-122.4888514	NO	
ATP-09C	48.74637526	-122.4887256	NO	
ATP-09D	48.74629174	-122.4887108	NO	
ATP-09E	48.7464398	-122.4885746	YES	
ATP-09F	48.74645835	-122.4886874	YES	
ATP-09G	48.74640571	-122.4887111	NO	
ATP-09H	48.74653897	-122.4887705	YES	
ATP-09J	48.74657419	-122.4888208	YES	
ATP-09K	48.74660465	-122.4888695	YES	
ATP-09L	48.74664047	-122.4889249	NO	
ATP-10A	48.74634356	-122.4892749	NO	
ATP-10B	48.74631111	-122.4892069	NO	
ATP-10C	48.74626655	-122.4891306	NO	
ATP-11A	48.74612363	-122.4891741	NO	
ATP-11B	48.74620643	-122.4890597	NO	
ATP-11C	48.7461278	-122.4888983	NO	
ATP-11D	48.74616803	-122.488977	NO	Deeper test pit verified Chemfix material at approx. 5 ft bgs

FIGURES



GIS Path: G:\projects\ChlorAlkaliRAU_210368\Proj\ChlorAlkaliRAU_210368.aprx || Coordinate System: || Date Saved: 4/11/2024 || User: haleyduran || Print Date: 4/19/2024

Areas of PRDI 3 Data Collection

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING	APR-2024	BY: AAF / SCC	FIGURE NO. 1
	PROJECT NO: 210368	REVISED BY: NLK / HMD	

Basemap Layer Credits || Light Gray Base: City of Bellingham, Whatcom County, WA State Parks GIS, Esri Canada, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USFWS, NRCan, Parks Canada
Light Gray Base: Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS

GIS Path: G:\projects\Chlor-Alkali\RAU_210368\Pre\Chlor-Alkali\RAU_210368.aprx; 02- Water Table Elevations in Fill Unit April 2023 | | User: haleyturan | | Print Date: 8/7/2024

L1-MW03
CP-MW10
EMW-8S
EMW-29D
CP-MWC3
LAW-8
CP-MW05
CP-MWC2
EMW-14S
13.31
CP-MW11
EMW-15S
LAW-4
LAW-3
CP-MWB3
CP-MWC1
9.62
CP-MW23
CP-MWB2
CP-MW13
13.31
CP-DW2
CP-MW22
12.68
CP-DW1
EMW-28D
CP-DW3
CP-MW04
CP-MWB1
8.9
CP-MW06
13.37
AMW-02
8.5
EMW-04S
13.16
CP-MWA3
CP-MWA2
CP-MWA1
10.06
EMW-19S
13.49
CP-MW24
13.59
CP-DW4
CP-DW6
CP-MW21
CP-DW5
CP-MW01
9.4
AMW-03
12.08
EMW-1S
CP-MW07
CP-MW08
7.9
CP-MW09
9.3
CP-MW12
CORNWALL AVE
E PINE ST

Well Sampled in April 2023
Monitoring Well - Inaccessible
Monitoring Well
Fill Unit
Lower Sand
April 2023 Groundwater Elevation Contours
April 2023 Groundwater Flow Direction
City Storm Drain Line
Historical GP West Features
ABC Lease Boundary
Property Boundaries from ALTA Survey(David Evans and Associates, 2004)

CP-MW08 ← Well ID
7.9
Apr. 2023 Groundwater Elevation (FT NAVD88)

PROJECT NORTH
TRUE NORTH
45°

0 60 120
Feet

Note:
- April 2023 Groundwater Contours generated from Surfer Version 11

Water Table Elevations in Fill Unit April 2023

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING

AUG-2024	BY: AET / DIM / HMD	FIGURE NO. 2
PROJECT NO. 210368	REVISED BY: ---	

Data source credits: None || Basemap Service Layer Credits: NA

GIS Path: G:\projects\Chor-Alkali\RAU_210368\Pro\Chor-Alkali\RAU_210368.aprx; 03 - Water Table Elevations in Fill Unit September 2023 || User: haley.duran || Print Date: 8/7/2024

CP-MWC3
CP-MWC2
CP-MWB3
CP-MWB2
CP-MWA3
CP-MWA2
CP-MW07
CP-MW08 6.98
CP-MW12
E PINE ST
L1-MW03
CP-MW10
EMW-8S
LAW-8
CP-MW11
EMW-14S 10.08
EMW-15S
LAW-4
LAW-3
CP-MWC1 7.78
CP-MW22 10.69
CP-MW13 10.82
CP-MWB1 6.91
CP-MW06 11.03
AMW-02 8.5
EMW-4S 9.47
CP-MW24 11.01
CP-MW103 7.28
CP-MWA1 8.24
EMW-19S 10.78
CP-MW101 10.57
CP-MW01 7.78
AMW-03 9.85
EMW-1S
CP-MW102 7.97
CP-MW09
CORNWALL AVE
11
10
9
8
7

Fill Unit Monitoring Wells

- Sampled in September 2023
- Not Sampled in September 2023
- Sept. 2023 Groundwater Elevation Contours
- September 2023 Groundwater Flow Direction
- City Storm Drain Line
- Historical Features
- ABC Recycling Lease Boundary
- Property Boundaries from ALTA Survey(David Evans and Associates, 2004)

CP-MW08 ← Well ID
6.98
Sept. 2023 Groundwater Elevation (FT NAVD88)

PROJECT NORTH
TRUE NORTH
45°

Notes:
- * Water level not included in contour analysis
- Sept. 2023 Groundwater Contours generated from Surfer Version 11

0 60 120
Feet

Water Table Elevations in Fill Unit September 2023

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect Consulting	AUG-2024	BY: AET / DIM / HMD	FIGURE NO. 3
	PROJECT NO. 210368	REVISED BY: ---/---	

Data source credits: None || Basemap Service Layer Credits: NA

GIS Path: G:\projects\Chor-Alkali\RAU_210368\Proj\Chor-Alkali\RAU_210368.aprx; 04 - Water Table Elevations in Fill Unit, March 2024 | User: haley.duran | Print Date: 8/9/2024

L1-MW03
CP-MW10
EMW-8S
CP-MWC3
LAW-8
CP-MWC2
EMW-14S
14.2
CP-MW11
EMW-15S
CP-MWC1
9.68
LAW-4
LAW-3
CP-MWB3
CP-MW22
13.15
CP-MWB2
CP-MW13
13.3
CP-MWB1
9.19
CP-MW06
13.46
9
10
11
12
13
AMW-02
10.63
EMW-4S
12.97
CP-MWA3
CP-MW24
13.69
CP-MWA2
CP-MW103
8.77
CP-MWA1
9.98
EMW-19S
13.66
CP-MW101
13.48
AMW-03
11.9
CP-MW01
9.4
EMW-1S
CP-MW07
CP-MW102
9.39
CP-MW08
8.27
CP-MW09
8.99
CP-MW12
CORNWALL AVE
E PINE ST

Sampled in March 2024
Not Sampled in March 2024
March 2024 Groundwater Elevation Contours (ft)
March 2024 Groundwater Flow Direction
City Storm Drain Line
Historical Features
ABC Recycling Lease Boundary
Property Boundaries from ALTA Survey(David Evans and Associates, 2004)

CP-MW08 ← Well ID
8.27
March 2024 Groundwater Elevation (FT NAVD88)

PROJECT NORTH
TRUE NORTH
45°

0 60 120
Feet

Water Table Elevations in Fill Unit March 2024

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING	AUG-2024	BY: AET / DIM / HMD	FIGURE NO. 4
	PROJECT NO. 210368	REVISED BY: ---/---	

Data source credits: None || Basemap Service Layer Credits: NA

GIS Path: G:\projects\Chlor-Alkali\RAU_210368\Pro\Chlor-Alkali\RAU_210368.aprx; 05 - Water Table Elevations in Fill Unit, June 2024 | | User: haleyduran | | Print Date: 8/9/2024

CP-MWC3
CP-MWC2
CP-MWB3
CP-MWB2
CP-MWA3
CP-MWA2
CP-MW07
CP-MW08
7.65
CP-MW12
E PINE ST
L1-MW03
CP-MW10
EMW-8S
LAW-8
EMW-14S
13.39
CP-MW11
EMW-15S
LAW-3
CP-MWC1
9.5
LAW-4
CP-MWB1
8.91
CP-MW22
12.88
CP-MW13
12.93
CP-MW06
12.9
EMW-4S
12.48
AMW-02
9.74
CP-MW24
12.98
CP-MW103
8.4
CP-MWA1
9.92
EMW-19S
12.94
CP-MW101
12.87
CP-MW01
8.96
AMW-03
11.79
EMW-1S
CP-MW102
8.42
CP-MW09
8.76
CORNWALL AVE
12
11
10
9

Sampled in June 2024
Not Sampled in June 2024
June 2024 Groundwater Elevation Contours (ft)
June 2024 Groundwater Flow Direction
City Storm Drain Line
Historical Features
ABC Recycling Lease Boundary
Property Boundaries from ALTA Survey(David Evans and Associates, 2004)

CP-MW08 ← Well ID
7.65
June 2024 Groundwater Elevation (FT NAVD88)

PROJECT NORTH
TRUE NORTH
45°

0 60 120
Feet

Water Table Elevations in Fill Unit June 2024

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING	AUG-2024	BY: AET / DIM / HMD	FIGURE NO. 5
	PROJECT NO. 210368	REVISED BY: ---/---	

Data source credits: None | | Basemap Service Layer Credits: NA

Fill Unit Monitoring Wells

- Sampled in April 2023
- Not Sampled in April 2023

Fill Unit Groundwater pH (Std. Units)
(April 2023)

- > 8.5
- > 10

- Railroad
- City Storm Drain Line
- Historical GP West Features
- ABC Recycling Lease Boundary
- Property Boundaries from ALTA Survey (David Evans and Associates, 2004)

CP-MW08 ← Well ID
7.34 ← Apr. 2023 Groundwater pH (std. units)

0 60 120
Feet

MILL NORTH
TRUE NORTH
45°

Groundwater pH Fill Unit
April 2023

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING	AUG-2024	BY: AET / DIM / HMD	FIGURE NO. 6
	PROJECT NO. 210368	REVISED BY: ---/---	

GIS Path: G:\projects\ChlorAlkaliRAU_210368\Pro\ChlorAlkaliRAU_210368.aprx || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 8/9/2024 || User: hailey.duran || Print Date: 8/9/2024

Data source credits: DIM / NLK || Basemap Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA

Fill Unit Monitoring Wells

- Sampled in September 2023
- Not Sampled in September 2023

Fill Unit Groundwater pH (Std. Units)

(September 2023)

- > 8.5
- > 10

- Railroad
- City Storm Drain Line
- Historic Features
- ABC Recycling Lease Boundary
- Property Boundaries from ALTA Survey(David Evans and Associates, 2004)

CP-MW08 7.33 — Well ID; Sept. 2023 Groundwater pH (std. units)

0 60 120

Feet

MILL NORTH

TRUE NORTH 45°

Groundwater pH in Fill Unit September 2023

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING	AUG-2024	BY: AET / DIM / HMD	FIGURE NO. 7
	PROJECT NO. 210368	REVISED BY: ---/---	

Data source credits: None || Basemap Service Layer Credits: NA

GIS Path: G:\projects\Chlor-Alkali\RAU_210368\Pro\Chlor-Alkali\RAU_210368.aprx; 07 - Fill Unit Groundwater pH September 2023 | User: haley.duran | | Print Date: 8/8/2024

GIS Path: G:\projects\Chor-Alkali\RAU_210368\Pre\Chor-Alkali\RAU_210368.aprx; 08 -Groundwater pH in Fill Unit, March 2024 | User: haley.duran | | Print Date: 8/8/2024

Not Sampled in March 2024

Sampled in March 2024

Fill Unit Groundwater pH (Std. Units)
(March 2024)

> 8.5

> 10

Railroad

City Storm Drain Line

Historic Features

Property Boundaries from ALTA Survey(David Evans and Associates, 2004)

ABC Recycling Lease Boundary

CP-MW08 ← Well ID
7.27 ← March 2024 Groundwater pH (std. units)

0 60 120
Feet

MILL NORTH
TRUE NORTH
45°

Groundwater pH in Fill Unit March 2024

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING	AUG-2024	BY: AET / DIM / HMD	FIGURE NO. 8
	PROJECT NO. 210368	REVISED BY: ---/---	

Data source credits: None | | Basemap Service Layer Credits: NA

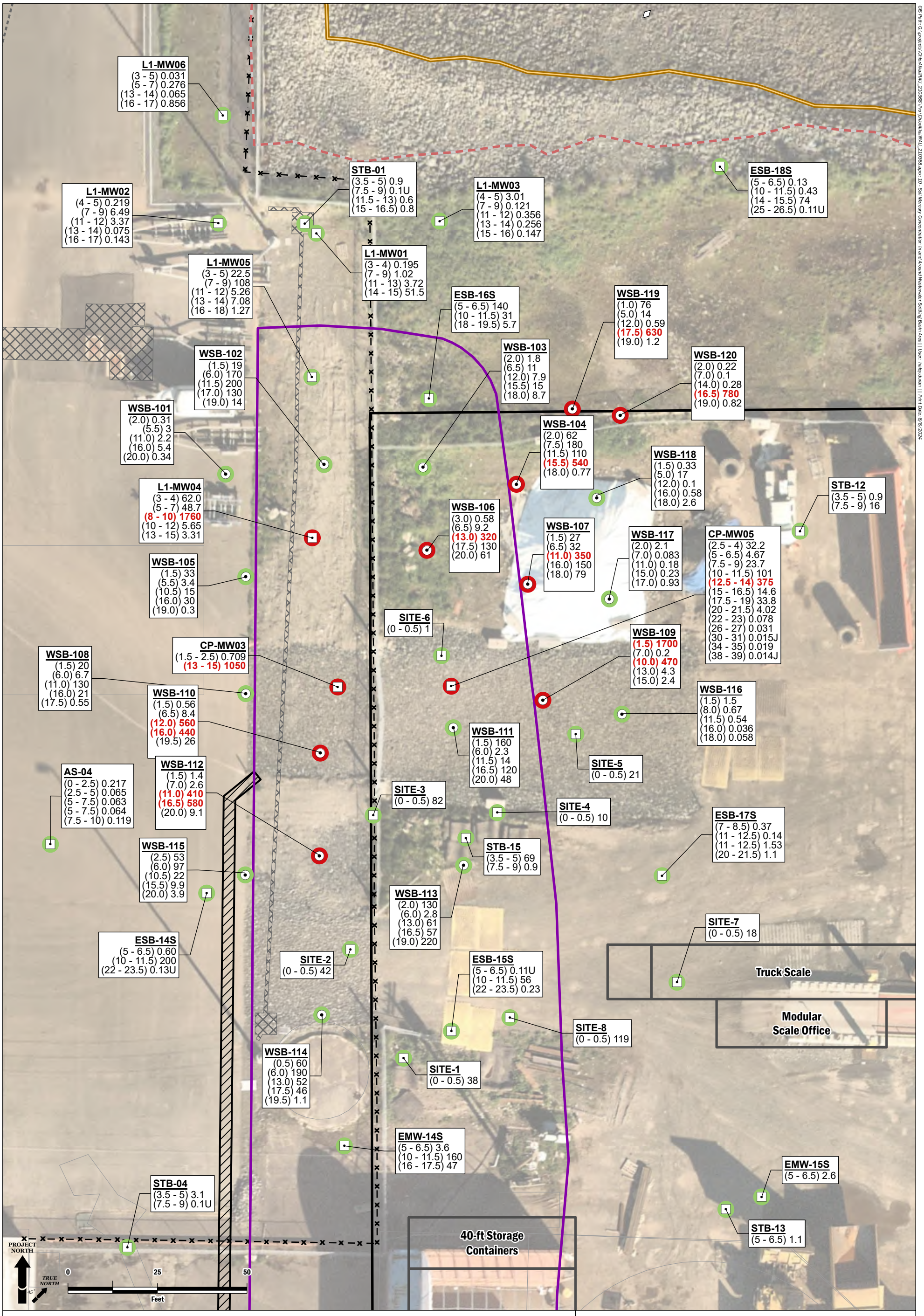
Groundwater pH in Fill Unit June 2024

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING	AUG-2024	BY: AET / DIM / HMD	FIGURE NO. 9
	PROJECT NO. 210368	REVISED BY: ---/---	

Data source credits: None || Basemap Service Layer Credits: NA

GIS Path: G:\projects\Chlor-Alkali\RAU_210368\Pro\Chlor-Alkali\RAU_210368.aprx; 09 - Groundwater pH in Fill Unit, June 2024 || User: haleyduran || Print Date: 8/8/2024



Mercury Concentrations in Soil

- Soil Hg > 300 mg/kg in all sample(s)
- Soil Hg > 300 mg/kg in all samples
- PRDI 3 Soil Boring
- Historical Soil Boring (RI Dataset)

- Wastewater Settling Basin (Approx)
- Limit of Log Pond Cap
- ABC Recycling Lease Boundary
- Mean Higher High Water (MHHW) Line
- Fence
- Electrical Utility Trench

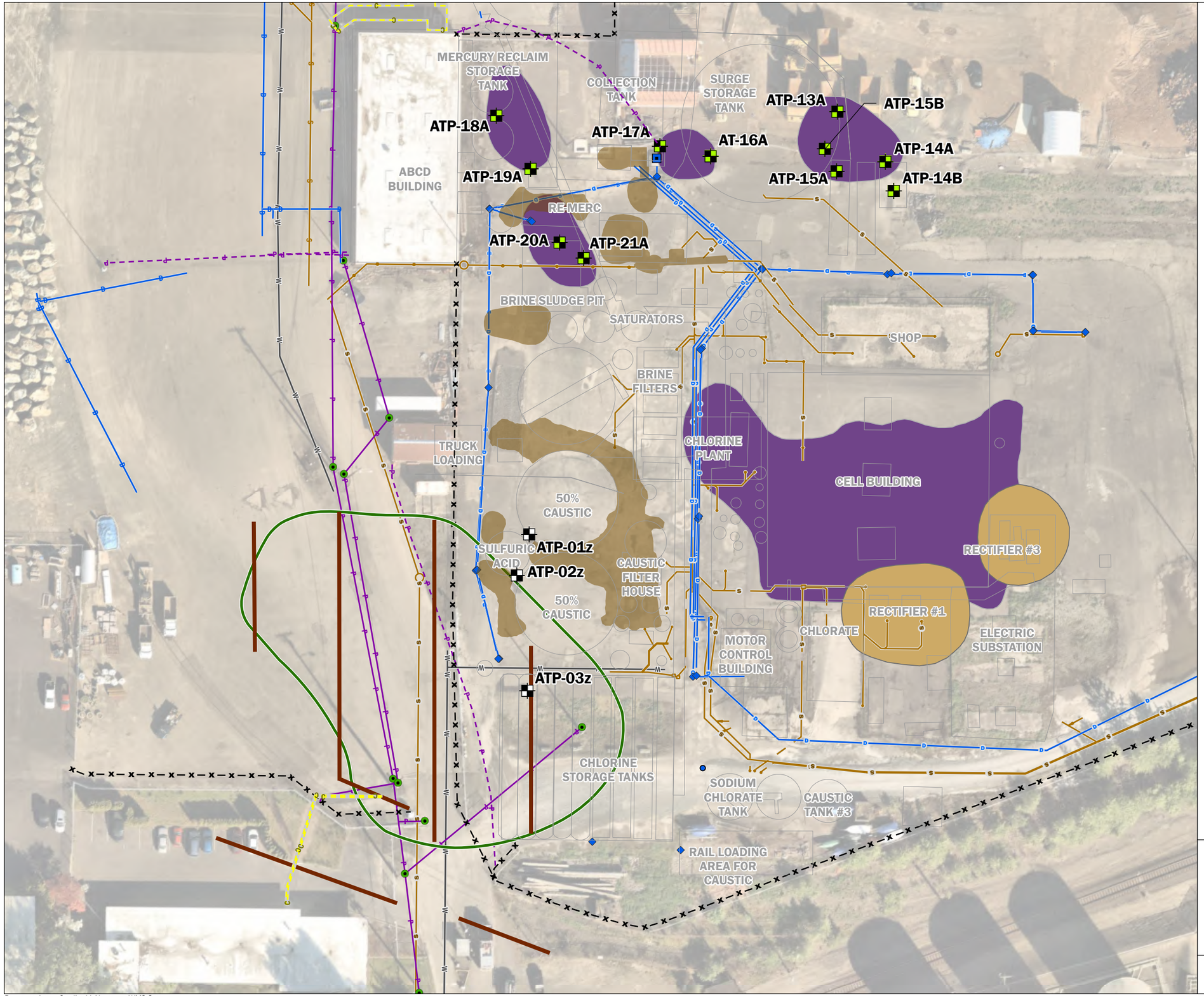
Soil Mercury Concentration In and Around Wastewater Settling Basin Area

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING	AUG-2024	BY: AET / DIM / HMD	FIGURE NO. 10
	PROJECT NO. 210368	REVISED BY: ---/---	

Data source credits: SJG / NLK || Basemap Service Layer Credits: NA

GIS Path: G:\projects\Chlor-Alkali\RAU_210368\Proj\Chlor-Alkali\RAU_210368.aprx; 10 - Soil Mercury Concentration In and Around Wastewater Settling Basin Area || User: haley.durham || Print Date: 8/8/2024



ISN Test Pits

ISS Test Pits

Remedial Components

- Obstruction Removal and In Situ Solidification of Soils
- Petroleum Hydrocarbon Soil Removal
- Previous Soil Removal/Offsite Disposal Areas, Caustic Plume-Cell Building Interim Action
- Preliminary ISN Trench Layouts
- Caustic Core Groundwater (pH >10 based on 2023-2024 data)
- Generalized Groundwater Flow Direction
- Fence
- Catch Basin
- Power Pole
- Storm Manhole
- Storm Vault
- Sewer
- Stormwater
- Power (Underground)
- Power Line (Overhead)
- Water Line
- Communication Line
- Historical GP West Features
- Property Boundaries from ALTA Survey (David Evans and Associates, 2004)

MILL NORTH

TRUE NORTH

45°

0 60 120

Feet

ISS and ISN Test Pit Locations

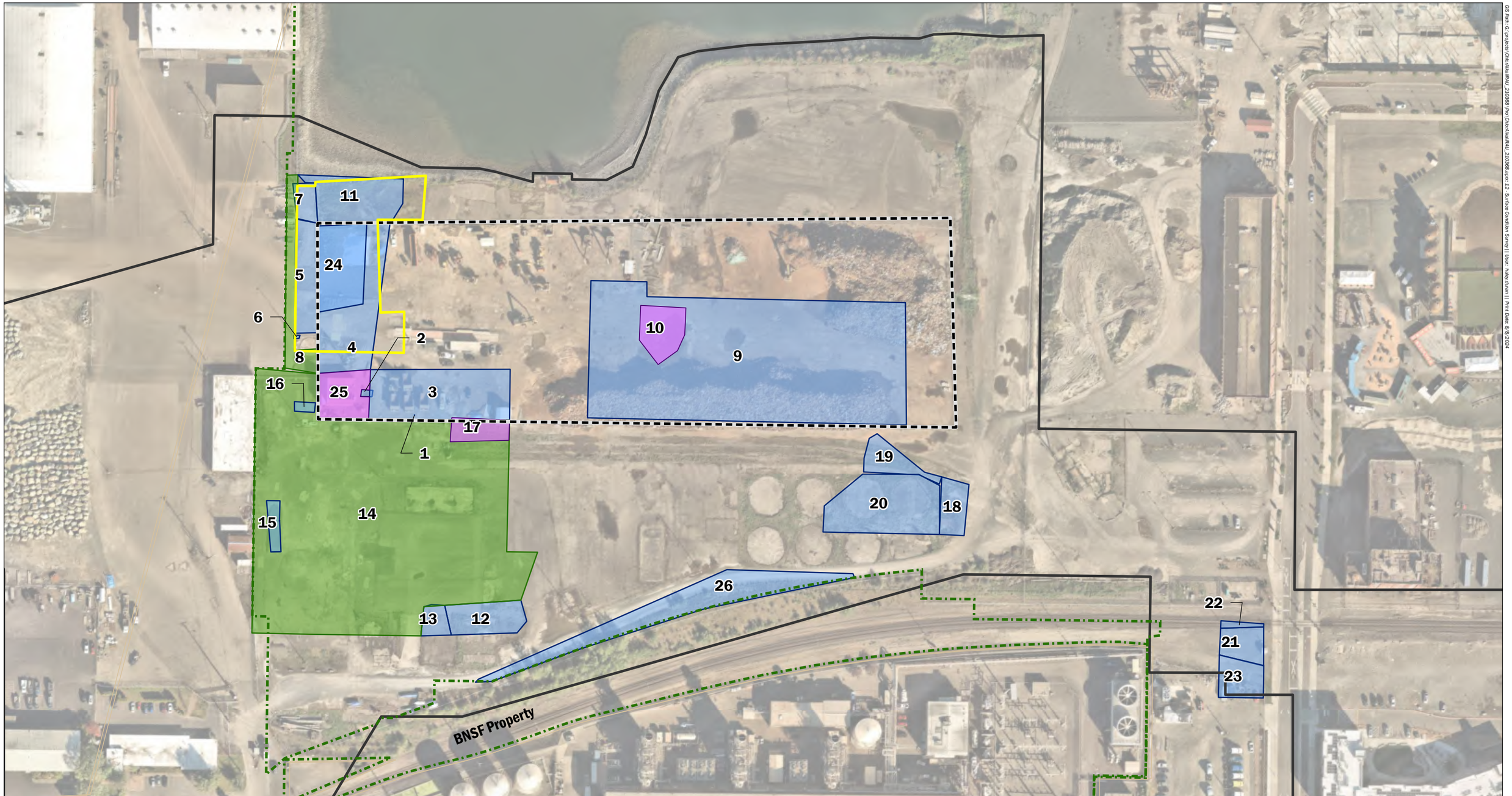
Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect Consulting	AUG-2024	BY: AET / HMD	FIGURE NO. 11
	PROJECT NO. 210368	REVISED BY: ---	

Basemap Layer Credits | | Nearmap WMS Server:

GIS Path: G:\projects\ChlorAlkaliRAU_210368\Pro\ChlorAlkaliRAU_210368.aprx | | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | | Date Saved: 8/8/2024 | | User: hailey.duran | | Print Date: 8/8/2024

GIS Path: G:\Projects\Olin\Alkali\RAU_210368\Pro\Olin\Alkali\RAU_210368.aprx | Layout: 12 - Surface Condition Survey | | User: haley.duran | | Print Date: 8/8/2024



Observed Surface Conditions (Oct. 2023)

- Category 1: Hard Cap In Suitable Condition
- Category 2: Hard Cap Absent or In Unsuitable Condition
- Category 3: Surface Obscured, Condition Uncertain

- ABC Lease Boundary
- Unpaved Area
- Chlor-Alkali RAU Boundary
- Property Boundary
- Bellingham Tax Parcels

MILL NORTH
TRUE NORTH
45°

0 70 140 Feet

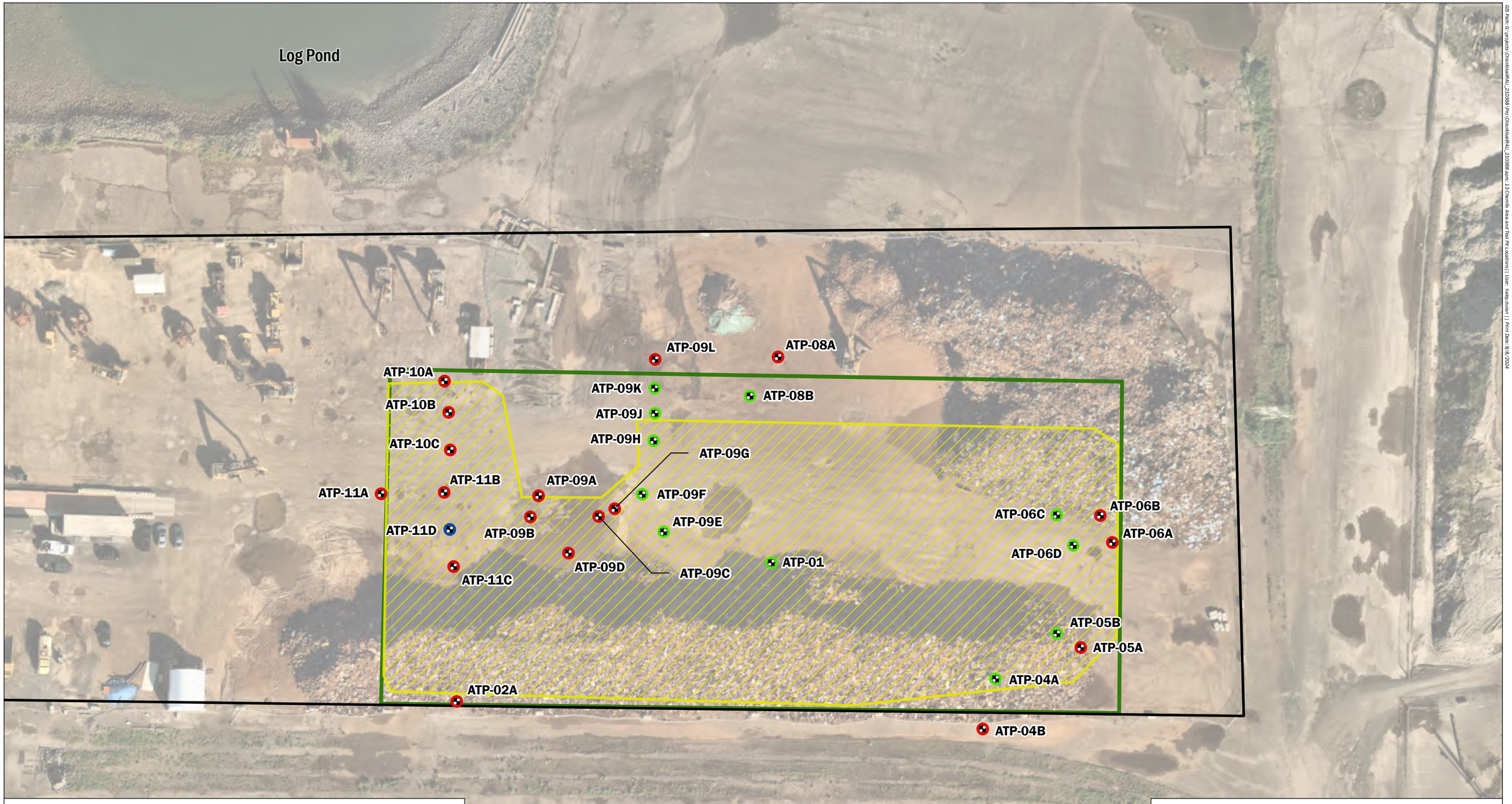
Note:
- Surface condition survey conducted Oct. 10-11, 2023

Surface Condition Survey Results for Hard Cap Areas

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect CONSULTING	AUG-2024	BY: AET / HMD	FIGURE NO. 12
	PROJECT NO. 210368	REVISED BY: ---/---	

Data source credits: None | | Basemap Service Layer Credits: NA



Test Pit

- Geotextile Absent
- Geotextile Present
- Deep Test Pit to Confirm Chemfix Material Present Where Geotextile Absent
- Chemfix Area (based on historical Information)
- Interpreted Chemfix Area for Capping Purposes
- ABC Lease Boundary

0 30 60 Feet

PROJECT NORTH

TRUE NORTH

45°

Chemfix Area Test Pit Locations

Pre-Remedial Design Investigation 3 Data Report
Chlor-Alkali RAU - GP West Site
Bellingham, Washington

Aspect Consulting	AUG-2024	BY: ACG / HMD	FIGURE NO. 13
	PROJECT NO. 210368	REVISED BY: ---/---	

Data source credits: None | | Basemap Service Layer Credits: NA

GIS Path: G:\projects\Chlor-Alkali\RAU_210368\Pro\ChlorAlkaliRAU_210368.aprx | Chemfix Area and Test Pit Locations | User: haley.duran | | Print Date: 8/8/2024

APPENDIX A

Data Validation Reports and Laboratory Analytical Reports for 2023 and 2024 Groundwater Sampling

DATA VALIDATION REPORT

GP West Chlor Alkali RAU
Groundwater Sampling
April 2023
Sample Delivery Group EV23040104

Prepared by:

Aspect Consulting, LLC
710 Second Ave, Suite 550
Seattle, WA 98104

Project No. 210368 • June 2023

S:\Aspect\InfoServices\Database\EQuIS\Data Projects\GP\GP West Chlor Alkali\2023-04 GW\ValidationReport_EV23040104_202304GW.docx

Contents

1 Introduction 1

2 Data Validation Findings for SDG EV23040104 1

2.1 Sample Receipt and Preservation 2
2.2 Mercury (EPA1631E) 2
2.2.1 Holding Times 2
2.2.2 Method Blanks 2
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1 Introduction

This report summarizes the findings of groundwater sampling for the GP West Chlor-Alkali RAU Cleanup in April 2023. A complete list of samples and analyses for the sample delivery group (SDG) is provided in Section 2.

Samples were sent to ALS Environmental (Everett, WA) for analysis of various parameters. The analytical methods are summarized in Table 1 below:

Table 1. Analytical Methods

SDG	Analysis	Method	Lab	Validation Level
EV23040104	Conventionals	EPA300.0	ALS-Ev	2a
EV23040104	Conventionals	EPA376.1	ALS-Ev	2a
EV23040104	Conventionals	SM2320B	ALS-Ev	2a
EV23040104	Conventionals	SM5310C	ALS-Ev	2a
EV23040104	Metals	EPA1631E	ALS-Ev	2a
EV23040104	Metals	EPA200.8	ALS-Ev	2a

Data assigned a J/UJ qualifier (estimated) may be used for site evaluation purposes but the reasons for qualification should be considered when interpreting sample concentrations. Values without qualification meet all data measurement quality objectives and are suitable for use.

Data qualifier definitions and a summary table of the qualified data are included in the Qualified Data Summary at the end of this report. Data qualifiers have been incorporated into the project chemistry database to reflect the validation in this report.

2 Data Validation Findings for SDG EV23040104

Soil samples in this SDG, and the chemical analyses performed on them, are tabulated below. The sections below describe the results of the data quality review for this SDG by analyte group (analysis).

Table 2. Sample Index

Sample Name	Sample Date	EPA1631E	EPA200.8	EPA300.0	EPA376.1	SM2320B	SM5310C
AMW-02-20230418	04/18/2023	X	X	X	X	X	X
AMW-03-20230418	04/18/2023	X	X	X	X	X	X
CP-MW01-20230417	04/17/2023	X	X	X		X	
CP-MW06-20230417	04/17/2023	X	X	X	X	X	X
CP-MW08-20230417	04/17/2023	X					
CP-MW09-20230417	04/17/2023	X					
CP-MW13-20230417	04/17/2023	X	X	X		X	
CP-MW22-20230417	04/17/2023	X	X	X		X	
CP-MW24-20230417	04/17/2023	X	X	X	X	X	X
CP-MWA1-20230418	04/18/2023	X	X	X	X	X	X
CP-MWB1-20230418	04/18/2023	X	X	X	X	X	X
CP-MWC1-20230418	04/18/2023	X	X	X		X	
EMW-04S-20230417	04/17/2023	X				X	
EMW-14S-20230418	04/18/2023	X	X	X		X	
EMW-19S-20230418	04/18/2023	X	X	X	X	X	X

2.1 Sample Receipt and Preservation

Sample receipt and preservation (2-6 degrees C) were acceptable.

2.2 Mercury (EPA1631E)

2.2.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.2.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.2.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.2.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.2.5 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

All MS and MSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.2.6 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. The MSD was used as the LD. No qualification or action was needed.

2.2.7 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.2.8 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.2.9 Overall Assessment

Accuracy was acceptable based on the LCS %R, except as noted above. Precision was acceptable based on the MS/MSD RPD values, except as noted above. The data are of known quality and are acceptable for use as qualified.

2.3 Alkalinity (SM2320B)

2.3.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.3.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.3.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.3.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.3.5 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.3.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.3.7 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.3.8 Overall Assessment

Accuracy was acceptable based on the LCS %R, except as noted above. Precision was acceptable based on the LD RPD values, except as noted above. The data are of known quality and are acceptable for use as qualified.

2.4 Sulfide (EPA376.1)

2.4.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.4.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.4.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.4.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.4.5 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

All MS and MSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.4.6 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.4.7 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.4.8 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.4.9 Overall Assessment

Accuracy was acceptable based on the LCS/LCSD %R, except as noted above. Precision was acceptable based on the MS/MSD and LD RPD values, except as noted above. The data are of known quality and are acceptable for use as qualified.

2.5 TOC (SM5310C)

2.5.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.5.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.5.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.5.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.5.5 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

All MS %R were within the laboratory specified control limits. No qualification or action was needed.

2.5.6 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.5.7 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.5.8 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.5.9 Overall Assessment

Accuracy was acceptable based on the LCS %R, except as noted above. Precision was acceptable based on the LD RPD values, except as noted above. The data are of known quality and are acceptable for use as qualified.

2.6 Metals (EPA200.8)

2.6.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.6.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.6.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.6.4 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.6.5 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

All MS and MSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.6.6 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.6.7 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.6.8 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.6.9 Overall Assessment

Accuracy was acceptable based on the LCS/LCSD %R, except as noted above. Precision was acceptable based on the LCS/LCSD, MS/MSD, and LD RPD values, except as noted above. The data are of known quality and are acceptable for use as qualified.

2.7 Anions (EPA300.0)

2.7.1 Holding Times

Samples were analyzed within the requisite holding time limit, with the following exception(s):

Nitrate for CP-MWA1-20230418 was analyzed about 50 hours after collection, which exceeds the 48-hour hold time. The results were qualified as estimated (J/UJ).

2.7.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.7.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.7.4 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.7.5 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

All MS %R were within the laboratory specified control limits, with the following exception(s):

Nitrate – MS %R was below the lower control limit. Associated results are qualified as estimated (J/UJ).

2.7.6 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.7.7 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.7.8 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.7.9 Overall Assessment

Accuracy was acceptable based on the LCS/LCSD %R, except as noted above. Precision was acceptable based on the LCS/LCSD and LD RPD values, except as noted above. The data are of known quality and are acceptable for use as qualified.

3 Qualified Data Summary

Qualified sample results are listed below. Results flagged non-detect (U) by lab with no further qualification necessary are not listed.

Table 3. Qualified Data Summary

Sample ID	Method	Analyte	Qualifier	Reason
CP-MWA1-20230418	EPA300.0	Nitrate as Nitrogen	UJ	Hold Time Exceeded
CP-MW01-20230417	EPA300.0	Nitrite as Nitrogen	UJ	MS %R Low

Table 4. Data Qualifier Definitions

Data Qualifier	Definition
J	The analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.
R	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
U	The analyte was analyzed for but was considered not detected at the reporting limit or reported value.
UJ	The analyte was analyzed for, and the associated quantitation limit was an estimated value.

DATA VALIDATION REPORT

GP West Chlor Alkali RAU
Groundwater Sampling
September 2023
Sample Delivery Group EV23090105

Prepared by:

Aspect Consulting, LLC
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Project No. 210368 • October 2023

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1 Introduction

This report summarizes the findings of groundwater sampling for the GP West Chlor-Alkali RAU Cleanup in September 2023. A complete list of samples and analyses for the sample delivery group (SDG) is provided in Section 2.

Samples were sent to ALS Environmental (Everett, WA) for analysis of various parameters. The analytical methods are summarized in Table 1 below:

Table 1. Analytical Methods

SDG	Analysis	Method	Lab	Validation Level
EV23090105	Nitrate/Nitrite/Sulfate	EPA300.0	ALS-Ev	2A
EV23090105	Sulfide	EPA376.1	ALS-Ev	2A
EV23090105	Total Alkalinity	SM2320B	ALS-Ev	2A
EV23090105	Total Organic Carbon	SM5310C	ALS-Ev	2A
EV23090105	Mercury	EPA1631E	ALS-Ev	2A
EV23090105	Metals	EPA200.8	ALS-Ev	2A

Data assigned a J/UJ qualifier (estimated) may be used for site evaluation purposes but the reasons for qualification should be considered when interpreting sample concentrations. Values without qualification meet all data measurement quality objectives and are suitable for use.

Data qualifier definitions and a summary table of the qualified data are included in the Qualified Data Summary at the end of this report. Data qualifiers have been incorporated into the project chemistry database to reflect the validation in this report.

2 Data Validation Findings for SDG EV23090105

Groundwater samples in this SDG, and the chemical analyses performed on them, are tabulated below. The sections below describe the results of the data quality review for this SDG by analyte group (analysis).

Table 2. Sample Index

Sample Name	Sample Date	EPA1631E	EPA200.8	EPA300.0	EPA376.1	SM2320B	SM5310C
AMW-02-20230919	09/19/2023	X	X	X	X	X	X
AMW-500-20230919	09/19/2023	X	X	X	X	X	X
CP-MW01-20230919	09/19/2023	X	X	X	X	X	X
CP-MW103-20230919	09/19/2023	X	X	X	X	X	X
CP-MWB1-20230919	09/19/2023	X	X	X	X	X	X
CP-MWC1-20230919	09/19/2023	X	X	X	X	X	X
EMW-14S-20230919	09/19/2023	X	X	X	X	X	X

2.1 Sample Receipt and Preservation

Sample receipt and preservation (2.1 degrees C) were acceptable. The samples collected from EMW-14S and CP-MWB1 for sulfide analysis were inadvertently field filtered. The results for these two samples should be considered as dissolved sulfides and have been reported as such on summary reports. In addition, the sample collected from EMW-14S for metals analysis (all except mercury) was inadvertently not field filtered. Metals results for this sample have been reported as total rather than dissolved.

2.2 Mercury (EPA1631E)

2.2.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.2.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.2.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.2.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.2.5 Laboratory Duplicates/Matrix Spikes/Matrix Spike Duplicates

Laboratory duplicates, matrix spikes, and matrix spike duplicates were not performed on the project samples. The lab manager indicated that a duplicate, matrix spike matrix spike duplicate were performed on non-project samples in the same batch.

2.2.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.2.7 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.2.8 Overall Assessment

Accuracy and precision were acceptable. The data are of known quality and are acceptable for use without qualification.

2.3 Alkalinity (SM2320B)

2.3.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.3.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.3.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.3.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.3.5 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.3.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.3.7 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.3.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS %R and RPD values. The data are of known quality and are acceptable for use without qualification.

2.4 Sulfide (EPA376.1)

2.4.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.4.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.4.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.4.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.4.5 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

All MS and MSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.4.6 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.4.7 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.4.8 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.4.9 Overall Assessment

Accuracy and precision were acceptable based on the LCS/LCSD %R and RPD. The data are of known quality and are acceptable for use without qualification.

2.5 TOC (SM5310C)

2.5.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.5.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.5.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.5.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.5.5 Laboratory Duplicates/Matrix Spikes/Matrix Spike Duplicates

Laboratory duplicates, matrix spikes, and matrix spike duplicates were not performed on the project samples. The lab manager indicated that a duplicate, matrix spike matrix spike duplicate were performed on non-project samples in the same batch.

2.5.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.5.7 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.5.8 Overall Assessment

Accuracy and precision were acceptable. The data are of known quality and are acceptable for use without qualification.

2.6 Metals (EPA200.8)

2.6.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.6.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.6.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.6.4 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.6.5 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.6.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.6.7 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.6.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS/LCSD %R, and RPD values. The data are of known quality and are acceptable for use without qualification.

2.7 Anions (EPA300.0)

2.7.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.7.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.7.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.7.4 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.7.5 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.7.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.7.7 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.7.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS/LCSD %R and RPD values, except as noted above. The data are of known quality and are acceptable for use without qualification.

3 Qualified Data Summary

No sample results were qualified.

DATA VALIDATION REPORT

GP West Chlor Alkali RAU
Groundwater Sampling
September 2023
Sample Delivery Group EV23090120

Prepared by:

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Project No. 210368 • October 2023

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1 Introduction

This report summarizes the findings of groundwater sampling for the GP West Chlor-Alkali RAU Cleanup in September 2023. A complete list of samples and analyses for the sample delivery group (SDG) is provided in Section 2.

Samples were sent to ALS Environmental (Everett, WA) for analysis of various parameters. The analytical methods are summarized in Table 1 below:

Table 1. Analytical Methods

SDG	Analysis	Method	Lab	Validation Level
EV23090120	Nitrate/Nitrite/Sulfate	EPA300.0	ALS-Ev	2A
EV23090120	Sulfide	EPA376.1	ALS-Ev	2A
EV23090120	Total Alkalinity	SM2320B	ALS-Ev	2A
EV23090120	Total Organic Carbon	SM5310C	ALS-Ev	2A
EV23090120	Mercury	EPA1631E	ALS-Ev	2A
EV23090120	Metals	EPA200.8	ALS-Ev	2A

Data assigned a J/UJ qualifier (estimated) may be used for site evaluation purposes but the reasons for qualification should be considered when interpreting sample concentrations. Values without qualification meet all data measurement quality objectives and are suitable for use.

Data qualifier definitions and a summary table of the qualified data are included in the Qualified Data Summary at the end of this report. Data qualifiers have been incorporated into the project chemistry database to reflect the validation in this report.

2 Data Validation Findings for SDG EV23090120

Groundwater samples in this SDG, and the chemical analyses performed on them, are tabulated below. The sections below describe the results of the data quality review for this SDG by analyte group (analysis).

Table 2. Sample Index

Sample Name	Sample Date	EPA1631E	EPA200.8	EPA300.0	EPA376.1	SM2320B	SM5310C
EMW-19S-20230920	09/20/2023	X	X	X	X	X	X
EMW-04S-20230920	09/20/2023	X	X	X	X	X	X
CP-MW24-20230920	09/20/2023	X	X	X	X	X	X
CP-MW101-20230920	09/20/2023	X	X	X	X	X	X
CP-MW06-20230920	09/20/2023	X	X	X	X	X	X
AMW-03-20230920	09/20/2023	X	X	X	X	X	X
CP-MWA1-20230920	09/20/2023	X	X	X	X	X	X
CP-MW09-20230921	09/21/2023	X	X	X	X	X	X
CP-MW13-20230921	09/21/2023	X	X	X	X	X	X
CP-MW08-20230921	09/21/2023	X	X	X	X	X	X
CP-MW22-20230921	09/21/2023	X	X	X	X	X	X
CP-MW102-20230921	09/21/2023	X	X	X	X	X	X

2.1 Sample Receipt and Preservation

Sample receipt and preservation (2.4 to 2.9 degrees C) were acceptable.

2.2 Mercury (EPA1631E)

2.2.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.2.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.2.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.2.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.2.5 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

MS/MSD was performed on sample CP-MW101-20230920. Both the MS and MSD recoveries were below acceptable limits. The mercury result for sample, CP-MW101-20230920 was qualified as J.

2.2.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.2.7 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.2.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS %R and RPD values. The data are of known quality and are acceptable for use without qualification.

2.3 Alkalinity (SM2320B)

2.3.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.3.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.3.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.3.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.3.5 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.3.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.3.7 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.3.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS %R and RPD values. The data are of known quality and are acceptable for use without qualification.

2.4 Sulfide (EPA376.1)

2.4.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.4.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.4.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.4.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.4.5 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.4.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.4.7 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.4.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS/LCSD %R and RPD. The data are of known quality and are acceptable for use without qualification.

2.5 TOC (SM5310C)

2.5.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.5.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.5.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.5.4 Laboratory Control Samples (LCS)

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.5.5 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.5.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.5.7 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.5.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS %R and RPD values. The data are of known quality and are acceptable for use without qualification.

2.6 Metals (EPA200.8)

2.6.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.6.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.6.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.6.4 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.6.5 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.6.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.6.7 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.6.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS/LCSD %R, and RPD values. The data are of known quality and are acceptable for use without qualification.

2.7 Anions (EPA300.0)

2.7.1 Holding Times

The following samples were analyzed for nitrate and nitrite outside of the required holding time: EMW-19S-20230920, EMW-4S-20230920, CP-MW24-20230920, CP-MW101-20230920, CP-MW06-20230920, AMW-03-20230920, and CP-MWA1-20230920. Since the holding time was exceeded by less than one day, the nitrate and nitrite results for these samples were qualified as UJ. The remaining samples were analyzed within the requisite holding time limits.

2.7.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.7.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.7.4 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.7.5 Laboratory Duplicates (LD)

All LD RPD were within the laboratory specified control limits. No qualification or action was needed.

2.7.6 Field Duplicates (FD)

Field duplicates were not required for this project; no FD samples were collected.

2.7.7 Case Narrative/Laboratory Qualification

No case narrative notes provided.

2.7.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS/LCSD %R and RPD values, except as noted above. The data are of known quality and are acceptable for use without qualification.

3 Qualified Data Summary

Qualified sample results are listed below. Results flagged non-detect (U) by lab with no further qualification necessary are not listed.

Table 3. Qualified Data Summary

Sample ID	Method	Analytes	Qualifier	Reason
EMW-19S-20230920	EPA300.0	Nitrate, Nitrite	UJ	Hold Time Exceeded
EMW-4S-20230920	EPA300.0	Nitrate, Nitrite	UJ	Hold Time Exceeded
CP-MW24-20230920	EPA300.0	Nitrate, Nitrite	UJ	Hold Time Exceeded
CP-MW101-20230920	EPA300.0	Nitrate, Nitrite	UJ	Hold Time Exceeded
CP-MW06-20230920	EPA300.0	Nitrate, Nitrite	UJ	Hold Time Exceeded
AMW-03-20230920	EPA300.0	Nitrate, Nitrite	UJ	Hold Time Exceeded
CP-MWA1-20230920	EPA300.0	Nitrate, Nitrite	UJ	Hold Time Exceeded
CP-MW101-20230920	EPA1631E	Mercury	J	MS/MSD Recoveries Low

Table 4. Data Qualifier Definitions

Data Qualifier	Definition
J	The analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.
U	The analyte was analyzed for but was considered not detected at the reporting limit or reported value.
UJ	The analyte was analyzed for, and the associated quantitation limit was an estimated value.

DATA VALIDATION REPORT

GP West Chlor Alkali RAU
Groundwater Sampling
March 2024
Sample Delivery Group EV24030054

Prepared by:

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Project No. 210368 • March 2024

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1 Introduction

This report summarizes the findings of groundwater sampling for the GP West Chlor-Alkali RAU Cleanup in March 2024. A complete list of samples and analyses for the sample delivery group (SDG) is provided in Section 2.

Samples were sent to ALS Environmental (Everett, WA) for analysis of various parameters. The analytical methods are summarized in Table 1 below:

Table 1. Analytical Methods

SDG	Analysis	Method	Lab	Validation Level
EV24030054	Nitrate/Nitrite/Sulfate	EPA300.0	ALS-Ev	2A
EV24030054	Sulfide	EPA376.1	ALS-Ev	2A
EV24030054	Total Alkalinity	SM2320B	ALS-Ev	2A
EV24030054	Total Organic Carbon	SM5310C	ALS-Ev	2A
EV24030054	Mercury	EPA1631E	ALS-Ev	2A
EV24030054	Metals	EPA200.8	ALS-Ev	2A

Data assigned a J/UJ qualifier (estimated) may be used for site evaluation purposes but the reasons for qualification should be considered when interpreting sample concentrations. Values without qualification meet all data measurement quality objectives and are suitable for use.

Data qualifier definitions and a summary table of the qualified data are included in the Qualified Data Summary at the end of this report. Data qualifiers have been incorporated into the project chemistry database to reflect the validation in this report.

2 Data Validation Findings for SDG EV24030054

Groundwater samples in this SDG, and the chemical analyses performed on them, are tabulated below. The sections below describe the results of the data quality review for this SDG by analyte group (analysis).

Table 2. Sample Index

Sample Name	Sample Date	EPA1631E	EPA200.8	EPA300.0	EPA376.1	SM2320B	SM5310C
AMW-02-20240306	03/06/2024	X	X	X	X	X	X
CP-MW01-20240306	03/06/2024	X	X	X	X	X	X
CP-MW103-20240306	03/06/2024	X	X	X	X	X	X
CP-MWB1-20240306	03/06/2024	X	X	X	X	X	X
CP-MWC1-20240306	03/06/2024	X	X	X	X	X	X
EMW-14S-20240306	03/06/2024	X	X	X	X	X	X

2.1 Sample Receipt and Preservation

Sample receipt and preservation (3.6 to 3.8 degrees C) were acceptable.

2.2 Mercury (EPA1631E)

2.2.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.2.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank.

2.2.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.2.4 Laboratory Control Sample (LCS) and LCS Duplicate

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.2.5 Laboratory Duplicate

A laboratory duplicate was not performed on the project samples.

2.2.6 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

The matrix spikes and matrix spike duplicate for this sample delivery group were performed on non-project samples. The %R and RPD were acceptable.

2.2.7 Field Duplicates (FD)

A field duplicate was not collected.

2.2.8 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.2.9 Overall Assessment

Accuracy and precision were acceptable. Accuracy and precision were acceptable based on the MS/MSD and LCS/LCSD %R and RPD values. The data are of known quality and are acceptable for use without qualification.

2.3 Alkalinity (SM2320B)

2.3.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.3.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.3.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.3.4 Laboratory Control Sample (LCS) and LCS Duplicate

All LCS/LCSD %R and RPD were within the laboratory specified control limits.

2.3.5 Laboratory Duplicates/Matrix Spikes/Matrix Spike Duplicates

Laboratory duplicates, matrix spikes, and matrix spike duplicates were not performed on the project samples.

2.3.6 Field Duplicate (FD)

A field duplicate was not collected.

2.3.7 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.3.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS/LCSD %R and RPD values. The data are of known quality and are acceptable for use without qualification.

2.4 Sulfide (EPA376.1)

2.4.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.4.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.4.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.4.4 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.4.5 Laboratory Duplicate

A laboratory duplicate was not performed on the project samples.

2.4.6 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

The matrix spike and matrix spike duplicate for this sample delivery group were performed on non-project samples. The %R and RPD were acceptable.

2.4.7 Field Duplicate (FD)

A field duplicate was not collected.

2.4.8 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.4.9 Overall Assessment

Accuracy and precision were acceptable based on the MS/MSD and LCS/LCSD %R and RPD. The data are of known quality and are acceptable for use without qualification.

2.5 TOC (SM5310C)

2.5.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.5.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.5.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.5.4 Laboratory Control Sample (LCS) and LCS Duplicate

All LCS/LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.5.5 Laboratory Duplicates/Matrix Spikes/Matrix Spike Duplicates

Laboratory duplicates, matrix spikes, and matrix spike duplicates were not performed on the project samples.

2.5.6 Field Duplicate (FD)

A field duplicate was not collected.

2.5.7 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.5.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS/LCSD %R and RPD values. The data are of known quality and are acceptable for use without qualification.

2.6 Metals (EPA200.8)

2.6.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.6.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.6.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.6.4 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.6.5 Laboratory Duplicate

A laboratory duplicate was not performed on the project samples.

2.6.6 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

The matrix spike and matrix spike duplicate for this sample delivery group were performed on non-project samples. The %R and RPD were acceptable.

2.6.7 Field Duplicate (FD)

A field duplicate was not collected.

2.6.8 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.6.9 Overall Assessment

Accuracy and precision were acceptable based on the MS/MSD and LCS/LCSD %R and RPD values. The data are of known quality and are acceptable for use without qualification.

2.7 Anions (EPA300.0)

2.7.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.7.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.7.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.7.4 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.7.5 Laboratory Duplicates/Matrix Spikes/Matrix Spike Duplicates

Laboratory duplicates, matrix spikes, and matrix spike duplicates were not performed on the project samples.

2.7.6 Field Duplicate (FD)

A field duplicate was not collected.

2.7.7 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.7.8 Overall Assessment

Accuracy and precision were acceptable based on the LCS/LCSD %R and RPD values, except as noted above. The data are of known quality and are acceptable for use without qualification.

3 Qualified Data Summary

No sample results were qualified.

DATA VALIDATION REPORT

GP West Chlor Alkali RAU
Groundwater Sampling
June 2024
Sample Delivery Group EV24030054

Prepared by:

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Project No. 210368 • July 2024

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1 Introduction

This report summarizes the findings of groundwater sampling for the GP West Chlor-Alkali RAU Cleanup in June 2024. A complete list of samples and analyses for the sample delivery group (SDG) is provided in Section 2.

Samples were sent to ALS Environmental (Everett, WA) for analysis of various parameters. The analytical methods are summarized in Table 1 below:

Table 1. Analytical Methods

SDG	Analysis	Method	Lab	Validation Level
EV24060124	Nitrate/Nitrite/Sulfate	EPA300.0	ALS-Ev	2A
EV24060124	Sulfide	EPA376.1	ALS-Ev	2A
EV24060124	Total Alkalinity	SM2320B	ALS-Ev	2A
EV24060124	Total Organic Carbon	SM5310C	ALS-Ev	2A
EV24060124	Mercury	EPA1631E	ALS-Ev	2A
EV24060124	Metals	EPA200.8	ALS-Ev	2A

Data assigned a J/UJ qualifier (estimated) may be used for site evaluation purposes but the reasons for qualification should be considered when interpreting sample concentrations. Values without qualification meet all data measurement quality objectives and are suitable for use.

Data qualifier definitions and a summary table of the qualified data are included in the Qualified Data Summary at the end of this report. Data qualifiers have been incorporated into the project chemistry database to reflect the validation in this report.

2 Data Validation Findings for SDG EV24060124

Groundwater samples in this SDG, and the chemical analyses performed on them, are tabulated below. The sections below describe the results of the data quality review for this SDG by analyte group (analysis).

Table 2. Sample Index

Sample Name	Sample Date	EPA1631E	EPA200.8	EPA300.0	EPA376.1	SM2320B	SM5310C
AMW-02-20240306	06/13/2024	X	X	X	X	X	X
CP-MW4-20240613	06/13/2024	X	X	X	X	X	X
CP-MWA1-20240613	06/13/2024	X	X	X	X	X	X
EMW-14S-20240613	06/13/2024	X	X	X	X	X	X
EMW-19S-20240613	06/13/2024	X	X	X	X	X	X

2.1 Sample Receipt and Preservation

Sample receipt and preservation (4.3 degrees C) were acceptable.

2.2 Mercury (EPA1631E)

2.2.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.2.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank.

2.2.3 Laboratory Control Sample (LCS)

The LCS percent recovery was within the laboratory specified control limits. No qualification or action was needed.

2.2.4 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.2.5 Overall Assessment

Accuracy and precision were acceptable. The data are of known quality and are acceptable for use without qualification.

2.3 Alkalinity (SM2320B)

2.3.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.3.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.3.3 Laboratory Control Sample (LCS) and LCS Duplicate

All LCS/LCSD %R and RPD were within the laboratory specified control limits.

2.3.4 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.3.5 Overall Assessment

Accuracy and precision were acceptable. The data are of known quality and are acceptable for use without qualification.

2.4 Sulfide (EPA376.1)

2.4.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.4.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.4.3 Laboratory Control Sample (LCS)

The LCS percent recovery was within the laboratory specified control limits. No qualification or action was needed.

2.4.4 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.4.5 Overall Assessment

Accuracy and precision were acceptable based. The data are of known quality and are acceptable for use without qualification.

2.5 TOC (SM5310C)

2.5.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.5.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.5.3 Laboratory Control Sample (LCS)

The LCS percent recovery was within the laboratory specified control limits. No qualification or action was needed.

2.5.4 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.5.5 Overall Assessment

Accuracy and precision were acceptable. The data are of known quality and are acceptable for use without qualification.

2.6 Metals (EPA200.8)

2.6.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.6.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.6.3 Laboratory Control Samples/Laboratory Control Sample Duplicate (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits with the exception of the LCSD recovery of sodium. At 106%, it was just over the laboratory's control limits of 80 to 105%. All sample sodium results were qualified J based on the LCSD recovery.

2.6.4 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.6.5 Overall Assessment

Accuracy and precision were acceptable with the exception of sodium results, which were qualified J based on a slightly high LCSD recovery. The data are of known quality and are acceptable for use as qualified.

2.7 Anions (EPA300.0)

2.7.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.7.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.7.3 Laboratory Control Samples/Laboratory Control Sample Duplicate (LCS/LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.7.4 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.7.5 Overall Assessment

Accuracy and precision were acceptable, except as noted above. The data are of known quality and are acceptable for use as qualified.

3 Qualified Data Summary

Sample	Method	Analyte	Qualifier	Reason
AMW-03-20240613	EPA200.8	Sodium	J	LCSD recovery high.
CP-MWA1-20240613	EPA200.8	Sodium	J	LCSD recovery high.
CP-MWC1-20240613	EPA200.8	Sodium	J	LCSD recovery high.
EMW-14S-20240613	EPA200.8	Sodium	J	LCSD recovery high.
EMW-19S-20240613	EPA200.8	Sodium	J	LCSD recovery high.

May 5, 2023

Ms. Delia Massey
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Ms. Massey,

On April 19th, 15 samples were received by our laboratory and assigned our laboratory project number EV23040104. The project was identified as your 210368. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-01
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/17/2023 11:10:00 AM
CLIENT SAMPLE ID	CP-MW09-20230417	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	E1631E	U	0.50	1	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-02
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/17/2023 11:15:00 AM
CLIENT SAMPLE ID	CP-MW08-20230417	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	E1631E	**10**	0.50	1	NG/L	05/04/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-03
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/17/2023 12:50:00 PM
CLIENT SAMPLE ID	EMW-04S-20230417	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3 o l	SM2320B	**1000**	2.0	1	MG/L	04/24/2023	CAS
Total Mercury (Dissolved)	E1631E	**0.90**	0.50	1	NG/L	05/04/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-04
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/17/2023 1:20:00 PM
CLIENT SAMPLE ID	CP-MW22-20230417	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**1900**	23	250	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	04/19/2023	RAL
Nitrite	EPA-300.0	U	2.5	1	MG/L	04/19/2023	RAL
Sulfate	EPA-300.0	**31**	6.5	25	MG/L	04/19/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**270**	100	2	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**25000**	100	2	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**670**	100	2	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**12000**	100	2	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**110**	4.0	2	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**13000**	100	2	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**1800000**	500	5	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**1200**	2.0	1	MG/L	04/24/2023	CAS
Mercury (Dissolved)	E1631E	**8200**	25	50	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-05
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/17/2023 2:00:00 PM
CLIENT SAMPLE ID	CP-MW13-20230417	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**670**	9.2	100	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	04/19/2023	RAL
Nitrite	EPA-300.0	U	2.5	1	MG/L	04/19/2023	RAL
Sulfate	EPA-300.0	**1.6**	0.26	1	MG/L	04/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**39000**	50	1	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**410**	50	1	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**5000**	50	1	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**260**	2.0	1	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**11000**	50	1	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**590000**	100	1	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**450**	2.0	1	MG/L	04/24/2023	CAS
Mercury (Dissolved)	E1631E	**230**	0.50	1	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-06
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/17/2023 3:20:00 PM
CLIENT SAMPLE ID	CP-MW06-20230417	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**810**	9.2	100	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	04/19/2023	RAL
Nitrite	EPA-300.0	U	2.5	1	MG/L	04/19/2023	RAL
Sulfate	EPA-300.0	**1.2**	0.26	1	MG/L	04/19/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**3600**	50	1	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**6700**	50	1	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**5500**	50	1	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**720**	50	1	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**93**	2.0	1	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**2300**	50	1	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**1200000**	500	5	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**1400**	2.0	1	MG/L	04/24/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	04/24/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**220**	50	100	MG/L	05/02/2023	CAS
Mercury (Dissolved)	E1631E	**930**	2.5	5	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-07
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/17/2023 3:45:00 PM
CLIENT SAMPLE ID	CP-MW24-20230417	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**190**	2.3	25	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	04/19/2023	RAL
Nitrite	EPA-300.0	U	1.0	1	MG/L	04/19/2023	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	04/19/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**970**	50	1	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**8400**	50	1	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**2200**	50	1	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**1600**	50	1	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**76**	2.0	1	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**3800**	50	1	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**360000**	100	1	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**580**	2.0	1	MG/L	04/24/2023	CAS
Sulfide	EPA-376.1	**0.21**	0.050	1	MG/L	04/24/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**35**	2.5	5	MG/L	05/02/2023	CAS
Mercury (Dissolved)	E1631E	**660**	2.5	5	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-08
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/17/2023 5:45:00 PM
CLIENT SAMPLE ID	CP-MW01-20230417	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**90**	0.92	10	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	04/19/2023	RAL
Nitrite	EPA-300.0	U	0.50	1	MG/L	04/19/2023	RAL
Sulfate	EPA-300.0	**0.60**	0.26	1	MG/L	04/19/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**35000**	50	1	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**840**	50	1	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**19000**	50	1	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**1100**	2.0	1	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**740000**	500	5	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**1600**	2.0	1	MG/L	04/24/2023	CAS
Mercury (Dissolved)	E1631E	**130**	0.50	1	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-09
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/18/2023 9:50:00 AM
CLIENT SAMPLE ID	CP-MWB1-20230418	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**230**	2.3	25	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	04/19/2023	RAL
Nitrite	EPA-300.0	U	1.0	1	MG/L	04/19/2023	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	04/19/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**8400**	50	1	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**71**	50	1	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**3600**	50	1	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**19**	2.0	1	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**4900**	50	1	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**640000**	500	5	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**970**	2.0	1	MG/L	04/24/2023	CAS
Sulfide	EPA-376.1	**0.20**	0.050	1	MG/L	04/24/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**23**	2.5	5	MG/L	05/02/2023	CAS
Mercury (Dissolved)	E1631E	**97**	0.50	1	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-10
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/18/2023 12:13:00 PM
CLIENT SAMPLE ID	CP-MWC1-20230418	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**10**	0.092	1	MG/L	04/19/2023	RAL
Nitrate	EPA-300.0	**0.28**	0.15	1	MG/L	04/19/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	04/19/2023	RAL
Sulfate	EPA-300.0	**2.0**	0.26	1	MG/L	04/19/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**580**	50	1	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**2900**	50	1	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**820**	50	1	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**430**	50	1	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**20**	2.0	1	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**960**	50	1	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**120000**	100	1	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**190**	2.0	1	MG/L	04/24/2023	CAS
Mercury (Dissolved)	E1631E	**200**	0.50	1	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-11
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/18/2023 10:35:00 AM
CLIENT SAMPLE ID	EMW-14S-20230418	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**150**	0.92	10	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	**3.0**	0.15	1	MG/L	04/19/2023	RAL
Nitrite	EPA-300.0	U	0.50	1	MG/L	04/19/2023	RAL
Sulfate	EPA-300.0	**6.1**	0.26	1	MG/L	04/19/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**550**	50	1	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**1100**	50	1	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**1800**	50	1	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**67**	2.0	1	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**1100**	50	1	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**200000**	100	1	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**220**	2.0	1	MG/L	04/24/2023	CAS
Mercury (Dissolved)	E1631E	**280**	5.0	10	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-12
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/18/2023 11:45:00 AM
CLIENT SAMPLE ID	CP-MWA1-20230418	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**1600**	23	250	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U, H	0.76	5	MG/L	04/20/2023	RAL
Nitrite	EPA-300.0	U	2.5	5	MG/L	04/20/2023	RAL
Sulfate	EPA-300.0	**4.9**	1.3	5	MG/L	04/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**280**	120	2.5	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**10000**	120	2.5	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**9200**	120	2.5	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**160**	120	2.5	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**21**	5.0	2.5	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**60000**	120	2.5	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**6300000**	2000	20	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**8000**	10	5	MG/L	04/24/2023	CAS
Sulfide	EPA-376.1	**120**	10	200	MG/L	04/24/2023	CAS
Total Organic Carbon (TOC	SM5310C	**1200**	120	250	MG/L	05/02/2023	CAS
Mercury (Dissolved)	E1631E	**2700**	10	20	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.
H - Sample analyzed outside of hold time.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-13
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/18/2023 2:25:00 PM
CLIENT SAMPLE ID	AMW-02-20230418	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**1700**	23	250	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U	0.76	5	MG/L	04/20/2023	RAL
Nitrite	EPA-300.0	U	2.5	5	MG/L	04/20/2023	RAL
Sulfate	EPA-300.0	**2.2**	1.3	5	MG/L	04/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**2100**	120	2.5	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**12000**	120	2.5	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**2300**	120	2.5	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**1600**	120	2.5	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**160**	5.0	2.5	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**12000**	120	2.5	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**2500000**	500	5	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**3600**	10	5	MG/L	04/24/2023	CAS
Sulfide	EPA-376.1	**70**	10	200	MG/L	04/24/2023	CAS
otal Organic Carbon (TOC)	SM5310C	**630**	120	250	MG/L	05/02/2023	CAS
Mercury (Dissolved)	E1631E	**5400**	10	20	NG/L	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-14
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/18/2023 2:55:00 PM
CLIENT SAMPLE ID	AMW-03-20230418	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**250**	2.3	25	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U	0.76	5	MG/L	04/20/2023	RAL
Nitrite	EPA-300.0	U	0.71	5	MG/L	04/20/2023	RAL
Sulfate	EPA-300.0	**22**	1.3	5	MG/L	04/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**310**	120	2.5	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**6900**	120	2.5	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**5100**	120	2.5	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	U	120	2.5	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**25**	5.0	2.5	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**20000**	120	2.5	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**2900000**	500	5	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**4600**	10	5	MG/L	04/24/2023	CAS
Sulfide	EPA-376.1	**72**	5.0	100	MG/L	04/24/2023	CAS
Total Organic Carbon(TOC)	SM5310C	**700**	50	100	MG/L	05/02/2023	CAS
Mercury (Dissolved)	E1631E	**2200**	10	20	NG/L	05/04/2023	CAS

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS JOB#:	EV23040104
		ALS SAMPLE#:	EV23040104-15
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	04/19/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	4/18/2023 3:55:00 PM
CLIENT SAMPLE ID	EMW-19S-20230418	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**45**	0.92	10	MG/L	04/20/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	04/19/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	04/19/2023	RAL
Sulfate	EPA-300.0	**160**	2.6	10	MG/L	04/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**660**	50	1	UG/L	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	**1900**	50	1	UG/L	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	**4900**	50	1	UG/L	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**64**	50	1	UG/L	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	**47**	2.0	1	UG/L	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	**1700**	50	1	UG/L	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	**460000**	100	1	UG/L	04/21/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**720**	2.0	1	MG/L	04/24/2023	CAS
Sulfide	EPA-376.1	**0.55**	0.050	1	MG/L	04/24/2023	CAS
otal Organic Carbon (TOC)	SM5310C	**32**	2.5	5	MG/L	05/02/2023	CAS
Mercury (Dissolved)	E1631E	**30000**	120	250	NG/L	05/04/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

CLIENT CONTACT: Delia Massey
CLIENT PROJECT: 210368

DATE: 5/5/2023
ALS SDG#: EV23040104
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-R434523 - Batch R434523 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.092	04/19/2023	RAL
Nitrate	EPA-300.0	U	MG/L	0.15	04/19/2023	RAL
Nitrite	EPA-300.0	U	MG/L	0.14	04/19/2023	RAL
Sulfate	EPA-300.0	U	MG/L	0.26	04/19/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R434526 - Batch R434526 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.092	04/20/2023	RAL
Nitrate	EPA-300.0	U	MG/L	0.15	04/20/2023	RAL
Nitrite	EPA-300.0	U	MG/L	0.14	04/20/2023	RAL
Sulfate	EPA-300.0	U	MG/L	0.26	04/20/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-042023W - Batch 192749 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved)	EPA-200.8	U	UG/L	50	04/21/2023	RAL
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	04/21/2023	RAL
Iron (Dissolved)	EPA-200.8	U	UG/L	50	04/21/2023	RAL
Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	04/21/2023	RAL
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	04/21/2023	RAL
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	04/21/2023	RAL
Sodium (Dissolved)	EPA-200.8	U	UG/L	100	04/21/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R434509 - Batch R434509 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	2.0	04/24/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R434514 - Batch R434514 - Water by EPA-376.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Sulfide	EPA-376.1	U	MG/L	0.050	04/24/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS SDG#:	EV23040104
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Delia Massey		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MBLK-R434514 - Batch R434514 - Water by EPA-376.1

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R434516 - Batch R434516 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	05/02/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R434520 - Batch R434520 - Water by E1631E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	E1631E	U	NG/L	0.50	05/04/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

CLIENT CONTACT: Delia Massey
CLIENT PROJECT: 210368

DATE: 5/5/2023
ALS SDG#: EV23040104
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R434523 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**97.5**			80	120	04/19/2023	RAL
Chloride - BSD	EPA-300.0	**100**	**3**		80	120	04/19/2023	RAL
Nitrate - BS	EPA-300.0	**96.5**			80	120	04/19/2023	RAL
Nitrate - BSD	EPA-300.0	**95.0**	**2**		80	120	04/19/2023	RAL
Nitrite - BS	EPA-300.0	**90.5**			80	120	04/19/2023	RAL
Nitrite - BSD	EPA-300.0	**91.5**	**1**		80	120	04/19/2023	RAL
Sulfate - BS	EPA-300.0	**96.0**			80	120	04/19/2023	RAL
Sulfate - BSD	EPA-300.0	**93.0**	**3**		80	120	04/19/2023	RAL

ALS Test Batch ID: R434526 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**100**			80	120	04/20/2023	RAL
Chloride - BSD	EPA-300.0	**99.0**	**1**		80	120	04/20/2023	RAL
Nitrate - BS	EPA-300.0	**96.0**			80	120	04/20/2023	RAL
Nitrate - BSD	EPA-300.0	**99.0**	**3**		80	120	04/20/2023	RAL
Nitrite - BS	EPA-300.0	**93.0**			80	120	04/20/2023	RAL
Nitrite - BSD	EPA-300.0	**93.0**	**0**		80	120	04/20/2023	RAL
Sulfate - BS	EPA-300.0	**92.0**			80	120	04/20/2023	RAL
Sulfate - BSD	EPA-300.0	**93.0**	**1**		80	120	04/20/2023	RAL

ALS Test Batch ID: 192749 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved) - BS	EPA-200.8	**102**			80	120	04/21/2023	RAL
Aluminum (Dissolved) - BSD	EPA-200.8	**102**	**0**		80	120	04/21/2023	RAL
Calcium (Dissolved) - BS	EPA-200.8	**96.3**			80	120	04/21/2023	RAL
Calcium (Dissolved) - BSD	EPA-200.8	**95.9**	**0**		80	120	04/21/2023	RAL
Iron (Dissolved) - BS	EPA-200.8	**102**			80	120	04/21/2023	RAL
Iron (Dissolved) - BSD	EPA-200.8	**100**	**2**		80	120	04/21/2023	RAL
Magnesium (Dissolved) - BS	EPA-200.8	**101**			80	120	04/21/2023	RAL
Magnesium (Dissolved) - BSD	EPA-200.8	**102**	**1**		80	120	04/21/2023	RAL
Manganese (Dissolved) - BS	EPA-200.8	**101**			82.2	110	04/21/2023	RAL
Manganese (Dissolved) - BSD	EPA-200.8	**100**	**1**		82.2	110	04/21/2023	RAL
Potassium (Dissolved) - BS	EPA-200.8	**99.2**			80	120	04/21/2023	RAL
Potassium (Dissolved) - BSD	EPA-200.8	**99.6**	**0**		80	120	04/21/2023	RAL
Sodium (Dissolved) - BS	EPA-200.8	**104**			80	105	04/21/2023	RAL
Sodium (Dissolved) - BSD	EPA-200.8	**102**	**2**		80	105	04/21/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	5/5/2023
		ALS SDG#:	EV23040104
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Delia Massey		
CLIENT PROJECT:	210368		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R434509 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**102**			85	115	04/24/2023	CAS

ALS Test Batch ID: R434514 - Water by EPA-376.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfide - BS	EPA-376.1	**99.1**			85	106	04/24/2023	CAS

ALS Test Batch ID: R434516 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**98.0**			85	115	05/02/2023	CAS

ALS Test Batch ID: R434520 - Water by E1631E

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)- BS	E1631E	**91.6**			77	123	05/04/2023	CAS

APPROVED BY

Rob Greer
Laboratory Director

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Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2304010 4

Date 04/19/23 Page 1 Of 2

PROJECT ID: 210368
REPORT TO COMPANY: Aspect Consulting
PROJECT MANAGER: Delia Massey, Steve Germinat
ADDRESS: 710 2nd Ave #550
Seattle, WA 98104
PHONE: (860) 368-9745 P.O. #: 210368
E-MAIL: dmassey@aspectconsulting.com, sgermint@"
INVOICE TO COMPANY: AP
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED / OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 Pesticides by EPA 8081	Metals-MTCA-5 RCRA-8 Pri Pol TAL	Metals Other (Specify)	TCLP-Metals VOA Semi-Vol Pest Herbs	Hg by 1631	Alkalinity by EPA 310.1 Anions (Cl, NO2, NO3, SO4) by EPA 300.0 Dissolved Metals (Ca, K, Mg, Na) by 6020/200.8	TOC by PSEP 5.1	Sulfide by EPA 376.1		NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. CP-MW09-20230417	04/17/23	1110	W	1																		X						1	
2. CP-MW08-20230417	"	1115	"	2																		X						1	
3. EMW-045-20230417	"	1250	"	3																		X	X					2	
4. CP-MW22-20230417	"	1320	"	4																		X	X	X	X			4	
5. CP-MW13-20230417	"	1400	"	5																		X	X	X	X			4	
6. CP-MW06-20230417	"	1520	"	6																		X	X	X	X	X	X	6	
7. CP-MW24-20230417	"	1545	"	7																		X	X	X	X	X	X	6	
8. CP-MW01-20230417	↓	1745	"	8																		X	X	X	X			4	
9. CP-MW81-20230418	04/18/23	0950	"	9																		X	X	X	X	X	X	6	
10. CP-MW11-20230418	↓	1213	↓	10																		X	X	X	X			4	

SPECIAL INSTRUCTIONS Only run dissolved metals for: Al, Fe, Mn. Cations: Ca, K, Mg, Na. Anions: Cl, NO2, NO3, SO4.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [signature], Aspect 04/19/23 0825
   Received By: Shawn Robinson AS 4/19/23 0825
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: [10] Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: _____

*Turnaround request less than standard may incur Rush Charges

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Everett, WA 98208
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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)
EV2304010 4

Date 04/19/23 Page 2 Of 2

PROJECT ID: 210368
REPORT TO COMPANY: Aspect Consulting
PROJECT MANAGER: Delia Mussey, Steve Germiat
ADDRESS:
PHONE: P.O. #:
E-MAIL:
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	VOA	Semi-Vol	Pest	Herbs	TCLP-Metals	OTHER (Specify) Hg by 1631	Alkalinity by EPA 310.1	Anions by EPA 300.0 (Cl, F, NO3, SO4)	Total Phosphorus by EPA 365.1	TOC by EPA 415.1	S, Sulfide by EPA 376.1		NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. ~~CP-MWB1-20230418~~	~~04/18/23~~	~~0950~~	W																											X	X	X	X	X	X		6	
2. EMW-145-20230418	04/18/23	1035	W	11																										X	X	X	X				4	
3. CP-MWA1-20230418		1145		12																										X	X	X	X	X	X		6	
4. AMW-02-20230418		1425		13																																	6	
5. AMW-03-20230418		1455		14																																	6	
6. EMW-195-20230418		1555		15																																	6	
7.																																						
8.																																						
9.																																						
10.																																						

SPECIAL INSTRUCTIONS EMW-195-20230418 Hg sample is in a 500 mL unpreserved, field filtered, HDPE bottle.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [signature], Aspect, 04/19/23 0825
   Received By: Shawn Roberson ALS 4/19/23 0825
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

October 27, 2023

Ms. Amy Tice
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Ms. Tice,

On September 20th, 7 samples were received by our laboratory and assigned our laboratory project number EV23090105. The project was identified as your 210368. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090105
		ALS SAMPLE#:	EV23090105-01
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/20/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/19/2023 12:20:00 PM
CLIENT SAMPLE ID	CP-MWC1-20230919	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**140**	0.92	10	MG/L	09/21/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/20/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/20/2023	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	09/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**590**	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**6000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**840**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**1300**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**51**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**2400**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**400000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**760**	2.0	1	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	**2.7**	0.25	5	MG/L	09/26/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**34**	2.5	5	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**660**	2.5	5	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090105
		ALS SAMPLE#:	EV23090105-02
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/20/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/19/2023 1:25:00 PM
CLIENT SAMPLE ID	CP-MW103-20230919	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**47**	0.46	5	MG/L	09/21/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/20/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/20/2023	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	09/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**140000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**10000**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**25000**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**1500**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**16000**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**120000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**720**	2.0	1	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	09/26/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**14**	0.50	1	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**2.5**	0.50	1	ng/L	09/26/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090105
		ALS SAMPLE#:	EV23090105-03
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/20/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/19/2023 3:35:00 PM
CLIENT SAMPLE ID	CP-MW01-20230919	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**200**	2.3	25	MG/L	09/21/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/20/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/20/2023	RAL
Sulfate	EPA-300.0	**0.93**	0.26	1	MG/L	09/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**110**	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**42000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**1700**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**29000**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**1300**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**20000**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**1200000**	1000	5	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**2800**	2.0	1	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	**6.4**	1.0	20	MG/L	09/26/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**160**	25	50	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**130**	2.5	5	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090105
		ALS SAMPLE#:	EV23090105-04
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/20/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/19/2023 5:05:00 PM
CLIENT SAMPLE ID	AMW-02-20230919	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**2600**	23	250	MG/L	09/21/2023	RAL
Nitrate	EPA-300.0	U	0.76	5	MG/L	09/20/2023	RAL
Nitrite	EPA-300.0	U	0.71	5	MG/L	09/20/2023	RAL
Sulfate	EPA-300.0	**6.4**	1.3	5	MG/L	09/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**3400**	250	5	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**11000**	250	5	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**3900**	250	5	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**1200**	250	5	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**110**	10	5	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**19000**	250	5	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**4300000**	4000	20	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**5900**	50	5	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	**100**	5.0	100	MG/L	09/26/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**620**	50	100	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**53**	12	25	ng/L	09/26/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090105
		ALS SAMPLE#:	EV23090105-05
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/20/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/19/2023 1:15:00 PM
CLIENT SAMPLE ID	CP-MWB1-20230919	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**480**	2.3	25	MG/L	09/21/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/20/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/20/2023	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	09/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**11000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**120**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**3500**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**25**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**5500**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**620000**	1000	5	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**1100**	2.0	1	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	**0.33**	0.050	1	MG/L	09/26/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**26**	2.5	5	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**110**	2.5	5	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090105
		ALS SAMPLE#:	EV23090105-06
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/20/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/19/2023 3:10:00 PM
CLIENT SAMPLE ID	EMW-14S-20230919	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**300**	2.3	25	MG/L	09/21/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/20/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/20/2023	RAL
Sulfate	EPA-300.0	**2.4**	0.26	1	MG/L	09/20/2023	RAL
Aluminum	EPA-200.8	**960**	50	1	UG/L	10/02/2023	RAL
Calcium	EPA-200.8	**15000**	50	1	UG/L	10/02/2023	RAL
Iron	EPA-200.8	**1900**	50	1	UG/L	10/02/2023	RAL
Magnesium	EPA-200.8	**1700**	50	1	UG/L	10/02/2023	RAL
Manganese	EPA-200.8	**180**	2.0	1	UG/L	10/02/2023	RAL
Potassium	EPA-200.8	**1900**	50	1	UG/L	10/02/2023	RAL
Sodium	EPA-200.8	**330000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**380**	2.0	1	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	**0.43**	0.050	1	MG/L	09/26/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**38**	10	20	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**10000**	25	50	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090105
		ALS SAMPLE#:	EV23090105-07
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/20/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/19/2023 1:00:00 AM
CLIENT SAMPLE ID	AMW-500-20230919	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**48**	0.46	5	MG/L	09/21/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/20/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/20/2023	RAL
Sulfate	EPA-300.0	**0.45**	0.26	1	MG/L	09/20/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**140000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**10000**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**25000**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**1500**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**17000**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**130000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**720**	2.0	1	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	09/26/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**15**	0.50	1	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**2.4**	0.50	1	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104
CLIENT CONTACT: Amy Tice
CLIENT PROJECT: 210368

DATE: 10/27/2023
ALS SDG#: EV23090105
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-R448554 - Batch R448554 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.092	09/20/2023	RAL
Nitrate	EPA-300.0	U	MG/L	0.15	09/20/2023	RAL
Nitrite	EPA-300.0	U	MG/L	0.14	09/20/2023	RAL
Sulfate	EPA-300.0	U	MG/L	0.26	09/20/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-092623W2 - Batch 201130 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Aluminum	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Calcium	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Iron	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Magnesium	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Manganese	EPA-200.8	U	UG/L	2.0	10/02/2023	RAL
Potassium	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Sodium	EPA-200.8	U	UG/L	200	10/02/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-092623W2 - Batch 201131 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	U	UG/L	200	10/02/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R448890 - Batch R448890 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	9.0	09/29/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS SDG#:	EV23090105
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MBLK-R448897 - Batch R448897 - Water by EPA-376.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Sulfide	EPA-376.1	U	MG/L	0.050	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R448899 - Batch R448899 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	10/10/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R448900 - Batch R448900 - Water by E1631E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury, Dissolved	E1631E	U	ng/L	0.50	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

CLIENT CONTACT: Amy Tice
CLIENT PROJECT: 210368

DATE: 10/27/2023
ALS SDG#: EV23090105
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R448554 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**98.0**			80	120	09/20/2023	RAL
Chloride - BSD	EPA-300.0	**100**	**2**		80	120	09/20/2023	RAL
Nitrate - BS	EPA-300.0	**95.0**			80	120	09/20/2023	RAL
Nitrate - BSD	EPA-300.0	**99.0**	**4**		80	120	09/20/2023	RAL
Nitrite - BS	EPA-300.0	**103**			80	120	09/20/2023	RAL
Nitrite - BSD	EPA-300.0	**107**	**4**		80	120	09/20/2023	RAL
Sulfate - BS	EPA-300.0	**98.0**			80	120	09/20/2023	RAL
Sulfate - BSD	EPA-300.0	**96.0**	**2**		80	120	09/20/2023	RAL

ALS Test Batch ID: 201130 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Aluminum - BS	EPA-200.8	**100**			80	120	10/02/2023	RAL
Aluminum - BSD	EPA-200.8	**101**	**1**		80	120	10/02/2023	RAL
Calcium - BS	EPA-200.8	**94.8**			80	120	10/02/2023	RAL
Calcium - BSD	EPA-200.8	**95.5**	**1**		80	120	10/02/2023	RAL
Iron - BS	EPA-200.8	**95.2**			80	120	10/02/2023	RAL
Iron - BSD	EPA-200.8	**98.7**	**4**		80	120	10/02/2023	RAL
Magnesium - BS	EPA-200.8	**97.4**			80	120	10/02/2023	RAL
Magnesium - BSD	EPA-200.8	**98.9**	**2**		80	120	10/02/2023	RAL
Manganese - BS	EPA-200.8	**95.9**			82.2	110	10/02/2023	RAL
Manganese - BSD	EPA-200.8	**97.1**	**1**		82.2	110	10/02/2023	RAL
Potassium - BS	EPA-200.8	**97.1**			80	120	10/02/2023	RAL
Potassium - BSD	EPA-200.8	**97.6**	**1**		80	120	10/02/2023	RAL
Sodium - BS	EPA-200.8	**99.9**			80	105	10/02/2023	RAL
Sodium - BSD	EPA-200.8	**99.0**	**1**		80	105	10/02/2023	RAL

ALS Test Batch ID: 201131 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved) - BS	EPA-200.8	**100**			80	120	10/02/2023	RAL
Aluminum (Dissolved) - BSD	EPA-200.8	**101**	**1**		80	120	10/02/2023	RAL
Calcium (Dissolved) - BS	EPA-200.8	**94.8**			80	120	10/02/2023	RAL
Calcium (Dissolved) - BSD	EPA-200.8	**95.5**	**1**		80	120	10/02/2023	RAL
Iron (Dissolved) - BS	EPA-200.8	**95.2**			80	120	10/02/2023	RAL
Iron (Dissolved) - BSD	EPA-200.8	**98.7**	**4**		80	120	10/02/2023	RAL
Magnesium (Dissolved) - BS	EPA-200.8	**97.4**			80	120	10/02/2023	RAL
Magnesium (Dissolved) - BSD	EPA-200.8	**98.9**	**2**		80	120	10/02/2023	RAL
Manganese (Dissolved) - BS	EPA-200.8	**95.9**			82.2	110	10/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

CLIENT CONTACT: Amy Tice
CLIENT PROJECT: 210368

DATE: 10/27/2023
ALS SDG#: EV23090105
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Manganese (Dissolved) - BSD	EPA-200.8	**97.1**	**1**		82.2	110	10/02/2023	RAL
Potassium (Dissolved) - BS	EPA-200.8	**97.1**			80	120	10/02/2023	RAL
Potassium (Dissolved) - BSD	EPA-200.8	**97.6**	**1**		80	120	10/02/2023	RAL
Sodium (Dissolved) - BS	EPA-200.8	**99.9**			80	105	10/02/2023	RAL
Sodium (Dissolved) - BSD	EPA-200.8	**99.0**	**1**		80	105	10/02/2023	RAL

ALS Test Batch ID: R448890 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**105**			85	115	09/29/2023	CAS

ALS Test Batch ID: R448897 - Water by EPA-376.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfide - BS	EPA-376.1	**95.6**				110	09/26/2023	CAS

ALS Test Batch ID: R448899 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**94.4**			85	115	10/10/2023	CAS

ALS Test Batch ID: R448900 - Water by E1631E

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury, Dissolved - BS	E1631E	**93.8**			77	123	09/26/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS SDG#:	EV23090105
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

MATRIX SPIKE RESULTS

ALS Test Batch ID: R448897 - Water
Parent Sample: AMW-500-20230919

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Sulfide - MS	EPA-376.1	**99.0**			0.898	0	0.889	69	123		09/26/2023	CAS
Sulfide - MSD	EPA-376.1	**97.8**	**1**		0.898	0	0.878	69	123	25	09/26/2023	CAS

*Calc Result = (Sample Result - Parent Sample Result)

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS SDG#:	EV23090105
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

SAMPLE DUPLICATE RESULTS

ALS Test Batch ID: R448890 - Water
Parent Sample: CP-MWC1-20230919

ANALYTE	METHOD	PARENT SAMPLE RESULT	RESULT	RPD	UNITS	QUAL	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	760	**760**	**0**	MG/L		09/29/2023	CAS

ALS Test Batch ID: R448897 - Water
Parent Sample: AMW-500-20230919

ANALYTE	METHOD	PARENT SAMPLE RESULT	RESULT	RPD	UNITS	QUAL	ANALYSIS DATE	ANALYSIS BY
Sulfide	EPA-376.1	ND	**ND**	**0**	MG/L		09/26/2023	CAS

APPROVED BY

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
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ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2309105

Date 09/20/23 Page 1 Of 1

PROJECT ID: 210368
REPORT TO COMPANY: Aspect Consulting
PROJECT MANAGER: Amy Tice
ADDRESS: 710 2nd Ave #550
Seattle, WA
PHONE: 206-334-7690 P.O. #:
E-MAIL: atice@aspectconsulting.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	VOA	Semi-Vol	Pest	Herbs	TCLP-Metals	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. CP-MW01-20230919	09/19/23	1220	W	1																									X		6	
2. CP-MW03-20230919		1325		2																												
3. CP-MW01-20230919		1535		3																												
4. AMW-02-20230919		1705		4																												
5. CP-MWB1-20230919		1315		5																												
6. EMW-145-20230919	↓	1510	↓	6																												
7. AMW-500-20230919	09/19/23	0100	W	7																									X	X	6	
8.																																
9.																																
10.																																

OTHER (Specify): Hg by 1631 (Field Filtered); Alkalinity by EPA 310.1; Cations (Ca, Fe, K, Mg, Mn, Na) (Field Filtered) by SM6020/EPA 200.8; Anions (Chloride, nitrate, nitrite, sulfate) by 300.0; TOC by EPA 415.1/9060; Sulfide by EPA 376.1

2.1°C

SPECIAL INSTRUCTIONS: EMW-145-20230919 was not field filtered for HNO_3 bottle, NaOH bottle was field filtered accidentally. CP-MWB1-20230919 NaOH was accidentally field filtered.

X - TOTAL METALS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: N'Kolai Carroll, Aspect, 09/20/23 12:17
   Received By: ALI 9/20/23 12:17
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: _____

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Aspect Consulting ALS Job #: EV2309010 5

Project: 210368

Received Date: 9/20/23 Received Time: 1217 By: RBy

Type of shipping container: Cooler Ø Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Mail ___ Courier Ø Hand Delivered ___
FedEx Express ___
ROB

	Yes	No	N/A
Were custody seals on outside of shipping container?	___	___	Ø
If yes, how many? ___ Where? ___			
Custody seal date: ___ Seal name: ___			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	Ø	___	___
Did all bottles have labels?	Ø	___	___
Did all bottle labels and tags agree with Chain of Custody?	Ø	___	___
Were samples received within hold time?	Ø	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	Ø	___	___
Was sufficient amount of sample sent for the tests indicated?	Ø	___	___
Was correct preservation added to samples?	Ø	Ø	___
Were VOA vials checked for absence of air bubbles?	___	___	Ø
Bubbles present in sample #: ___			

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Temperature of cooler upon receipt: 2.1°C (on ice) Cold Cool Ambient N/A

Explain any discrepancies: refer to notes on chain that client wrote.

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___

October 27, 2023

Ms. Amy Tice
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Ms. Tice,

On September 21st, 12 samples were received by our laboratory and assigned our laboratory project number EV23090120. The project was identified as your 210368. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-01
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/20/2023 9:35:00 AM
CLIENT SAMPLE ID	EMW-19S-20230920	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**55**	0.46	5	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U, HT01	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U, HT01	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	**180**	6.5	25	MG/L	10/08/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**1100**	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**10000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**6500**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**950**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**120**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**4500**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**510000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**740**	0	1	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	**1.9**	0.050	1	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**22**	2.5	5	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**67000**	250	500	ng/L	09/26/2023	CAS

HT01 -Sample was analyzed outside of the holding time due to laboratory error. Sample results should be considered estimated.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-02
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/20/2023 10:40:00 AM
CLIENT SAMPLE ID	EMW-04S-20230920	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**200**	9.2	100	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U, HT01	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U, HT01	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	10/08/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**160000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**12000**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**49000**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**1400**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**33000**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**290000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**1100**	0	1	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	**0.063**	0.050	1	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**28**	5.0	10	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**1.3**	0.50	1	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.
HT01 -Sample was analyzed outside of the holding time due to laboratory error. Sample results should be considered estimated.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-03
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/20/2023 12:10:00 PM
CLIENT SAMPLE ID	CP-MW24-20230920	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**400**	9.2	100	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U, HT01	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U, HT01	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	**0.96**	0.26	1	MG/L	10/08/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**810**	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**8200**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**2900**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**1600**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**81**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**5200**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**610000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**860**	0	1	MG/L	09/29/2023	CAS
Sulfide	EPA-376.1	**0.36**	0.050	1	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**69**	5.0	10	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**730**	2.5	5	ng/L	09/26/2023	CAS

HT01 -Sample was analyzed outside of the holding time due to laboratory error. Sample results should be considered estimated.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-04
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/20/2023 12:30:00 PM
CLIENT SAMPLE ID	CP-MW101-20230920	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**36**	0.23	2.5	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U, HT01	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U, HT01	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	**2.8**	0.26	1	MG/L	09/22/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**1400**	250	5	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**19000**	250	5	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**9700**	250	5	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**1900**	250	5	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**120**	10	5	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**8000**	250	5	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**920000**	1000	5	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**2100**	0	5	MG/L	10/02/2023	CAS
Sulfide	EPA-376.1	**14**	1.0	20	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**200**	25	50	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**24**	12	25	ng/L	09/26/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-05
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/20/2023 2:00:00 PM
CLIENT SAMPLE ID	CP-MW06-20230920	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**840**	9.2	100	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U, HT01	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U, HT01	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	**0.72**	0.26	1	MG/L	09/22/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**7900**	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**7200**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**8900**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**1700**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**130**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**2700**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**1100000**	1000	5	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**1400**	0	5	MG/L	10/02/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**110**	25	50	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**800**	12	25	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.
HT01 -Sample was analyzed outside of the holding time due to laboratory error. Sample results should be considered estimated.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-06
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/20/2023 4:45:00 PM
CLIENT SAMPLE ID	AMW-03-20230920	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**230**	2.3	25	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U, HT01	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U, HT01	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	**15**	0.26	1	MG/L	09/22/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**320**	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**8500**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**3700**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**150**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**40**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**2100000**	1000	5	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**3900**	0	5	MG/L	10/02/2023	CAS
Sulfide	EPA-376.1	**69**	5.0	100	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**350**	25	50	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**72**	12	25	ng/L	09/26/2023	CAS

HT01 -Sample was analyzed outside of the holding time due to laboratory error. Sample results should be considered estimated.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-07
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/20/2023 5:35:00 PM
CLIENT SAMPLE ID	CP-MWA1-20230920	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**2100**	9.2	100	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U, HT01	0.76	5	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U, HT01	0.71	5	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	**46**	1.3	5	MG/L	09/22/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**350**	250	5	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**6400**	250	5	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**11000**	250	5	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**270**	250	5	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**19**	10	5	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**65000**	250	5	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**6600000**	4000	20	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**11000**	0	5	MG/L	10/02/2023	CAS
Sulfide	EPA-376.1	**130**	5.0	100	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**690**	50	100	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**24**	12	25	ng/L	09/26/2023	CAS

HT01 -Sample was analyzed outside of the holding time due to laboratory error. Sample results should be considered estimated.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-08
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/21/2023 8:45:00 AM
CLIENT SAMPLE ID	CP-MW09-20230921	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**7.4**	0.092	1	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	**6.0**	0.26	1	MG/L	09/22/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**52000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**300**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**2200**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**180**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**2200**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**19000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**170**	0	1	MG/L	10/02/2023	CAS
Sulfide	EPA-376.1	**0.23**	0.050	1	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**2.4**	0.50	1	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	U	0.50	1	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-09
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/21/2023 9:50:00 AM
CLIENT SAMPLE ID	CP-MW13-20230921	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**410**	9.2	100	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	09/22/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**190**	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**9800**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**430**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**1900**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**130**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**6400**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**430000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**430**	0	1	MG/L	10/02/2023	CAS
Sulfide	EPA-376.1	**0.092**	0.050	1	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**7.4**	0.50	1	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**280**	2.5	5	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-10
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/21/2023 9:55:00 AM
CLIENT SAMPLE ID	CP-MW08-20230921	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**24**	0.23	2.5	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	09/22/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**57000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**890**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**15000**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**200**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**12000**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**74000**	200	1	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**370**	0	1	MG/L	10/02/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**9.5**	2.5	5	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**5.1**	0.50	1	ng/L	09/26/2023	CAS

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-11
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/21/2023 11:30:00 AM
CLIENT SAMPLE ID	CP-MW22-20230921	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**2200**	23	250	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	**6.5**	0.26	1	MG/L	09/22/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**150**	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**27000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**550**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**14000**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**84**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**15000**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**2000000**	1000	5	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**1500**	0	1	MG/L	10/02/2023	CAS
Sulfide	EPA-376.1	**0.60**	0.050	1	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**110**	10	20	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	**5200**	25	50	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS JOB#:	EV23090120
		ALS SAMPLE#:	EV23090120-12
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	09/21/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	9/21/2023 11:45:00 AM
CLIENT SAMPLE ID	CP-MW102-20230921	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**140**	9.2	100	MG/L	09/25/2023	RAL
Nitrate	EPA-300.0	U	0.15	1	MG/L	09/22/2023	RAL
Nitrite	EPA-300.0	U	0.14	1	MG/L	09/22/2023	RAL
Sulfate	EPA-300.0	**3.9**	0.26	1	MG/L	09/22/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**860**	50	1	UG/L	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	**47000**	50	1	UG/L	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	**6900**	50	1	UG/L	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	**25000**	50	1	UG/L	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	**910**	2.0	1	UG/L	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	**17000**	50	1	UG/L	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	**800000**	1000	5	UG/L	10/02/2023	RAL
Alkalinity as CaCO3, Total	SM2320B	**1700**	0	1	MG/L	10/02/2023	CAS
Sulfide	EPA-376.1	**16**	1.0	20	MG/L	09/27/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**160**	25	50	MG/L	10/10/2023	CAS
Mercury, Dissolved	E1631E	U	2.5	5	ng/L	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

CLIENT CONTACT: Amy Tice
CLIENT PROJECT: 210368

DATE: 10/27/2023
ALS SDG#: EV23090120
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-R448558 - Batch R448558 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.092	09/25/2023	RAL
Nitrate	EPA-300.0	U	MG/L	0.15	09/25/2023	RAL
Nitrite	EPA-300.0	U	MG/L	0.14	09/25/2023	RAL
Sulfate	EPA-300.0	U	MG/L	0.26	09/25/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-092623W2 - Batch 201131 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Iron (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	10/02/2023	RAL
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	10/02/2023	RAL
Sodium (Dissolved)	EPA-200.8	U	UG/L	200	10/02/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R448859 - Batch R448859 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	9.0	09/29/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R448864 - Batch R448864 - Water by EPA-376.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Sulfide	EPA-376.1	U	MG/L	0.050	09/27/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R448868 - Batch R448868 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	10/10/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS SDG#:	EV23090120
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MBLK-R448877 - Batch R448877 - Water by E1631E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury, Dissolved	E1631E	U	ng/L	0.50	09/26/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

CLIENT CONTACT: Amy Tice
CLIENT PROJECT: 210368

DATE: 10/27/2023
ALS SDG#: EV23090120
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R448558 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**99.0**			80	120	09/25/2023	RAL
Chloride - BSD	EPA-300.0	**95.0**	**4**		80	120	09/25/2023	RAL
Nitrate - BS	EPA-300.0	**98.0**			80	120	09/25/2023	RAL
Nitrate - BSD	EPA-300.0	**94.0**	**4**		80	120	09/25/2023	RAL
Nitrite - BS	EPA-300.0	**108**			80	120	09/25/2023	RAL
Nitrite - BSD	EPA-300.0	**102**	**6**		80	120	09/25/2023	RAL
Sulfate - BS	EPA-300.0	**96.0**			80	120	09/25/2023	RAL
Sulfate - BSD	EPA-300.0	**97.0**	**1**		80	120	09/25/2023	RAL

ALS Test Batch ID: 201131 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved) - BS	EPA-200.8	**100**			80	120	10/02/2023	RAL
Aluminum (Dissolved) - BSD	EPA-200.8	**101**	**1**		80	120	10/02/2023	RAL
Calcium (Dissolved) - BS	EPA-200.8	**94.8**			80	120	10/02/2023	RAL
Calcium (Dissolved) - BSD	EPA-200.8	**95.5**	**1**		80	120	10/02/2023	RAL
Iron (Dissolved) - BS	EPA-200.8	**95.2**			80	120	10/02/2023	RAL
Iron (Dissolved) - BSD	EPA-200.8	**98.7**	**4**		80	120	10/02/2023	RAL
Magnesium (Dissolved) - BS	EPA-200.8	**97.4**			80	120	10/02/2023	RAL
Magnesium (Dissolved) - BSD	EPA-200.8	**98.9**	**2**		80	120	10/02/2023	RAL
Manganese (Dissolved) - BS	EPA-200.8	**95.9**			82.2	110	10/02/2023	RAL
Manganese (Dissolved) - BSD	EPA-200.8	**97.1**	**1**		82.2	110	10/02/2023	RAL
Potassium (Dissolved) - BS	EPA-200.8	**97.1**			80	120	10/02/2023	RAL
Potassium (Dissolved) - BSD	EPA-200.8	**97.6**	**1**		80	120	10/02/2023	RAL
Sodium (Dissolved) - BS	EPA-200.8	**99.9**			80	105	10/02/2023	RAL
Sodium (Dissolved) - BSD	EPA-200.8	**99.0**	**1**		80	105	10/02/2023	RAL

ALS Test Batch ID: R448859 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**105**			1	200	09/29/2023	CAS

ALS Test Batch ID: R448864 - Water by EPA-376.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfide - BS	EPA-376.1	**98.9**			90	110	09/27/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS SDG#:	EV23090120
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R448868 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**114**			85	115	10/10/2023	CAS

ALS Test Batch ID: R448877 - Water by E1631E

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury, Dissolved - BS	E1631E	**93.8**			77	123	09/26/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS SDG#:	EV23090120
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

MATRIX SPIKE RESULTS

ALS Test Batch ID: R448864 - Water

Parent Sample: **CP-MW09-20230921**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Sulfide - MS	EPA-376.1	**103**			0.900	0.23	0.924	69	123		09/27/2023	CAS
Sulfide - MSD	EPA-376.1	**100**	**2**		0.900	0.23	0.904	69	123	20	09/27/2023	CAS

*Calc Result = (Sample Result - Parent Sample Result)

ALS Test Batch ID: R448868 - Water

Parent Sample: **CP-MW09-20230921**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - MS	SM5310C	**99.6**			25.0	2.4	24.9	85	115		10/10/2023	CAS

*Calc Result = (Sample Result - Parent Sample Result)

ALS Test Batch ID: R448877 - Water

Parent Sample: **CP-MW102-20230921**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Mercury, Dissolved - MS	E1631E	**55.2**		SQ2	250	0	138 SQ2	71	125		09/26/2023	CAS
Mercury, Dissolved - MSD	E1631E	**56.8**	**3**	SQ2	250	0	142 SQ2	71	125	25	09/26/2023	CAS

SQ2 - Spike outside of control limits due to matrix effect.

*Calc Result = (Sample Result - Parent Sample Result)

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	10/27/2023
		ALS SDG#:	EV23090120
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

SAMPLE DUPLICATE RESULTS

ALS Test Batch ID: R448859 - Water
Parent Sample: CP-MW09-20230921

ANALYTE	METHOD	PARENT SAMPLE RESULT	RESULT	RPD	UNITS	QUAL	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	170	**170**	**1**	MG/L		10/02/2023	CAS

ALS Test Batch ID: R448864 - Water
Parent Sample: CP-MW09-20230921

ANALYTE	METHOD	PARENT SAMPLE RESULT	RESULT	RPD	UNITS	QUAL	ANALYSIS DATE	ANALYSIS BY
Sulfide	EPA-376.1	0.23	**0.22**	**2**	MG/L		09/27/2023	CAS

ALS Test Batch ID: R448868 - Water
Parent Sample: CP-MW09-20230921

ANALYTE	METHOD	PARENT SAMPLE RESULT	RESULT	RPD	UNITS	QUAL	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	2.4	**2.4**	**0**	MG/L		10/10/2023	CAS

APPROVED BY

Rob Greer
Laboratory Director

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ALS Environmental
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Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

EV2309120

Date 09/21/23 Page 1 of 2

PROJECT ID:	210368
REPORT TO COMPANY:	Aspect Consulting
PROJECT MANAGER:	Amy Tice
ADDRESS:	710 2nd Ave #550 Seattle, WA
PHONE:	P.O. #:
E-MAIL:	atice@aspectconsulting.com
INVOICE TO COMPANY:	
ATTENTION:	
ADDRESS:	

ANALYSIS REQUESTED

OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	VOA	Semi-Vol	Pest	Herbs	TCLP-Metals	Hg by 1631 (Field Filtered)	Alkalinity by EPA 310.1	Cations (Al, Ca, Fe, K, Mg, Mn, Na) (Field Filtered) by SW6020/EPA 200.8	Anions (chloride, nitrate, nitrite, sulfate) by EPA 300.0	TOC by EPA 415.1/9060	Sulfide by EPA 376.1	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EMW-195-20230920	09/20/23	0935	W	1																									X	X	X	X	X	X	6	
2. EMW-045-20230920	"	1040	"	2																									"	"	"	"	"	"	"	
3. CP-MW24-20230920	"	1210	"	3																																
4. CP-MW101-20230920	"	1230	"	4																																
5. CP-MW06-20230920	"	1400	"	5																																
6. AMW-03-20230920	"	1645	"	6																																
7. CP-MWA1-20230920	"	1735	"	7																																
8. CP-MW09-20230921	09/21/23	0845	"	8																																
9. CP-MW13-20230921	"	0950	"	9																																
10. CP-MW08-20230921	"	0955	"	10																																

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nikola Cvrkel, Aspect, 09/21/23 1445
   Received By: ALS 9/21/23 1445
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: ~~5~~ Standard | 3 | 1 | SAME DAY

OTHER:
Specify: _____

*Turnaround request less than standard may incur Rush Charges

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

EV2309120

Date 09/21/23 Page 2 Of 2

PROJECT ID: 210368
REPORT TO COMPANY: Aspect Consulting
PROJECT MANAGER: Anny Tice
ADDRESS:
PHONE: P.O. #:
E-MAIL: atice@aspectconsulting.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 BTEX by EPA 8260	MTBE by EPA 8021 MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 Pesticides by EPA 8081	Metals-MTCA-5 RCRA-8 Pri Pol TAL	Metals Other (Specify)	TCLP-Metals VOA Semi-Vol Pest Herbs	Hg by 1631 (Field Filtered)	Alkalinity by EPA 310.1	Cations (Ca, Fe, K, Mg, Mn, Na) (Field Filtered) by SW6020/EPA 200.8	Anions (Chloride, Nitrate, Nitrite, Sulfate) by 300.0	TDC by EPA 415.1/9060	Sulfide by EPA 376.1	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. CP-MW22-20230921	09/21/23	1430	W	11																X	X	X	X	X	X	X	6	
2. CP-MW102-20230921	09/21/23	1145	W	12																X	X	X	X	X	X	X	6	
3.																												
4.																												
5.																												
6.																												
7.																												
8.																												
9.																												
10.																												

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nikolai Cornell, Aspect, 09/21/23 1445
   Received By: ALS 9/21/23 1445
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: (10) Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: (5) Standard | 3 | 1 | SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Aspect ALS Job #: EV23090120

Project: 210368

Received Date: 9/21/23 Received Time: 1445 By: CE

Type of shipping container: Cooler X Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Mail ___ Courier ___ Hand Delivered Y
FedEx Express ___

	Yes	No	N/A
Were custody seals on outside of shipping container?	___	___	Y
If yes, how many? ___ Where? ___			
Custody seal date: ___ Seal name: ___			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	___	___
Did all bottles have labels?	X	___	___
Did all bottle labels and tags agree with Chain of Custody?	X	___	___
Were samples received within hold time?	X	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	X	___	___
Was sufficient amount of sample sent for the tests indicated?	X	___	___
Was correct preservation added to samples?	X	___	___

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles?	___	___	X
Bubbles present in sample #: ___			

Temperature of cooler upon receipt: 2.9°C / 2.4°C (omit) Cold Cool Ambient N/A

Explain any discrepancies: ___

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___

March 21, 2024

Ms. Delia Massey
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Ms. Massey,

On March 7th, 5 samples were received by our laboratory and assigned our laboratory project number EV24030054. The project was identified as your 210368. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	3/21/2024 EV24030054 EV24030054-01
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	03/07/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	3/6/2024 12:00:00 PM
CLIENT SAMPLE ID	EMW-14S-20240306	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**91**	0.92	10	MG/L	03/07/2024	RAL
Nitrate/Nitrite	EPA-300.0	**0.63**	0.14	1	MG/L	03/07/2024	RAL
Sulfate	EPA-300.0	**3.8**	0.26	1	MG/L	03/07/2024	RAL
Aluminum (Dissolved)	EPA-200.8	**120**	50	1	UG/L	03/19/2024	EBS
Calcium (Dissolved)	EPA-200.8	**12000**	50	1	UG/L	03/19/2024	EBS
Iron (Dissolved)	EPA-200.8	**390**	50	1	UG/L	03/19/2024	EBS
Magnesium (Dissolved)	EPA-200.8	**1700**	50	1	UG/L	03/19/2024	EBS
Manganese (Dissolved)	EPA-200.8	**39**	2.0	1	UG/L	03/19/2024	EBS
Potassium (Dissolved)	EPA-200.8	**800**	50	1	UG/L	03/19/2024	EBS
Sodium (Dissolved)	EPA-200.8	**130000**	50	1	UG/L	03/19/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**190**	2.0	1	MG/L	03/13/2024	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	03/11/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**12**	2.0	4	MG/L	03/13/2024	CAS
Mercury, Dissolved	E1631E	**3200**	5.0	10	NG/L	03/19/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	3/21/2024 EV24030054 EV24030054-02
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	03/07/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	3/6/2024 2:00:00 PM
CLIENT SAMPLE ID	CP-MWC1-20240306	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**150**	1.8	20	MG/L	03/07/2024	RAL
Nitrate/Nitrite	EPA-300.0	**2.3**	0.14	1	MG/L	03/07/2024	RAL
Sulfate	EPA-300.0	**1.0**	0.26	1	MG/L	03/07/2024	RAL
Aluminum (Dissolved)	EPA-200.8	**480**	50	1	UG/L	03/19/2024	EBS
Calcium (Dissolved)	EPA-200.8	**3000**	50	1	UG/L	03/19/2024	EBS
Iron (Dissolved)	EPA-200.8	**880**	50	1	UG/L	03/19/2024	EBS
Magnesium (Dissolved)	EPA-200.8	**590**	50	1	UG/L	03/19/2024	EBS
Manganese (Dissolved)	EPA-200.8	**41**	2.0	1	UG/L	03/19/2024	EBS
Potassium (Dissolved)	EPA-200.8	**1700**	50	1	UG/L	03/19/2024	EBS
Sodium (Dissolved)	EPA-200.8	**410000**	50	1	UG/L	03/19/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**730**	2.0	1	MG/L	03/13/2024	CAS
Sulfide	EPA-376.1	**2.0**	0.25	5	MG/L	03/11/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**36**	10	20	MG/L	03/13/2024	CAS
Mercury, Dissolved	E1631E	**880**	5.0	10	NG/L	03/19/2024	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	3/21/2024 EV24030054 EV24030054-03
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	03/07/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	3/6/2024 3:15:00 PM
CLIENT SAMPLE ID	AMW-03-20240306	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**200**	1.8	20	MG/L	03/07/2024	RAL
Nitrate/Nitrite	EPA-300.0	U	0.14	1	MG/L	03/07/2024	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	03/07/2024	RAL
Aluminum (Dissolved)	EPA-200.8	U	250	5	UG/L	03/19/2024	EBS
Calcium (Dissolved)	EPA-200.8	**6100**	250	5	UG/L	03/19/2024	EBS
Iron (Dissolved)	EPA-200.8	**3500**	250	5	UG/L	03/19/2024	EBS
Magnesium (Dissolved)	EPA-200.8	U	250	5	UG/L	03/19/2024	EBS
Manganese (Dissolved)	EPA-200.8	**34**	10	5	UG/L	03/19/2024	EBS
Potassium (Dissolved)	EPA-200.8	**12000**	250	5	UG/L	03/19/2024	EBS
Sodium (Dissolved)	EPA-200.8	**2000000**	250	5	UG/L	03/19/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**3800**	4.0	2	MG/L	03/13/2024	CAS
Sulfide	EPA-376.1	**65**	5.0	100	MG/L	03/11/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**450**	250	500	MG/L	03/13/2024	CAS
Mercury, Dissolved	E1631E	**3200**	100	200	NG/L	03/19/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	3/21/2024 EV24030054 EV24030054-04
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	03/07/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	3/6/2024 4:30:00 PM
CLIENT SAMPLE ID	CP-MWA1-20240306	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**1900**	46	500	MG/L	03/07/2024	RAL
Nitrate/Nitrite	EPA-300.0	**30**	2.9	20	MG/L	03/07/2024	RAL
Sulfate	EPA-300.0	**6.3**	5.2	20	MG/L	03/07/2024	RAL
Aluminum (Dissolved)	EPA-200.8	U	500	10	UG/L	03/19/2024	EBS
Calcium (Dissolved)	EPA-200.8	**6800**	500	10	UG/L	03/19/2024	EBS
Iron (Dissolved)	EPA-200.8	**11000**	500	10	UG/L	03/19/2024	EBS
Magnesium (Dissolved)	EPA-200.8	U	500	10	UG/L	03/19/2024	EBS
Manganese (Dissolved)	EPA-200.8	**21**	20	10	UG/L	03/19/2024	EBS
Potassium (Dissolved)	EPA-200.8	**60000**	500	10	UG/L	03/19/2024	EBS
Sodium (Dissolved)	EPA-200.8	**6200000**	500	10	UG/L	03/19/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**10000**	20	10	MG/L	03/14/2024	CAS
Sulfide	EPA-376.1	**140**	5.0	100	MG/L	03/11/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**1500**	250	500	MG/L	03/13/2024	CAS
Mercury, Dissolved	E1631E	**4300**	100	200	NG/L	03/19/2024	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	3/21/2024 EV24030054 EV24030054-05
CLIENT CONTACT:	Delia Massey	DATE RECEIVED:	03/07/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	3/6/2024 5:30:00 PM
CLIENT SAMPLE ID	EMW-19S-20240306	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**18**	0.092	1	MG/L	03/07/2024	RAL
Nitrate/Nitrite	EPA-300.0	U	0.14	1	MG/L	03/07/2024	RAL
Sulfate	EPA-300.0	**130**	2.6	10	MG/L	03/07/2024	RAL
Aluminum (Dissolved)	EPA-200.8	**490**	50	1	UG/L	03/19/2024	EBS
Calcium (Dissolved)	EPA-200.8	**2800**	50	1	UG/L	03/19/2024	EBS
Iron (Dissolved)	EPA-200.8	**2400**	50	1	UG/L	03/19/2024	EBS
Magnesium (Dissolved)	EPA-200.8	**160**	50	1	UG/L	03/19/2024	EBS
Manganese (Dissolved)	EPA-200.8	**40**	2.0	1	UG/L	03/19/2024	EBS
Potassium (Dissolved)	EPA-200.8	**1300**	50	1	UG/L	03/19/2024	EBS
Sodium (Dissolved)	EPA-200.8	**220000**	50	1	UG/L	03/19/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**360**	2.0	1	MG/L	03/13/2024	CAS
Sulfide	EPA-376.1	**0.79**	0.20	4	MG/L	03/11/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**14**	10	20	MG/L	03/13/2024	CAS
Mercury, Dissolved	E1631E	**16000**	25	50	NG/L	03/19/2024	CAS

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104
CLIENT CONTACT: Delia Massey
CLIENT PROJECT: 210368

DATE: 3/21/2024
ALS SDG#: EV24030054
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-R461886 - Batch R461886 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.092	03/07/2024	RAL
Nitrate/Nitrite	EPA-300.0	U	MG/L	0.14	03/07/2024	RAL
Sulfate	EPA-300.0	U	MG/L	0.26	03/07/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-031824W - Batch 209072 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved)	EPA-200.8	U	UG/L	50	03/19/2024	EBS
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	03/19/2024	EBS
Iron (Dissolved)	EPA-200.8	U	UG/L	50	03/19/2024	EBS
Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	03/19/2024	EBS
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	03/19/2024	EBS
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	03/19/2024	EBS
Sodium (Dissolved)	EPA-200.8	U	UG/L	50	03/19/2024	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R461878 - Batch R461878 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	9.0	03/13/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R461880 - Batch R461880 - Water by EPA-376.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Sulfide	EPA-376.1	U	MG/L	0.050	03/11/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R461882 - Batch R461882 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	03/13/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	3/21/2024
		ALS SDG#:	EV24030054
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Delia Massey		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MBLK-R461883 - Batch R461883 - Water by E1631E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury, Dissolved	E1631E	U	NG/L	0.50	03/19/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104
CLIENT CONTACT: Delia Massey
CLIENT PROJECT: 210368

DATE: 3/21/2024
ALS SDG#: EV24030054
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R461886 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**99.0**			80	120	03/07/2024	RAL
Chloride - BSD	EPA-300.0	**99.0**	**0**		80	120	03/07/2024	RAL
Sulfate - BS	EPA-300.0	**99.0**			80	120	03/07/2024	RAL
Sulfate - BSD	EPA-300.0	**100**	**1**		80	120	03/07/2024	RAL

ALS Test Batch ID: 209072 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved) - BS	EPA-200.8	**104**			80	120	03/19/2024	EBS
Aluminum (Dissolved) - BSD	EPA-200.8	**104**	**0**		80	120	03/19/2024	EBS
Calcium (Dissolved) - BS	EPA-200.8	**92.3**			80	120	03/19/2024	EBS
Calcium (Dissolved) - BSD	EPA-200.8	**92.8**	**1**		80	120	03/19/2024	EBS
Iron (Dissolved) - BS	EPA-200.8	**102**			80	120	03/19/2024	EBS
Iron (Dissolved) - BSD	EPA-200.8	**102**	**1**		80	120	03/19/2024	EBS
Magnesium (Dissolved) - BS	EPA-200.8	**99.1**			80	120	03/19/2024	EBS
Magnesium (Dissolved) - BSD	EPA-200.8	**99.8**	**1**		80	120	03/19/2024	EBS
Manganese (Dissolved) - BS	EPA-200.8	**96.0**			82.2	110	03/19/2024	EBS
Manganese (Dissolved) - BSD	EPA-200.8	**96.0**	**0**		82.2	110	03/19/2024	EBS
Potassium (Dissolved) - BS	EPA-200.8	**99.3**			80	120	03/19/2024	EBS
Potassium (Dissolved) - BSD	EPA-200.8	**98.9**	**0**		80	120	03/19/2024	EBS
Sodium (Dissolved) - BS	EPA-200.8	**98.4**			80	105	03/19/2024	EBS
Sodium (Dissolved) - BSD	EPA-200.8	**98.5**	**0**		80	105	03/19/2024	EBS

ALS Test Batch ID: R461878 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**103**			85	115	03/13/2024	CAS
Alkalinity as CaCO3, Total - BSD	SM2320B	**110**	**6**		85	115	03/13/2024	CAS

ALS Test Batch ID: R461880 - Water by EPA-376.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfide - BS	EPA-376.1	**98.6**			90	110	03/11/2024	CAS

ALS Test Batch ID: R461882 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**98.4**			85	115	03/13/2024	CAS

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CERTIFICATE OF ANALYSIS

APPROVED BY

Rob Greer
Laboratory Director

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Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24030054

Date 03/06/24 Page 1 Of 1

PROJECT ID: 210368
REPORT TO COMPANY: Aspect Consulting
PROJECT MANAGER: Delia Massey
ADDRESS: 710 2nd Ave #550
Seattle, WA
PHONE: P.O. #:
E-MAIL: delia.massey@aspectconsulting.com
INVOICE TO COMPANY: AC
ATTENTION: AP
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. EMW-14S-20240306	03/06/24	1200	W	1
2. CP-MW1-20240306		1400		2
3. AMW-03-20240306		1515		3
4. CP-MW4-20240306		1630		4
5. EMW-19S-20240306		1730		5
6.				
7.				
8.				
9.				
10.				

ANALYSIS REQUESTED

	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs
1. EMW-14S-20240306																					X			
2. CP-MW1-20240306																					X			
3. AMW-03-20240306																					X			
4. CP-MW4-20240306																					X			
5. EMW-19S-20240306																					X			

OTHER (Specify)

	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
Hg EPA 1631 (Field Filtered)	6	
Alkalinity by EPA 310.1		
Dissolved Fe, Mn, Cu, Ni, Mg, Na EPA 200.8 (Field Filtered)		
Anions (Chloride, Nitrate, Nitrite, Sulfate) by EPA 300.0		
TOC by SM5310C		
Sulfide by EPA 376.1		

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nick Frederiksen (Geosyntec) 3/7/24 0821
   Received By: [signature], ALS, 3/7/24, 0821
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:

Specify: SHORT HOLD!!!
Field filtered.
Two coolers.

*Turnaround request less than standard may incur Rush Charges

3/7/24

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Aspect Consulting ALS Job#: EV240300S4

Project: 210368

Login Date: 3/7/24 Login Time: 0821 Login By: AV

Type of Shipping Container: Cooler ✓ Box ____ Other ____

Shipped via: FedEx Ground ____ UPS ____ Courier ____ Hand Delivered ✓ ALS Courier ____
FedEx Express ____

	Yes	No	N/A
Were custody seals on outside of shipping container? If yes, how many? ____ Where? ____ Custody seal date: ____ Seal name: ____	____	____	✓
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	✓	____	____
Did all bottles have labels?	✓	____	____
Did all bottle labels and tags agree with Chain of Custody?	✓	____	____
Were samples received within hold time?	✓	____	____
Did all bottles arrive in good condition (unbroken, etc.)?	✓	____	____
Was sufficient amount of sample sent for the tests indicated?	✓	____	____
Was correct preservation added to samples?	✓	____	____
Subcontract test containers added to Subcontract Bin?	✓	____	____
Wetchem test containers marked with required Tests?	____	____	✓
Short hold time test containers delivered to analysts?	____	____	✓
Were VOA vials checked for absence of air bubbles? Bubbles present in sample #: ____	____	____	✓
5035A kits received? # Low Kits: ____ # High Kits: ____	____	____	✓
5035A kits returned? # Low Kits: ____ # High Kits: ____			
Temperature of cooler upon receipt: 3.6°C, 3.8°C On ice?	✓	____	____

Explain any discrepancies:

Was client contacted? ____ Who was called? ____ By whom? ____ Date: ____

Outcome of call:

June 27, 2024

Mr. Steve Germiat
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Mr. Germiat,

On June 13th, 5 samples were received by our laboratory and assigned our laboratory project number EV24060124. The project was identified as your 210368. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	6/27/2024
		ALS JOB#:	EV24060124
		ALS SAMPLE#:	EV24060124-01
CLIENT CONTACT:	Steve Germiat	DATE RECEIVED:	06/13/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	6/13/2024 9:21:00 AM
CLIENT SAMPLE ID	EMW-14S-20240613	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**140**	0.92	10	MG/L	06/14/2024	RAL
Nitrate/Nitrite	EPA-300.0	**1.1**	0.14	1	MG/L	06/14/2024	RAL
Sulfate	EPA-300.0	**3.2**	0.26	1	MG/L	06/14/2024	RAL
Aluminum (Dissolved)	EPA-200.8	**490**	50	1	UG/L	06/14/2024	EBS
Calcium (Dissolved)	EPA-200.8	**9900**	50	1	UG/L	06/14/2024	EBS
Iron (Dissolved)	EPA-200.8	**1200**	50	1	UG/L	06/14/2024	EBS
Magnesium (Dissolved)	EPA-200.8	**1200**	50	1	UG/L	06/14/2024	EBS
Manganese (Dissolved)	EPA-200.8	**61**	5.0	1	UG/L	06/14/2024	EBS
Potassium (Dissolved)	EPA-200.8	**1200**	50	1	UG/L	06/14/2024	EBS
Sodium (Dissolved)	EPA-200.8	**210000**	50	1	UG/L	06/14/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**270**	2.0	1	MG/L	06/19/2024	CAS
Sulfide	EPA-376.1	**0.17**	0.050	1	MG/L	06/18/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**22**	5.0	10	MG/L	06/21/2024	CAS
Mercury, Dissolved	E1631E	**8400**	50	100	NG/L	06/20/2024	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	6/27/2024 EV24060124 EV24060124-02
CLIENT CONTACT:	Steve Germiat	DATE RECEIVED:	06/13/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	6/13/2024 9:35:00 AM
CLIENT SAMPLE ID	CP-MW4-20240613	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**120**	1.8	20	MG/L	06/14/2024	RAL
Nitrate/Nitrite	EPA-300.0	**0.16**	0.14	1	MG/L	06/14/2024	RAL
Sulfate	EPA-300.0	**0.50**	0.26	1	MG/L	06/14/2024	RAL
Aluminum (Dissolved)	EPA-200.8	**670**	50	1	UG/L	06/14/2024	EBS
Calcium (Dissolved)	EPA-200.8	**3100**	50	1	UG/L	06/14/2024	EBS
Iron (Dissolved)	EPA-200.8	**1000**	50	1	UG/L	06/14/2024	EBS
Magnesium (Dissolved)	EPA-200.8	**700**	50	1	UG/L	06/14/2024	EBS
Manganese (Dissolved)	EPA-200.8	**46**	5.0	1	UG/L	06/14/2024	EBS
Potassium (Dissolved)	EPA-200.8	**1700**	50	1	UG/L	06/14/2024	EBS
Sodium (Dissolved)	EPA-200.8	**410000**	50	1	UG/L	06/14/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**710**	2.0	1	MG/L	06/19/2024	CAS
Sulfide	EPA-376.1	**2.7**	0.50	10	MG/L	06/18/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**38**	10	20	MG/L	06/21/2024	CAS
Mercury, Dissolved	E1631E	**770**	2.5	5	NG/L	06/20/2024	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	6/27/2024 EV24060124 EV24060124-03
CLIENT CONTACT:	Steve Germiat	DATE RECEIVED:	06/13/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	6/13/2024 10:50:00 AM
CLIENT SAMPLE ID	EMW-19S-20240613	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**15**	0.092	1	MG/L	06/14/2024	RAL
Nitrate/Nitrite	EPA-300.0	**0.16**	0.14	1	MG/L	06/14/2024	RAL
Sulfate	EPA-300.0	**91**	2.6	10	MG/L	06/14/2024	RAL
Aluminum (Dissolved)	EPA-200.8	**510**	50	1	UG/L	06/14/2024	EBS
Calcium (Dissolved)	EPA-200.8	**2400**	50	1	UG/L	06/14/2024	EBS
Iron (Dissolved)	EPA-200.8	**2500**	50	1	UG/L	06/14/2024	EBS
Magnesium (Dissolved)	EPA-200.8	**110**	50	1	UG/L	06/14/2024	EBS
Manganese (Dissolved)	EPA-200.8	**36**	5.0	1	UG/L	06/14/2024	EBS
Potassium (Dissolved)	EPA-200.8	**1400**	50	1	UG/L	06/14/2024	EBS
Sodium (Dissolved)	EPA-200.8	**270000**	50	1	UG/L	06/14/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**410**	2.0	1	MG/L	06/19/2024	CAS
Sulfide	EPA-376.1	**1.1**	0.20	4	MG/L	06/18/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**16**	10	20	MG/L	06/21/2024	CAS
Mercury, Dissolved	E1631E	**8400**	50	100	NG/L	06/20/2024	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	6/27/2024 EV24060124 EV24060124-04
CLIENT CONTACT:	Steve Germiat	DATE RECEIVED:	06/13/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	6/13/2024 11:14:00 AM
CLIENT SAMPLE ID	AMW-03-20240613	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**200**	1.8	20	MG/L	06/14/2024	RAL
Nitrate/Nitrite	EPA-300.0	U	0.14	1	MG/L	06/14/2024	RAL
Sulfate	EPA-300.0	**4.7**	0.26	1	MG/L	06/14/2024	RAL
Aluminum (Dissolved)	EPA-200.8	**280**	250	5	UG/L	06/14/2024	EBS
Calcium (Dissolved)	EPA-200.8	**6800**	250	5	UG/L	06/14/2024	EBS
Iron (Dissolved)	EPA-200.8	**4000**	250	5	UG/L	06/14/2024	EBS
Magnesium (Dissolved)	EPA-200.8	U	250	5	UG/L	06/14/2024	EBS
Manganese (Dissolved)	EPA-200.8	**29**	25	5	UG/L	06/14/2024	EBS
Potassium (Dissolved)	EPA-200.8	**13000**	250	5	UG/L	06/14/2024	EBS
Sodium (Dissolved)	EPA-200.8	**2100000**	250	5	UG/L	06/14/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**4000**	20	10	MG/L	06/19/2024	CAS
Sulfide	EPA-376.1	**38**	5.0	100	MG/L	06/18/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**580**	100	200	MG/L	06/21/2024	CAS
Mercury, Dissolved	E1631E	**2300**	25	50	NG/L	06/20/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	6/27/2024 EV24060124 EV24060124-05
CLIENT CONTACT:	Steve Germiat	DATE RECEIVED:	06/13/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	6/13/2024 12:50:00 PM
CLIENT SAMPLE ID	CP-MWA1-20240613	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**1700**	46	500	MG/L	06/14/2024	RAL
Nitrate/Nitrite	EPA-300.0	U	0.71	5	MG/L	06/14/2024	RAL
Sulfate	EPA-300.0	**8.0**	1.3	5	MG/L	06/14/2024	RAL
Aluminum (Dissolved)	EPA-200.8	U	500	10	UG/L	06/14/2024	EBS
Calcium (Dissolved)	EPA-200.8	**6400**	500	10	UG/L	06/14/2024	EBS
Iron (Dissolved)	EPA-200.8	**11000**	500	10	UG/L	06/14/2024	EBS
Magnesium (Dissolved)	EPA-200.8	U	500	10	UG/L	06/14/2024	EBS
Manganese (Dissolved)	EPA-200.8	U	50	10	UG/L	06/14/2024	EBS
Potassium (Dissolved)	EPA-200.8	**61000**	500	10	UG/L	06/14/2024	EBS
Sodium (Dissolved)	EPA-200.8	**6100000**	1000	20	UG/L	06/14/2024	EBS
Alkalinity as CaCO3, Total	SM2320B	**11000**	20	10	MG/L	06/19/2024	CAS
Sulfide	EPA-376.1	**200**	12	250	MG/L	06/18/2024	CAS
Total Organic Carbon (TOC)	SM5310C	**260**	50	100	MG/L	06/21/2024	CAS
Mercury, Dissolved	E1631E	**1400**	50	100	NG/L	06/20/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104
CLIENT CONTACT: Steve Germiat
CLIENT PROJECT: 210368

DATE: 6/27/2024
ALS SDG#: EV24060124
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-R470272 - Batch R470272 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.092	06/14/2024	RAL
Nitrate/Nitrite	EPA-300.0	U	MG/L	0.14	06/14/2024	RAL
Sulfate	EPA-300.0	U	MG/L	0.26	06/14/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-061424W - Batch 213313 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved)	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Iron (Dissolved)	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Manganese (Dissolved)	EPA-200.8	U	UG/L	5.0	06/14/2024	EBS
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Sodium (Dissolved)	EPA-200.8	U	UG/L	50	06/14/2024	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R470653 - Batch R470653 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	9.0	06/19/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R470654 - Batch R470654 - Water by EPA-376.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Sulfide	EPA-376.1	U	MG/L	0.050	06/18/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R470655 - Batch R470655 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	06/21/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	6/27/2024
		ALS SDG#:	EV24060124
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Steve Germiat		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MBLK-R470657 - Batch R470657 - Water by E1631E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury, Dissolved	E1631E	U	NG/L	0.50	06/20/2024	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104
CLIENT CONTACT: Steve Germiat
CLIENT PROJECT: 210368

DATE: 6/27/2024
ALS SDG#: EV24060124
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R470272 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**102**			80	120	06/14/2024	RAL
Chloride - BSD	EPA-300.0	**103**	**1**		80	120	06/14/2024	RAL
Sulfate - BS	EPA-300.0	**101**			80	120	06/14/2024	RAL
Sulfate - BSD	EPA-300.0	**102**	**1**		80	120	06/14/2024	RAL

ALS Test Batch ID: 213313 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved) - BS	EPA-200.8	**102**			80	120	06/14/2024	EBS
Aluminum (Dissolved) - BSD	EPA-200.8	**102**	**0**		80	120	06/14/2024	EBS
Calcium (Dissolved) - BS	EPA-200.8	**95.2**			80	120	06/14/2024	EBS
Calcium (Dissolved) - BSD	EPA-200.8	**94.8**	**0**		80	120	06/14/2024	EBS
Iron (Dissolved) - BS	EPA-200.8	**103**			80	120	06/14/2024	EBS
Iron (Dissolved) - BSD	EPA-200.8	**102**	**0**		80	120	06/14/2024	EBS
Magnesium (Dissolved) - BS	EPA-200.8	**104**			80	120	06/14/2024	EBS
Magnesium (Dissolved) - BSD	EPA-200.8	**106**	**1**		80	120	06/14/2024	EBS
Manganese (Dissolved) - BS	EPA-200.8	**111**			82.2	115	06/14/2024	EBS
Manganese (Dissolved) - BSD	EPA-200.8	**110**	**2**		82.2	115	06/14/2024	EBS
Potassium (Dissolved) - BS	EPA-200.8	**98.5**			80	120	06/14/2024	EBS
Potassium (Dissolved) - BSD	EPA-200.8	**98.3**	**0**		80	120	06/14/2024	EBS
Sodium (Dissolved) - BS	EPA-200.8	**103**			80	105	06/14/2024	EBS
Sodium (Dissolved) - BSD	EPA-200.8	**106**	**2**	S	80	105	06/14/2024	EBS

S - Outside of control limits.

ALS Test Batch ID: R470653 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**105**			85	115	06/19/2024	CAS
Alkalinity as CaCO3, Total - BSD	SM2320B	**104**	**1**		85	115	06/19/2024	CAS

ALS Test Batch ID: R470654 - Water by EPA-376.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfide - BS	EPA-376.1	**99.4**				110	06/18/2024	CAS

ALS Test Batch ID: R470655 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**98.4**			85	115	06/21/2024	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	6/27/2024
		ALS SDG#:	EV24060124
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Steve Germiat		
CLIENT PROJECT:	210368		

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY

APPROVED BY

Rob Greer
Laboratory Director

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8620 Holly Drive, Suite 100
Everett, WA 98208
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http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24060124

Date 06/13/24 Page 1 Of 1

PROJECT ID: 210368
REPORT TO COMPANY: Aspect Consulting
PROJECT MANAGER: Steve Germiat
ADDRESS: 710 2nd Ave #550
Seattle, WA
PHONE: P.O. #: 210368
E-MAIL: steve.germiat@aspectconsulting.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. EMW-14S-20240613	06/13/24	0921	W	1
2. CP-MW4-20240613		1135		2
3. EMW-19S-20240613		1058		3
4. AMW-03-20240613		1114		4
5. CP-MW11-20240613		1250		5
6.				
7.				
8.				
9.				
10.				

ANALYSIS REQUESTED

	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs
1. EMW-14S-20240613																					X	X	X	X	X
2. CP-MW4-20240613																									
3. EMW-19S-20240613																									
4. AMW-03-20240613																									
5. CP-MW11-20240613																									

OTHER (Specify)

	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EMW-14S-20240613	6	
2. CP-MW4-20240613		
3. EMW-19S-20240613		
4. AMW-03-20240613		
5. CP-MW11-20240613		

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [illegible] Aspect 6/13/24 1510
Received By: [illegible] ALS 6/13/24 1510
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Aspect Consulting ALS Job#: EV2406O124

Project: 210368

Login Date: 6/13/24 Login Time: 1510 Login By: AV

Type of Shipping Container: Cooler ✓ Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Courier ___ Hand Delivered ✓ ALS Courier ___
FedEx Express ___

	Yes	No	N/A
Were custody seals on outside of shipping container? If yes, how many? ___ Where? ___ Custody seal date: ___ Seal name: ___	___	___	✓
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	✓	___	___
Did all bottles have labels?	✓	___	___
Did all bottle labels and tags agree with Chain of Custody?	✓	___	___
Were samples received within hold time?	✓	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	✓	___	___
Was sufficient amount of sample sent for the tests indicated?	✓	___	___
Was correct preservation added to samples?	✓	___	___
Subcontract test containers added to Subcontract Bin?	✓	___	___
Wetchem test containers marked with required Tests?	___	___	✓
Short hold time test containers delivered to analysts?	___	___	✓
Were VOA vials checked for absence of air bubbles?	___	___	✓
Bubbles present in sample #: ___			
5035A kits received? # Low Kits: ___ # High Kits: ___	___	___	✓
5035A kits returned? # Low Kits: ___ # High Kits: ___			
Temperature of cooler upon receipt: 4.3°C On ice?	✓	___	___

Explain any discrepancies:

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call:

APPENDIX B

Data Validation Reports and Laboratory Analytical Reports for Wastewater Settling Basin Soil Sampling

DATA VALIDATION REPORT

GP West Wastewater Settling Basin Area
Soil Sampling
October – December 2023
Sample Delivery Groups
EV231100006, EV23120110, and EV24010010

Prepared by:

Aspect Consulting (a Geosyntec Company)
710 Second Ave, Suite 550
Seattle, WA 98104

Project No. AS210368B • April 2024

S:\Port of Bellingham\Chlor-Alkali RAU RD-CM 210368-B\Data\Lab Data\2023.10 WSB Soil Sampling for PRDI 3\WSB Area Validation Report.docx

1 Introduction

This report summarizes the findings of groundwater sampling for the GP West WSB Area in October through December 2023. A complete list of samples and analyses for the sample delivery group (SDG) is provided in Section 2.

Samples were sent to ALS Environmental (Everett, WA) for analysis of various parameters. The analytical methods are summarized in Table 1 below:

Table 1. Analytical Methods

SDG	Analysis	Method	Lab	Validation Level
EV231100006	TPH Diesel and Oil	NWTPH-DX	ALS-Ev	2A
EV231100006	Metals	SW6020	ALS-Ev	2A
EV231100006	Mercury, leachate	SW7470R	ALS-Ev	2A
EV231100006	Mercury, total	SW7471	ALS-Ev	2A
EV231100006	SVOCs	SW8270E	ALS-Ev	2A
EV23120110	Mercury, total	SW7471	ALS-Ev	2A
EV24010010	Mercury, leachate	SW7470R	ALS-Ev	2A

Data assigned a J/UJ qualifier (estimated) may be used for site evaluation purposes but the reasons for qualification should be considered when interpreting sample concentrations. Values without qualification meet all data measurement quality objectives and are suitable for use.

Data qualifier definitions and a summary table of the qualified data are included in the Qualified Data Summary at the end of this report. Data qualifiers have been incorporated into the project chemistry database to reflect the validation in this report.

2 Data Validation Findings for SDG EV231100006

Soil samples in this SDG, and the chemical analyses performed on them, are tabulated below. The sections below describe the results of the data quality review for this SDG by analyte group (analysis).

Table 2. Sample Index

Sample Name	Sample Date	NWTPH-DX	SW6020	SW7470R	SW7471	SW8270E
WSB-101-2	10/31/2023				X	
WSB-101-5.5	10/31/2023				X	
WSB-101-11	10/31/2023				X	
WSB-101-16	10/31/2023				X	
WSB-101-20	10/31/2023				X	
WSB-102-1.5	10/31/2023				X	
WSB-102-6	10/31/2023				X	
WSB-102-11.5	10/31/2023				X	
WSB-102-17	10/31/2023				X	
WSB-102-19	10/31/2023				X	
WSB-103-2	10/30/2023				X	
WSB-103-6.5	10/30/2023				X	
WSB-103-12	10/30/2023				X	
WSB-103-15.5	10/30/2023				X	
WSB-103-18	10/30/2023				X	
WSB-104-2	10/30/2023				X	
WSB-104-7.5	10/30/2023				X	
WSB-104-11.5	10/30/2023				X	
WSB-104-15.5	10/30/2023	X	X	X	X	X
WSB-104-18	10/30/2023				X	
WSB-105-1.5	10/31/2023				X	
WSB-105-5.5	10/31/2023				X	
WSB-105-10.5	10/31/2023				X	
WSB-105-16	10/31/2023				X	
WSB-105-19	10/31/2023				X	
WSB-106-3	10/30/2023				X	
WSB-106-6.5	10/30/2023				X	
WSB-106-13	10/30/2023			X	X	
WSB-106-17.5	10/30/2023				X	
WSB-106-20	10/30/2023				X	
WSB-107-1.5	10/30/2023				X	
WSB-107-6.5	10/30/2023				X	
WSB-107-11	10/30/2023			X	X	
WSB-107-16	10/30/2023				X	
WSB-107-18	10/30/2023				X	
WSB-108-1.5	10/31/2023				X	
WSB-108-6	10/31/2023				X	
WSB-108-11	10/31/2023				X	
WSB-108-16	10/31/2023				X	
WSB-108-17.5	10/31/2023				X	
WSB-109-1.5	10/30/2023	X	X	X	X	X

Sample Name	Sample Date	NWTPH-DX	SW6020	SW7470R	SW7471	SW8270E
WSB-109-7	10/30/2023				X	
WSB-109-10	10/30/2023			X	X	
WSB-109-13	10/30/2023				X	
WSB-109-15	10/30/2023				X	
WSB-110-1.5	11/1/2023				X	
WSB-110-6.5	11/1/2023				X	
WSB-110-12	11/1/2023	X	X	X	X	X
WSB-110-16	11/1/2023				X	
WSB-110-19.5	11/1/2023				X	
WSB-111-1.5	10/31/2023				X	
WSB-111-6	10/31/2023				X	
WSB-111-11.5	10/31/2023				X	
WSB-111-16.5	10/31/2023				X	
WSB-111-20	10/31/2023				X	
WSB-112-1.5	11/1/2023				X	
WSB-112-7	11/1/2023				X	
WSB-112-11	11/1/2023			X	X	
WSB-112-16.5	11/1/2023	X	X	X	X	X
WSB-112-20	11/1/2023				X	
WSB-113-2	10/30/2023				X	
WSB-113-6	10/30/2023				X	
WSB-113-13	10/30/2023				X	
WSB-113-16.5	10/30/2023				X	
WSB-113-19	10/30/2023				X	

2.1 Sample Receipt and Preservation

Sample receipt and preservation (1.9 to 4.1 degrees C) were acceptable.

2.2 TPH Diesel and Oil (NWTPH-DX)

2.2.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.2.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank.

2.2.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.2.4 Surrogates

Surrogate spike recoveries from all samples were within laboratory control limits.

2.2.5 Laboratory Control Sample (LCS) and LCS Duplicate

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.2.6 Laboratory Duplicate

A laboratory duplicate was not performed on the project samples.

2.2.7 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

The matrix spike recovery was acceptable. A matrix spike duplicate was not analyzed due to a lack of sample material.

2.2.8 Field Duplicates (FD)

Field duplicates were not analyzed for TPH.

2.2.9 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.2.10 Overall Assessment

The data are of known quality and are acceptable for use without qualification.

2.3 Metals (SW6020)

2.3.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.3.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.3.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.3.4 Laboratory Control Sample (LCS) and LCS Duplicate

All LCS/LCSD %R and RPD were within the laboratory specified control limits.

2.3.5 Laboratory Duplicate

A laboratory duplicate was not performed on the project samples.

2.3.6 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

MS and MSD were performed on non-project samples. The recoveries and RPD were acceptable, with the exception of Barium, which had a high recovery. The project data were not qualified based on these results.

2.3.7 Field Duplicate (FD)

Field duplicates were not analyzed for metals.

2.3.8 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.3.9 Overall Assessment

The data are of known quality and are acceptable for use without qualification.

2.4 Mercury, TCLP Leachate (SW7470R)

2.4.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.4.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.4.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.4.4 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.4.5 Laboratory Duplicate

A laboratory duplicate was not performed on the project samples.

2.4.6 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

An MS/MSD was not performed due to a lack of sample material.

2.4.7 Field Duplicate (FD)

Field duplicates were not analyzed for Mercury, TCLP leachate.

2.4.8 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.4.9 Overall Assessment

The data are of known quality and are acceptable for use without qualification.

2.5 Mercury, total (SW7471)

2.5.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.5.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.5.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.5.4 Laboratory Control Sample (LCS) and LCS Duplicate

All LCS/LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.5.5 Laboratory Duplicate

A laboratory duplicate was not performed on the project samples.

2.5.6 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

Three samples were selected for MS/MSD. For two of the samples, the spike amount was too low relative to the parent sample concentration, resulting in unusable QC results. Sample WSB-101-2 was the third sample that was spiked; the spike recoveries exceeded the laboratory's control limits. The mercury result for this sample was qualified as estimated, J.

2.5.7 Field Duplicate (FD)

Three field duplicates were collected. The relative percent difference (RPD) for each pair is summarized in the table below. The upper control limit for soil sample RPD is 50%. By this criterion, three of duplicate pairs failed. The parent sample results were qualified as estimated, J.

Sample Name	Analyte	Parent Sample Concentration	Duplicate Sample Concentration	RPD
WSB-102-6	Mercury, total	170 mg/kg	320 mg/kg	61%, fail
WSB-105-16	Mercury, total	30 mg/kg	54 mg/kg	57%, fail
WSB-106-17.5	Mercury, total	130 mg/kg	130 mg/kg	0%, pass
WSB-113-16.5	Mercury, total	57 mg/kg	34 mg/kg	51%, fail

2.5.8 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.5.9 Overall Assessment

The data are of known quality and are acceptable for use, with the exception of the results summarized in Table 3 below.

2.6 Semi-Volatile Organic Compounds (SW8270E)

2.6.1 Holding Times

Samples were analyzed within the requisite holding time limit.

2.6.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.6.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

2.6.4 Surrogates

Surrogate spike recoveries from all samples were within laboratory control limits.

2.6.5 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

Hexachlorocyclopentadiene and 2,4-Dinitrophenol RPD were above the laboratory's control limit. These compounds were not detected in the samples. The results were qualified UJ. All other LCS and LCSD %R and RPD were within the laboratory-specified control limits.

2.6.6 Laboratory Duplicate

A laboratory duplicate was not performed on the project samples.

2.6.7 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

An MS/MSD was not performed due to a lack of sample material.

2.6.8 Field Duplicate (FD)

A field duplicate was not collected.

2.6.9 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

2.6.10 Overall Assessment

The data are of known quality and are acceptable for use without qualification, with the exception of results summarized in Table 3 below.

3 Qualified Data Summary (SDG EV231100006)

Sample	Method	Analyte	Qualifier	Reason
WSB-101-2	SW7471	Mercury	J	MS/MS recovery high.
WSB-104-15.5	SW8270E	2,4-Dinitrophenol	UJ	LCS/LCSD RPD over control limit.
WSB-104-15.5	SW8270E	Hexachlorocyclopentadiene	UJ	LCS/LCSD RPD over control limit.
WSB-109-1.5	SW8270E	2,4-Dinitrophenol	UJ	LCS/LCSD RPD over control limit.
WSB-109-1.5	SW8270E	Hexachlorocyclopentadiene	UJ	LCS/LCSD RPD over control limit.
WSB-110-12	SW8270E	2,4-Dinitrophenol	UJ	LCS/LCSD RPD over control limit.
WSB-110-12	SW8270E	Hexachlorocyclopentadiene	UJ	LCS/LCSD RPD over control limit.
WSB-112-16.5	SW8270E	2,4-Dinitrophenol	UJ	LCS/LCSD RPD over control limit.
WSB-112-16.5	SW8270E	Hexachlorocyclopentadiene	UJ	LCS/LCSD RPD over control limit.
WSB-118-1.5	SW7471	Mercury	J	Matrix spike recovery high.

4 Data Validation Findings for SDG EV23120110

Soil samples in this SDG, and the chemical analyses performed on them, are tabulated below. The sections below describe the results of the data quality review for this SDG by analyte group (analysis).

Table 3. Sample Index

Sample Name	Sample Date	SW7471
WSB-114-0.5	12/11/2023	X
WSB-114-6	12/11/2023	X
WSB-114-13	12/11/2023	X
WSB-114-17.5	12/11/2023	X
WSB-114-19.5	12/11/2023	X
WSB-115-2.5	12/11/2023	X
WSB-115-6	12/11/2023	X
WSB-115-10.5	12/11/2023	X
WSB-115-15.5	12/11/2023	X
WSB-115-20	12/11/2023	X
WSB-116-1.5	12/11/2023	X
WSB-116-8	12/11/2023	X
WSB-116-11.5	12/11/2023	X
WSB-116-16	12/11/2023	X
WSB-116-18	12/11/2023	X
WSB-117-2	12/11/2023	X
WSB-117-7	12/11/2023	X
WSB-117-11	12/11/2023	X
WSB-117-15	12/11/2023	X
WSB-117-17	12/11/2023	X
WSB-118-1.5	12/11/2023	X
WSB-118-5	12/11/2023	X
WSB-118-12	12/11/2023	X
WSB-118-16	12/11/2023	X
WSB-118-18	12/11/2023	X
WSB-119-1	12/11/2023	X
WSB-119-5	12/11/2023	X
WSB-119-12	12/11/2023	X
WSB-119-17.5	12/11/2023	X
WSB-119-19	12/11/2023	X
WSB-120-2	12/11/2023	X
WSB-120-7	12/11/2023	X
WSB-120-14	12/11/2023	X
WSB-120-16.5	12/11/2023	X
WSB-120-19	12/11/2023	X

4.1 Sample Receipt and Preservation

Sample receipt and preservation (4.2 degrees C) were acceptable.

4.2 Mercury, total (SW7471)

4.2.1 Holding Times

Samples were analyzed within the requisite holding time limit.

4.2.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank.

4.2.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

4.2.4 Laboratory Control Sample (LCS) and LCS Duplicate

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

4.2.5 Laboratory Duplicate

A laboratory duplicate was performed on sample WSB-118-1.5. The RPD was acceptable.

4.2.6 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

Two samples were selected for MS/MSD analysis: samples WSB-114-0.5 and WSB-118-1.5. The spiked amount was too low relative to the parent sample amount for WSB-114-0.5, resulting in a non-usable QC result. The spiked amount for WSB-118-1.5 was appropriate. The MS recovery was higher than the laboratory's control limit. The mercury result for this sample was qualified J.

4.2.7 Field Duplicates (FD)

A field duplicate was not collected.

4.2.8 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

4.2.9 Overall Assessment

The data are of known quality and are acceptable for use without qualification, with the exception of the data summarized in Table 5 below.

5 Qualified Data Summary (SDG EV23120110)

Sample	Method	Analyte	Qualifier	Reason
WSB-118-1.5	SW7471	Mercury, total	J	MS recovery over control limit.

6 Data Validation Findings for SDG EV24010010

Soil samples in this SDG, and the chemical analyses performed on them, are tabulated below. The sections below describe the results of the data quality review for this SDG by analyte group (analysis).

Table 4. Sample Index

Sample Name	Sample Date	SW7470R
WSB-114-0.5	12/11/2023	X
WSB-114-6	12/11/2023	X
WSB-114-13	12/11/2023	X
WSB-114-17.5	12/11/2023	X
WSB-115-2.5	12/11/2023	X
WSB-115-6	12/11/2023	X
WSB-115-10.5	12/11/2023	X
WSB-115-15.5	12/11/2023	X
WSB-118-5	12/11/2023	X
WSB-119-1	12/11/2023	X
WSB-119-5	12/11/2023	X
WSB-119-17.5	12/11/2023	X
WSB-120-16.5	12/11/2023	X

6.1 Sample Receipt and Preservation

Sample receipt and preservation (4.2 degrees C) were acceptable.

6.2 Mercury, TCLP leachate (SW7470R)

6.2.1 Holding Times

Samples were analyzed within the requisite holding time limit.

6.2.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank.

6.2.3 Trip Blanks

Trip blanks were not required for this project; no trip blanks were prepared or submitted for analysis.

6.2.4 Laboratory Control Sample (LCS) and LCS Duplicate

All LCS and LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

6.2.5 Laboratory Duplicate

A laboratory duplicate was not performed on the project samples.

6.2.6 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

MS/MSD were not performed on the project samples.

6.2.7 Field Duplicates (FD)

A field duplicate was not collected.

6.2.8 Case Narrative/Laboratory Qualification

The laboratory indicated that no abnormalities or nonconformances were observed during the analyses of the project, and no analytical results were qualified by the lab.

6.2.9 Overall Assessment

The data are of known quality and are acceptable for use without qualification.

7 Qualified Data Summary (SDG EV24010010)

No data were qualified.

November 15, 2023

Ms. Amy Tice
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Ms. Tice,

On November 1st, 69 samples were received by our laboratory and assigned our laboratory project number EV23110006. The project was identified as your 210368. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-01
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 11:30:00 AM
CLIENT SAMPLE ID	WSB-101-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.31**	0.020	1	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-02
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 11:45:00 AM
CLIENT SAMPLE ID	WSB-101-5.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**3.0**	0.40	20	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-03
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 12:00:00 PM
CLIENT SAMPLE ID	WSB-101-11	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**2.2**	0.20	10	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-04
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 12:05:00 PM
CLIENT SAMPLE ID	WSB-101-16	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**5.4**	0.50	25	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-05
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 12:10:00 PM
CLIENT SAMPLE ID	WSB-101-20	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.34**	0.020	1	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-06
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 1:00:00 PM
CLIENT SAMPLE ID	WSB-102-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**19**	1.0	50	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-07
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 1:20:00 PM
CLIENT SAMPLE ID	WSB-102-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**170**	20	1000	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-08
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 1:30:00 PM
CLIENT SAMPLE ID	WSB-102-11.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**200**	20	1000	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-09
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 1:45:00 PM
CLIENT SAMPLE ID	WSB-102-17	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**130**	10	500	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-10
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 1:50:00 PM
CLIENT SAMPLE ID	WSB-102-19	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**14**	1.0	50	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-11
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 3:05:00 PM
CLIENT SAMPLE ID	WSB-103-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**1.8**	0.40	20	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-12
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 3:25:00 PM
CLIENT SAMPLE ID	WSB-103-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**11**	0.80	40	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-13
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 3:35:00 PM
CLIENT SAMPLE ID	WSB-103-12	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**7.9**	0.80	40	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-14
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 3:45:00 PM
CLIENT SAMPLE ID	WSB-103-15.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**15**	1.0	50	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-15
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 3:50:00 PM
CLIENT SAMPLE ID	WSB-103-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**8.7**	0.40	20	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-16
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 10:00:00 AM
CLIENT SAMPLE ID	WSB-104-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**62**	10	500	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-17
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 10:35:00 AM
CLIENT SAMPLE ID	WSB-104-7.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**180**	20	1000	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-18
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 10:45:00 AM
CLIENT SAMPLE ID	WSB-104-11.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**110**	10	500	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-19
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 11:00:00 AM
CLIENT SAMPLE ID	WSB-104-15.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**130**	25	1	MG/KG	11/08/2023	DHM
TPH-Oil Range	NWTPH-DX	**190**	50	1	MG/KG	11/08/2023	DHM
Pyridine	EPA-8270	U	200	1	UG/KG	11/09/2023	DBA
N-Nitrosodimethylamine	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Phenol	EPA-8270	U	140	1	UG/KG	11/09/2023	DBA
Aniline	EPA-8270	U	170	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	350	1	UG/KG	11/09/2023	DBA
2-Chlorophenol	EPA-8270	U	360	1	UG/KG	11/09/2023	DBA
1,3-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
1,4-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzyl Alcohol	EPA-8270	U	190	1	UG/KG	11/09/2023	DBA
1,2-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Methylphenol	EPA-8270	U	120	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	460	1	UG/KG	11/09/2023	DBA
3&4-Methylphenol	EPA-8270	U	160	1	UG/KG	11/09/2023	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	340	1	UG/KG	11/09/2023	DBA
Hexachloroethane	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Nitrobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Isophorone	EPA-8270	U	260	1	UG/KG	11/09/2023	DBA
2-Nitrophenol	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
2,4-Dimethylphenol	EPA-8270	U	230	1	UG/KG	11/09/2023	DBA
Benzoic Acid	EPA-8270	U	2600	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	440	1	UG/KG	11/09/2023	DBA
2,4-Dichlorophenol	EPA-8270	U	890	1	UG/KG	11/09/2023	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	260	1	UG/KG	11/09/2023	DBA
Naphthalene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Chloroaniline	EPA-8270	U	2100	1	UG/KG	11/09/2023	DBA
2,6-Dichlorophenol	EPA-8270	U	670	1	UG/KG	11/09/2023	DBA
Hexachlorobutadiene	EPA-8270	U	500	1	UG/KG	11/09/2023	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	1200	1	UG/KG	11/09/2023	DBA
2-Methylnaphthalene	EPA-8270	U	560	1	UG/KG	11/09/2023	DBA
1-Methylnaphthalene	EPA-8270	U	640	1	UG/KG	11/09/2023	DBA
Hexachlorocyclopentadiene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4,6-Trichlorophenol	EPA-8270	U	140	1	UG/KG	11/09/2023	DBA
2,4,5-Trichlorophenol	EPA-8270	U	140	1	UG/KG	11/09/2023	DBA
2-Chloronaphthalene	EPA-8270	U	120	1	UG/KG	11/09/2023	DBA
2-Nitroaniline	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Acenaphthylene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-19
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 11:00:00 AM
CLIENT SAMPLE ID	WSB-104-15.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dimethylphthalate	EPA-8270	U	150	1	UG/KG	11/09/2023	DBA
2,6-Dinitrotoluene	EPA-8270	U	140	1	UG/KG	11/09/2023	DBA
Acenaphthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
3-Nitroaniline	EPA-8270	U	2100	1	UG/KG	11/09/2023	DBA
2,4-Dinitrophenol	EPA-8270	U	190	1	UG/KG	11/09/2023	DBA
4-Nitrophenol	EPA-8270	U	200	1	UG/KG	11/09/2023	DBA
Dibenzofuran	EPA-8270	U	120	1	UG/KG	11/09/2023	DBA
2,4-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	180	1	UG/KG	11/09/2023	DBA
Diethylphthalate	EPA-8270	U	150	1	UG/KG	11/09/2023	DBA
Fluorene	EPA-8270	U	130	1	UG/KG	11/09/2023	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	150	1	UG/KG	11/09/2023	DBA
4-Nitroaniline	EPA-8270	U	460	1	UG/KG	11/09/2023	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
N-Nitrosodiphenylamine	EPA-8270	U	120	1	UG/KG	11/09/2023	DBA
Azobenzene	EPA-8270	U	160	1	UG/KG	11/09/2023	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	130	1	UG/KG	11/09/2023	DBA
Hexachlorobenzene	EPA-8270	U	130	1	UG/KG	11/09/2023	DBA
Pentachlorophenol	EPA-8270	U	530	1	UG/KG	11/09/2023	DBA
Phenanthrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Carbazole	EPA-8270	U	390	1	UG/KG	11/09/2023	DBA
Di-N-Butylphthalate	EPA-8270	U	120	1	UG/KG	11/09/2023	DBA
Fluoranthene	EPA-8270	**250**	110	1	UG/KG	11/09/2023	DBA
Pyrene	EPA-8270	**190**	110	1	UG/KG	11/09/2023	DBA
Butylbenzylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
3,3-Dichlorobenzidine	EPA-8270	U	620	1	UG/KG	11/09/2023	DBA
Benzo[A]Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Chrysene	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	**280**	100	1	UG/KG	11/09/2023	DBA
Di-N-Octylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[B]Fluoranthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[K]Fluoranthene	EPA-8270	U	150	1	UG/KG	11/09/2023	DBA
Benzo[A]Pyrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	120	1	UG/KG	11/09/2023	DBA
Mercury	EPA-7471	**540**	20	1000	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-19
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 11:00:00 AM
CLIENT SAMPLE ID	WSB-104-15.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.0017**	0.00020	1	MG/L	11/09/2023	RAL
Arsenic	EPA-6020	**5.3**	0.20	1	MG/KG	11/09/2023	EBS
Barium	EPA-6020	**180**	0.10	1	MG/KG	11/09/2023	EBS
Cadmium	EPA-6020	**0.66**	0.10	1	MG/KG	11/09/2023	EBS
Chromium	EPA-6020	**57**	0.10	1	MG/KG	11/09/2023	EBS
Lead	EPA-6020	**68**	0.10	1	MG/KG	11/09/2023	EBS
Selenium	EPA-6020	U	1.0	1	MG/KG	11/09/2023	EBS
Silver	EPA-6020	**0.29**	0.10	1	MG/KG	11/09/2023	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**93.6**	11/08/2023	DHM
2-Fluorophenol	EPA-8270	**90.0**	11/09/2023	DBA
Phenol-d5	EPA-8270	**94.2**	11/09/2023	DBA
Nitrobenzene-d5	EPA-8270	**75.9**	11/09/2023	DBA
2-Fluorobiphenyl	EPA-8270	**73.7**	11/09/2023	DBA
2,4,6-Tribromophenol	EPA-8270	**81.9**	11/09/2023	DBA
Terphenyl-d14	EPA-8270	**73.0**	11/09/2023	DBA

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and an unidentified oil range product.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-20
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 11:05:00 AM
CLIENT SAMPLE ID	WSB-104-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.77**	0.040	2	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-21
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 2:20:00 PM
CLIENT SAMPLE ID	WSB-105-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**33**	2.0	100	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-22
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 2:30:00 PM
CLIENT SAMPLE ID	WSB-105-5.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**3.4**	2.0	100	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-23
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 2:40:00 PM
CLIENT SAMPLE ID	WSB-105-10.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**15**	2.0	100	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-24
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 2:55:00 PM
CLIENT SAMPLE ID	WSB-105-16	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**30**	2.0	100	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-25
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 3:00:00 PM
CLIENT SAMPLE ID	WSB-105-19	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.30**	0.020	1	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-26
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 4:20:00 PM
CLIENT SAMPLE ID	WSB-106-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.58**	0.040	2	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-27
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 4:30:00 PM
CLIENT SAMPLE ID	WSB-106-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**9.2**	2.0	100	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-28
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 4:45:00 PM
CLIENT SAMPLE ID	WSB-106-13	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**320**	20	1000	MG/KG	11/02/2023	RAL
Mercury (TCLP)	EPA-7470/1311	**0.00054**	0.00020	1	MG/L	11/09/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-29
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 4:55:00 PM
CLIENT SAMPLE ID	WSB-106-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**130**	10	500	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-30
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 5:00:00 PM
CLIENT SAMPLE ID	WSB-106-20	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**61**	4.0	200	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-31
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 11:40:00 AM
CLIENT SAMPLE ID	WSB-107-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**27**	2.0	100	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-32
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 11:50:00 AM
CLIENT SAMPLE ID	WSB-107-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**32**	2.0	100	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-33
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 12:00:00 PM
CLIENT SAMPLE ID	WSB-107-11	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**350**	20	1000	MG/KG	11/02/2023	RAL
Mercury (TCLP)	EPA-7470/1311	**0.00024**	0.00020	1	MG/L	11/09/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-34
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 12:25:00 PM
CLIENT SAMPLE ID	WSB-107-16	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**150**	10	500	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-35
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 12:30:00 PM
CLIENT SAMPLE ID	WSB-107-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**79**	4.0	200	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-36
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 3:55:00 PM
CLIENT SAMPLE ID	WSB-108-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**20**	2.0	100	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-37
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 4:05:00 PM
CLIENT SAMPLE ID	WSB-108-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**6.7**	2.0	100	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-38
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 4:15:00 PM
CLIENT SAMPLE ID	WSB-108-11	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**130**	10	500	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-39
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 4:25:00 PM
CLIENT SAMPLE ID	WSB-108-16	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**21**	2.0	100	MG/KG	11/02/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-40
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 4:30:00 PM
CLIENT SAMPLE ID	WSB-108-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.55**	0.10	5	MG/KG	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-41
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 1:00:00 PM
CLIENT SAMPLE ID	WSB-109-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**60**	25	1	MG/KG	11/08/2023	DHM
TPH-Oil Range	NWTPH-DX	**150**	50	1	MG/KG	11/08/2023	DHM
Pyridine	EPA-8270	U	200	1	UG/KG	11/09/2023	DBA
N-Nitrosodimethylamine	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Phenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Aniline	EPA-8270	U	120	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
2-Chlorophenol	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
1,3-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
1,4-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzyl Alcohol	EPA-8270	U	130	1	UG/KG	11/09/2023	DBA
1,2-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Methylphenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	310	1	UG/KG	11/09/2023	DBA
3&4-Methylphenol	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
Hexachloroethane	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Nitrobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Isophorone	EPA-8270	U	180	1	UG/KG	11/09/2023	DBA
2-Nitrophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4-Dimethylphenol	EPA-8270	U	160	1	UG/KG	11/09/2023	DBA
Benzoic Acid	EPA-8270	U	1800	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	300	1	UG/KG	11/09/2023	DBA
2,4-Dichlorophenol	EPA-8270	U	610	1	UG/KG	11/09/2023	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	180	1	UG/KG	11/09/2023	DBA
Naphthalene	EPA-8270	**110**	100	1	UG/KG	11/09/2023	DBA
4-Chloroaniline	EPA-8270	U	1400	1	UG/KG	11/09/2023	DBA
2,6-Dichlorophenol	EPA-8270	U	460	1	UG/KG	11/09/2023	DBA
Hexachlorobutadiene	EPA-8270	U	500	1	UG/KG	11/09/2023	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	810	1	UG/KG	11/09/2023	DBA
2-Methylnaphthalene	EPA-8270	U	380	1	UG/KG	11/09/2023	DBA
1-Methylnaphthalene	EPA-8270	U	440	1	UG/KG	11/09/2023	DBA
Hexachlorocyclopentadiene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4,6-Trichlorophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4,5-Trichlorophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Chloronaphthalene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Nitroaniline	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Acenaphthylene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-41
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 1:00:00 PM
CLIENT SAMPLE ID	WSB-109-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dimethylphthalate	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
2,6-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Acenaphthene	EPA-8270	**160**	100	1	UG/KG	11/09/2023	DBA
3-Nitroaniline	EPA-8270	U	1500	1	UG/KG	11/09/2023	DBA
2,4-Dinitrophenol	EPA-8270	U	130	1	UG/KG	11/09/2023	DBA
4-Nitrophenol	EPA-8270	U	140	1	UG/KG	11/09/2023	DBA
Dibenzofuran	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	120	1	UG/KG	11/09/2023	DBA
Diethylphthalate	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
Fluorene	EPA-8270	**130**	100	1	UG/KG	11/09/2023	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Nitroaniline	EPA-8270	U	320	1	UG/KG	11/09/2023	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
N-Nitrosodiphenylamine	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Azobenzene	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Hexachlorobenzene	EPA-8270	**1400**	100	1	UG/KG	11/09/2023	DBA
Pentachlorophenol	EPA-8270	U	500	1	UG/KG	11/09/2023	DBA
Phenanthrene	EPA-8270	**590**	100	1	UG/KG	11/09/2023	DBA
Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Carbazole	EPA-8270	U	270	1	UG/KG	11/09/2023	DBA
Di-N-Butylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Fluoranthene	EPA-8270	**520**	100	1	UG/KG	11/09/2023	DBA
Pyrene	EPA-8270	**320**	100	1	UG/KG	11/09/2023	DBA
Butylbenzylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
3,3-Dichlorobenzidine	EPA-8270	U	430	1	UG/KG	11/09/2023	DBA
Benzo[A]Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Chrysene	EPA-8270	**130**	100	1	UG/KG	11/09/2023	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	**230**	100	1	UG/KG	11/09/2023	DBA
Di-N-Octylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[B]Fluoranthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[K]Fluoranthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[A]Pyrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Mercury	EPA-7471	**1700**	80	4000	MG/KG	11/03/2023	RAL

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-41
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 1:00:00 PM
CLIENT SAMPLE ID	WSB-109-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.067**	0.0010	5	MG/L	11/09/2023	RAL
Arsenic	EPA-6020	**25**	0.20	1	MG/KG	11/09/2023	EBS
Barium	EPA-6020	**78**	0.10	1	MG/KG	11/09/2023	EBS
Cadmium	EPA-6020	**0.72**	0.10	1	MG/KG	11/09/2023	EBS
Chromium	EPA-6020	**25**	0.10	1	MG/KG	11/09/2023	EBS
Lead	EPA-6020	**93**	0.10	1	MG/KG	11/09/2023	EBS
Selenium	EPA-6020	U	1.0	1	MG/KG	11/09/2023	EBS
Silver	EPA-6020	**0.44**	0.10	1	MG/KG	11/09/2023	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**102**	11/08/2023	DHM
2-Fluorophenol	EPA-8270	**81.2**	11/09/2023	DBA
Phenol-d5	EPA-8270	**89.2**	11/09/2023	DBA
Nitrobenzene-d5	EPA-8270	**70.3**	11/09/2023	DBA
2-Fluorobiphenyl	EPA-8270	**67.1**	11/09/2023	DBA
2,4,6-Tribromophenol	EPA-8270	**70.7**	11/09/2023	DBA
Terphenyl-d14	EPA-8270	**66.9**	11/09/2023	DBA

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.
Diesel range product results biased high due to oil range product overlap.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-42
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 1:30:00 PM
CLIENT SAMPLE ID	WSB-109-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.20**	0.020	1	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-43
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 1:45:00 PM
CLIENT SAMPLE ID	WSB-109-10	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**470**	50	2500	MG/KG	11/03/2023	RAL
Mercury (TCLP)	EPA-7470/1311	**0.00082**	0.00020	1	MG/L	11/09/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-44
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 2:00:00 PM
CLIENT SAMPLE ID	WSB-109-13	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**4.3**	0.40	20	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-45
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 2:25:00 PM
CLIENT SAMPLE ID	WSB-109-15	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**2.4**	0.20	10	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-46
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 8:50:00 AM
CLIENT SAMPLE ID	WSB-110-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.56**	0.040	2	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-47
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 9:00:00 AM
CLIENT SAMPLE ID	WSB-110-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**8.4**	0.80	40	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-48
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 9:10:00 AM
CLIENT SAMPLE ID	WSB-110-12	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**40**	25	1	MG/KG	11/08/2023	DHM
TPH-Oil Range	NWTPH-DX	**200**	50	1	MG/KG	11/08/2023	DHM
Pyridine	EPA-8270	U	200	1	UG/KG	11/09/2023	DBA
N-Nitrosodimethylamine	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Phenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Aniline	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
2-Chlorophenol	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
1,3-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
1,4-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzyl Alcohol	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
1,2-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Methylphenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	270	1	UG/KG	11/09/2023	DBA
3&4-Methylphenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
Hexachloroethane	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Nitrobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Isophorone	EPA-8270	U	150	1	UG/KG	11/09/2023	DBA
2-Nitrophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4-Dimethylphenol	EPA-8270	U	140	1	UG/KG	11/09/2023	DBA
Benzoic Acid	EPA-8270	U	1500	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	260	1	UG/KG	11/09/2023	DBA
2,4-Dichlorophenol	EPA-8270	U	530	1	UG/KG	11/09/2023	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	150	1	UG/KG	11/09/2023	DBA
Naphthalene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Chloroaniline	EPA-8270	U	1200	1	UG/KG	11/09/2023	DBA
2,6-Dichlorophenol	EPA-8270	U	390	1	UG/KG	11/09/2023	DBA
Hexachlorobutadiene	EPA-8270	U	500	1	UG/KG	11/09/2023	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	690	1	UG/KG	11/09/2023	DBA
2-Methylnaphthalene	EPA-8270	U	330	1	UG/KG	11/09/2023	DBA
1-Methylnaphthalene	EPA-8270	U	380	1	UG/KG	11/09/2023	DBA
Hexachlorocyclopentadiene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4,6-Trichlorophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4,5-Trichlorophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Chloronaphthalene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Nitroaniline	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Acenaphthylene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-48
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 9:10:00 AM
CLIENT SAMPLE ID	WSB-110-12	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dimethylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,6-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Acenaphthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
3-Nitroaniline	EPA-8270	U	1200	1	UG/KG	11/09/2023	DBA
2,4-Dinitrophenol	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
4-Nitrophenol	EPA-8270	U	120	1	UG/KG	11/09/2023	DBA
Dibenzofuran	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
Diethylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Fluorene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Nitroaniline	EPA-8270	U	270	1	UG/KG	11/09/2023	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
N-Nitrosodiphenylamine	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Azobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Hexachlorobenzene	EPA-8270	**180**	100	1	UG/KG	11/09/2023	DBA
Pentachlorophenol	EPA-8270	U	500	1	UG/KG	11/09/2023	DBA
Phenanthrene	EPA-8270	**170**	100	1	UG/KG	11/09/2023	DBA
Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Carbazole	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
Di-N-Butylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Fluoranthene	EPA-8270	**200**	100	1	UG/KG	11/09/2023	DBA
Pyrene	EPA-8270	**150**	100	1	UG/KG	11/09/2023	DBA
Butylbenzylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
3,3-Dichlorobenzidine	EPA-8270	U	370	1	UG/KG	11/09/2023	DBA
Benzo[A]Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Chrysene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	**140**	100	1	UG/KG	11/09/2023	DBA
Di-N-Octylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[B]Fluoranthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[K]Fluoranthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[A]Pyrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Mercury	EPA-7471	**560**	50	2500	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-48
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 9:10:00 AM
CLIENT SAMPLE ID	WSB-110-12	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.0036**	0.00020	1	MG/L	11/09/2023	RAL
Arsenic	EPA-6020	**4.6**	0.20	1	MG/KG	11/09/2023	EBS
Barium	EPA-6020	**86**	0.10	1	MG/KG	11/09/2023	EBS
Cadmium	EPA-6020	**0.32**	0.10	1	MG/KG	11/09/2023	EBS
Chromium	EPA-6020	**30**	0.10	1	MG/KG	11/09/2023	EBS
Lead	EPA-6020	**18**	0.10	1	MG/KG	11/09/2023	EBS
Selenium	EPA-6020	U	1.0	1	MG/KG	11/09/2023	EBS
Silver	EPA-6020	**0.13**	0.10	1	MG/KG	11/09/2023	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**93.5**	11/08/2023	DHM
2-Fluorophenol	EPA-8270	**105**	11/09/2023	DBA
Phenol-d5	EPA-8270	**111**	11/09/2023	DBA
Nitrobenzene-d5	EPA-8270	**92.6**	11/09/2023	DBA
2-Fluorobiphenyl	EPA-8270	**85.9**	11/09/2023	DBA
2,4,6-Tribromophenol	EPA-8270	**90.5**	11/09/2023	DBA
Terphenyl-d14	EPA-8270	**90.5**	11/09/2023	DBA

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.
Diesel range product results biased high due to oil range product overlap.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-49
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 9:30:00 AM
CLIENT SAMPLE ID	WSB-110-16	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**440**	50	2500	MG/KG	11/03/2023	RAL
Mercury (TCLP)	EPA-7470/1311	**0.0013**	0.00020	1	MG/L	11/09/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-50
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 9:35:00 AM
CLIENT SAMPLE ID	WSB-110-19.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**26**	2.0	100	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-51
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 9:15:00 AM
CLIENT SAMPLE ID	WSB-111-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**160**	20	1000	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-52
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 9:35:00 AM
CLIENT SAMPLE ID	WSB-111-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**2.3**	0.20	10	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-53
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 9:45:00 AM
CLIENT SAMPLE ID	WSB-111-11.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**14**	1.0	50	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-54
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 9:55:00 AM
CLIENT SAMPLE ID	WSB-111-16.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**120**	10	500	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-55
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 10:00:00 AM
CLIENT SAMPLE ID	WSB-111-20	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**48**	2.0	100	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-56
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 10:00:00 AM
CLIENT SAMPLE ID	WSB-112-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**1.4**	0.10	5	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-57
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 10:15:00 AM
CLIENT SAMPLE ID	WSB-112-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**2.6**	0.20	10	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-58
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 10:25:00 AM
CLIENT SAMPLE ID	WSB-112-11	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**410**	50	2500	MG/KG	11/03/2023	RAL
Mercury (TCLP)	EPA-7470/1311	**0.0054**	0.00020	1	MG/L	11/09/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-59
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 10:40:00 AM
CLIENT SAMPLE ID	WSB-112-16.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**41**	25	1	MG/KG	11/09/2023	DHM
TPH-Oil Range	NWTPH-DX	**160**	50	1	MG/KG	11/09/2023	DHM
Pyridine	EPA-8270	U	200	1	UG/KG	11/09/2023	DBA
N-Nitrosodimethylamine	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Phenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Aniline	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
2-Chlorophenol	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
1,3-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
1,4-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzyl Alcohol	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
1,2-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Methylphenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	260	1	UG/KG	11/09/2023	DBA
3&4-Methylphenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
Hexachloroethane	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Nitrobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Isophorone	EPA-8270	U	150	1	UG/KG	11/09/2023	DBA
2-Nitrophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4-Dimethylphenol	EPA-8270	U	130	1	UG/KG	11/09/2023	DBA
Benzoic Acid	EPA-8270	U	1500	1	UG/KG	11/09/2023	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
2,4-Dichlorophenol	EPA-8270	U	510	1	UG/KG	11/09/2023	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	150	1	UG/KG	11/09/2023	DBA
Naphthalene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Chloroaniline	EPA-8270	U	1200	1	UG/KG	11/09/2023	DBA
2,6-Dichlorophenol	EPA-8270	U	380	1	UG/KG	11/09/2023	DBA
Hexachlorobutadiene	EPA-8270	U	500	1	UG/KG	11/09/2023	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	670	1	UG/KG	11/09/2023	DBA
2-Methylnaphthalene	EPA-8270	U	320	1	UG/KG	11/09/2023	DBA
1-Methylnaphthalene	EPA-8270	U	370	1	UG/KG	11/09/2023	DBA
Hexachlorocyclopentadiene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4,6-Trichlorophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4,5-Trichlorophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Chloronaphthalene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2-Nitroaniline	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Acenaphthylene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-59
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 10:40:00 AM
CLIENT SAMPLE ID	WSB-112-16.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dimethylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,6-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Acenaphthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
3-Nitroaniline	EPA-8270	U	1200	1	UG/KG	11/09/2023	DBA
2,4-Dinitrophenol	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
4-Nitrophenol	EPA-8270	U	110	1	UG/KG	11/09/2023	DBA
Dibenzofuran	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,4-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Diethylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Fluorene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Nitroaniline	EPA-8270	U	260	1	UG/KG	11/09/2023	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
N-Nitrosodiphenylamine	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Azobenzene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Hexachlorobenzene	EPA-8270	**100**	100	1	UG/KG	11/09/2023	DBA
Pentachlorophenol	EPA-8270	U	500	1	UG/KG	11/09/2023	DBA
Phenanthrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Carbazole	EPA-8270	U	250	1	UG/KG	11/09/2023	DBA
Di-N-Butylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Fluoranthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Pyrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Butylbenzylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
3,3-Dichlorobenzidine	EPA-8270	U	360	1	UG/KG	11/09/2023	DBA
Benzo[A]Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Chrysene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	**140**	100	1	UG/KG	11/09/2023	DBA
Di-N-Octylphthalate	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[B]Fluoranthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[K]Fluoranthene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[A]Pyrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	100	1	UG/KG	11/09/2023	DBA
Mercury	EPA-7471	**580**	50	2500	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-59
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 10:40:00 AM
CLIENT SAMPLE ID	WSB-112-16.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.0019**	0.00020	1	MG/L	11/09/2023	RAL
Arsenic	EPA-6020	**3.8**	0.20	1	MG/KG	11/09/2023	EBS
Barium	EPA-6020	**93**	0.10	1	MG/KG	11/09/2023	EBS
Cadmium	EPA-6020	**0.31**	0.10	1	MG/KG	11/09/2023	EBS
Chromium	EPA-6020	**25**	0.10	1	MG/KG	11/09/2023	EBS
Lead	EPA-6020	**17**	0.10	1	MG/KG	11/09/2023	EBS
Selenium	EPA-6020	U	1.0	1	MG/KG	11/09/2023	EBS
Silver	EPA-6020	**0.12**	0.10	1	MG/KG	11/09/2023	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**85.8**	11/09/2023	DHM
2-Fluorophenol	EPA-8270	**94.1**	11/09/2023	DBA
Phenol-d5	EPA-8270	**94.7**	11/09/2023	DBA
Nitrobenzene-d5	EPA-8270	**83.8**	11/09/2023	DBA
2-Fluorobiphenyl	EPA-8270	**75.2**	11/09/2023	DBA
2,4,6-Tribromophenol	EPA-8270	**85.2**	11/09/2023	DBA
Terphenyl-d14	EPA-8270	**78.6**	11/09/2023	DBA

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.
Diesel range product results biased high due to oil range product overlap.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS JOB#:	EV23110006
		ALS SAMPLE#:	EV23110006-60
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	11/1/2023 10:45:00 AM
CLIENT SAMPLE ID	WSB-112-20	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**9.1**	0.80	40	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-61
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 5:30:00 PM
CLIENT SAMPLE ID	WSB-113-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**130**	10	500	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-62
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 5:40:00 PM
CLIENT SAMPLE ID	WSB-113-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**2.8**	0.40	20	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-63
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 5:50:00 PM
CLIENT SAMPLE ID	WSB-113-13	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**61**	4.0	200	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-64
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 6:00:00 PM
CLIENT SAMPLE ID	WSB-113-16.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**57**	4.0	200	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-65
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 6:05:00 PM
CLIENT SAMPLE ID	WSB-113-19	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**220**	10	500	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-66
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 1:00:00 AM
CLIENT SAMPLE ID	WSB-FD1-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**130**	10	500	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-67
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/30/2023 2:00:00 AM
CLIENT SAMPLE ID	WSB-FD2-16.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**34**	2.0	100	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-68
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 1:00:00 AM
CLIENT SAMPLE ID	WSB-FD3-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**320**	20	1000	MG/KG	11/03/2023	RAL
Mercury (TCLP)	EPA-7470/1311	**0.0011**	0.00020	1	MG/L	11/09/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/15/2023 EV23110006 EV23110006-69
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	11/01/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/31/2023 2:00:00 AM
CLIENT SAMPLE ID	WSB-FD4-16	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**54**	4.0	200	MG/KG	11/03/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS SDG#:	EV23110006
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MB-110723S - Batch 203160 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	MG/KG	25	11/07/2023	DHM
TPH-Oil Range	NWTPH-DX	U	MG/KG	50	11/07/2023	DHM

U - Analyte analyzed for but not detected at level above reporting limit.

MB-110823S - Batch 203225 - Soil by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	UG/KG	200	11/09/2023	DBA
N-Nitrosodimethylamine	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Phenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Aniline	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	UG/KG	250	11/09/2023	DBA
2-Chlorophenol	EPA-8270	U	UG/KG	250	11/09/2023	DBA
1,3-Dichlorobenzene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
1,4-Dichlorobenzene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Benzyl Alcohol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
1,2-Dichlorobenzene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
2-Methylphenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	UG/KG	250	11/09/2023	DBA
3&4-Methylphenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	UG/KG	250	11/09/2023	DBA
Hexachloroethane	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Nitrobenzene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Isophorone	EPA-8270	U	UG/KG	100	11/09/2023	DBA
2-Nitrophenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
2,4-Dimethylphenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Benzoic Acid	EPA-8270	U	UG/KG	1000	11/09/2023	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	UG/KG	250	11/09/2023	DBA
2,4-Dichlorophenol	EPA-8270	U	UG/KG	500	11/09/2023	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Naphthalene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
4-Chloroaniline	EPA-8270	U	UG/KG	1000	11/09/2023	DBA
2,6-Dichlorophenol	EPA-8270	U	UG/KG	250	11/09/2023	DBA
Hexachlorobutadiene	EPA-8270	U	UG/KG	500	11/09/2023	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	UG/KG	500	11/09/2023	DBA
2-Methylnaphthalene	EPA-8270	U	UG/KG	250	11/09/2023	DBA
1-Methylnaphthalene	EPA-8270	U	UG/KG	250	11/09/2023	DBA
Hexachlorocyclopentadiene	EPA-8270	U	UG/KG	100	11/09/2023	DBA

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS SDG#:	EV23110006
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MB-110823S - Batch 203225 - Soil by EPA-8270

2,4,6-Trichlorophenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
2,4,5-Trichlorophenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
2-Chloronaphthalene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
2-Nitroaniline	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Acenaphthylene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Dimethylphthalate	EPA-8270	U	UG/KG	100	11/09/2023	DBA
2,6-Dinitrotoluene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Acenaphthene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
3-Nitroaniline	EPA-8270	U	UG/KG	1000	11/09/2023	DBA
2,4-Dinitrophenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
4-Nitrophenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Dibenzofuran	EPA-8270	U	UG/KG	100	11/09/2023	DBA
2,4-Dinitrotoluene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Diethylphthalate	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Fluorene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	UG/KG	100	11/09/2023	DBA
4-Nitroaniline	EPA-8270	U	UG/KG	250	11/09/2023	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	UG/KG	290	11/09/2023	DBA
N-Nitrosodiphenylamine	EPA-8270	U	UG/KG	500	11/09/2023	DBA
Azobenzene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Hexachlorobenzene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Pentachlorophenol	EPA-8270	U	UG/KG	500	11/09/2023	DBA
Phenanthrene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Anthracene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Carbazole	EPA-8270	U	UG/KG	250	11/09/2023	DBA
Di-N-Butylphthalate	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Fluoranthene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Pyrene	EPA-8270	U	UG/KG	150	11/09/2023	DBA
Butylbenzylphthalate	EPA-8270	U	UG/KG	100	11/09/2023	DBA
3,3-Dichlorobenzidine	EPA-8270	U	UG/KG	250	11/09/2023	DBA
Benzo[A]Anthracene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Chrysene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Di-N-Octylphthalate	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Benzo[B]Fluoranthene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Benzo[K]Fluoranthene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Benzo[A]Pyrene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	UG/KG	100	11/09/2023	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	UG/KG	100	11/09/2023	DBA

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104
CLIENT CONTACT: Amy Tice
CLIENT PROJECT: 210368

DATE: 11/15/2023
ALS SDG#: EV23110006
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-110823S - Batch 203225 - Soil by EPA-8270

Benzo[G,H,I]Perylene	EPA-8270	U	UG/KG	100	11/09/2023	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R450962 - Batch R450962 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	11/02/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R450967 - Batch R450967 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	11/02/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R450968 - Batch R450968 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	11/03/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R450970 - Batch R450970 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	11/03/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R451704 - Batch R451704 - TCLP Extract by EPA-7470

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7470	U	MG/L	0.00020	11/09/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-110923S - Batch 203360 - Soil by EPA-6020

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	U	MG/KG	0.20	11/09/2023	EBS
Barium	EPA-6020	U	MG/KG	0.12	11/09/2023	EBS
Cadmium	EPA-6020	U	MG/KG	0.10	11/09/2023	EBS
Chromium	EPA-6020	U	MG/KG	0.10	11/09/2023	EBS

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/15/2023
		ALS SDG#:	EV23110006
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MB-110923S - Batch 203360 - Soil by EPA-6020

Lead	EPA-6020	U	MG/KG	0.10	11/09/2023	EBS
Selenium	EPA-6020	U	MG/KG	1.0	11/09/2023	EBS
Silver	EPA-6020	U	MG/KG	0.10	11/09/2023	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 203160 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**96.2**			75.5	122.1	11/07/2023	DHM
TPH-Diesel Range - BSD	NWTPH-DX	**94.4**	**2**		75.5	122.1	11/07/2023	DHM

ALS Test Batch ID: 203225 - Soil by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**42.8**			20	150	11/09/2023	DBA
Pyridine - BSD	EPA-8270	**54.3**	**24**		20	150	11/09/2023	DBA
N-Nitrosodimethylamine - BS	EPA-8270	**63.2**			20	150	11/09/2023	DBA
N-Nitrosodimethylamine - BSD	EPA-8270	**64.7**	**2**		20	150	11/09/2023	DBA
Phenol - BS	EPA-8270	**85.1**			36.1	131	11/09/2023	DBA
Phenol - BSD	EPA-8270	**76.2**	**11**		36.1	131	11/09/2023	DBA
Aniline - BS	EPA-8270	**69.8**			20	150	11/09/2023	DBA
Aniline - BSD	EPA-8270	**66.4**	**5**		20	150	11/09/2023	DBA
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**61.0**			20	150	11/09/2023	DBA
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**61.5**	**1**		20	150	11/09/2023	DBA
2-Chlorophenol - BS	EPA-8270	**82.6**			59.9	111	11/09/2023	DBA
2-Chlorophenol - BSD	EPA-8270	**77.7**	**6**		59.9	111	11/09/2023	DBA
1,3-Dichlorobenzene - BS	EPA-8270	**64.6**			20	150	11/09/2023	DBA
1,3-Dichlorobenzene - BSD	EPA-8270	**67.6**	**5**		20	150	11/09/2023	DBA
1,4-Dichlorobenzene - BS	EPA-8270	**62.0**			44.3	122	11/09/2023	DBA
1,4-Dichlorobenzene - BSD	EPA-8270	**67.1**	**8**		44.3	122	11/09/2023	DBA
Benzyl Alcohol - BS	EPA-8270	**95.3**			20	150	11/09/2023	DBA
Benzyl Alcohol - BSD	EPA-8270	**85.4**	**11**		20	150	11/09/2023	DBA
1,2-Dichlorobenzene - BS	EPA-8270	**65.6**			20	150	11/09/2023	DBA
1,2-Dichlorobenzene - BSD	EPA-8270	**68.8**	**5**		20	150	11/09/2023	DBA
2-Methylphenol - BS	EPA-8270	**88.5**			20	150	11/09/2023	DBA
2-Methylphenol - BSD	EPA-8270	**80.8**	**9**		20	150	11/09/2023	DBA
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**66.4**			20	150	11/09/2023	DBA
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**68.2**	**3**		20	150	11/09/2023	DBA
3&4-Methylphenol - BS	EPA-8270	**94.4**			20	150	11/09/2023	DBA
3&4-Methylphenol - BSD	EPA-8270	**86.1**	**9**		20	150	11/09/2023	DBA
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**96.5**			31.6	134	11/09/2023	DBA
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**84.3**	**14**		31.6	134	11/09/2023	DBA
Hexachloroethane - BS	EPA-8270	**59.8**			20	150	11/09/2023	DBA
Hexachloroethane - BSD	EPA-8270	**62.4**	**4**		20	150	11/09/2023	DBA
Nitrobenzene - BS	EPA-8270	**70.5**			20	150	11/09/2023	DBA
Nitrobenzene - BSD	EPA-8270	**75.6**	**7**		20	150	11/09/2023	DBA
Isophorone - BS	EPA-8270	**58.2**			20	150	11/09/2023	DBA

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WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Isophorone - BSD	EPA-8270	**62.0**	**6**		20	150	11/09/2023	DBA
2-Nitrophenol - BS	EPA-8270	**72.9**			20	150	11/09/2023	DBA
2-Nitrophenol - BSD	EPA-8270	**77.0**	**5**		20	150	11/09/2023	DBA
2,4-Dimethylphenol - BS	EPA-8270	**88.5**			20	150	11/09/2023	DBA
2,4-Dimethylphenol - BSD	EPA-8270	**90.0**	**2**		20	150	11/09/2023	DBA
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**71.7**			20	150	11/09/2023	DBA
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**77.2**	**7**		20	150	11/09/2023	DBA
2,4-Dichlorophenol - BS	EPA-8270	**82.6**			20	150	11/09/2023	DBA
2,4-Dichlorophenol - BSD	EPA-8270	**84.7**	**2**		20	150	11/09/2023	DBA
1,2,4-Trichlorobenzene - BS	EPA-8270	**65.4**			44.6	122	11/09/2023	DBA
1,2,4-Trichlorobenzene - BSD	EPA-8270	**71.4**	**9**		44.6	122	11/09/2023	DBA
Naphthalene - BS	EPA-8270	**67.2**			20	150	11/09/2023	DBA
Naphthalene - BSD	EPA-8270	**73.0**	**8**		20	150	11/09/2023	DBA
4-Chloroaniline - BS	EPA-8270	**53.7**			20	150	11/09/2023	DBA
4-Chloroaniline - BSD	EPA-8270	**65.4**	**20**		20	150	11/09/2023	DBA
Hexachlorobutadiene - BS	EPA-8270	**61.4**			20	150	11/09/2023	DBA
Hexachlorobutadiene - BSD	EPA-8270	**70.1**	**13**		20	150	11/09/2023	DBA
4-Chloro-3-Methylphenol - BS	EPA-8270	**93.0**			49.2	135	11/09/2023	DBA
4-Chloro-3-Methylphenol - BSD	EPA-8270	**93.2**	**0**		49.2	135	11/09/2023	DBA
2-Methylnaphthalene - BS	EPA-8270	**73.9**			20	150	11/09/2023	DBA
2-Methylnaphthalene - BSD	EPA-8270	**77.8**	**5**		20	150	11/09/2023	DBA
1-Methylnaphthalene - BS	EPA-8270	**73.1**			20	150	11/09/2023	DBA
1-Methylnaphthalene - BSD	EPA-8270	**77.9**	**6**		20	150	11/09/2023	DBA
Hexachlorocyclopentadiene - BS	EPA-8270	**32.9**			20	150	11/09/2023	DBA
Hexachlorocyclopentadiene - BSD	EPA-8270	**21.9**	**40**	SR1	20	150	11/09/2023	DBA
2,4,6-Trichlorophenol - BS	EPA-8270	**72.9**			20	150	11/09/2023	DBA
2,4,6-Trichlorophenol - BSD	EPA-8270	**76.7**	**5**		20	150	11/09/2023	DBA
2,4,5-Trichlorophenol - BS	EPA-8270	**80.5**			20	150	11/09/2023	DBA
2,4,5-Trichlorophenol - BSD	EPA-8270	**84.3**	**5**		20	150	11/09/2023	DBA
2-Chloronaphthalene - BS	EPA-8270	**68.3**			20	150	11/09/2023	DBA
2-Chloronaphthalene - BSD	EPA-8270	**74.4**	**9**		20	150	11/09/2023	DBA
2-Nitroaniline - BS	EPA-8270	**80.6**			20	150	11/09/2023	DBA
2-Nitroaniline - BSD	EPA-8270	**83.3**	**3**		20	150	11/09/2023	DBA
Acenaphthylene - BS	EPA-8270	**73.3**			20	150	11/09/2023	DBA
Acenaphthylene - BSD	EPA-8270	**80.8**	**10**		20	150	11/09/2023	DBA
Dimethylphthalate - BS	EPA-8270	**77.1**			20	150	11/09/2023	DBA
Dimethylphthalate - BSD	EPA-8270	**81.7**	**6**		20	150	11/09/2023	DBA
2,6-Dinitrotoluene - BS	EPA-8270	**79.4**			20	150	11/09/2023	DBA
2,6-Dinitrotoluene - BSD	EPA-8270	**83.9**	**6**		20	150	11/09/2023	DBA
Acenaphthene - BS	EPA-8270	**68.8**			49.3	117	11/09/2023	DBA

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

CLIENT CONTACT: Amy Tice
CLIENT PROJECT: 210368

DATE: 11/15/2023
ALS SDG#: EV23110006
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Acenaphthene - BSD	EPA-8270	**75.9**	**10**		49.3	117	11/09/2023	DBA
3-Nitroaniline - BS	EPA-8270	**83.1**			20	150	11/09/2023	DBA
3-Nitroaniline - BSD	EPA-8270	**85.7**	**3**		20	150	11/09/2023	DBA
2,4-Dinitrophenol - BS	EPA-8270	**74.1**			20	150	11/09/2023	DBA
2,4-Dinitrophenol - BSD	EPA-8270	**45.6**	**48**	SR1	20	150	11/09/2023	DBA
4-Nitrophenol - BS	EPA-8270	**98.4**			29.8	137	11/09/2023	DBA
4-Nitrophenol - BSD	EPA-8270	**95.4**	**3**		29.8	137	11/09/2023	DBA
Dibenzofuran - BS	EPA-8270	**72.1**			20	150	11/09/2023	DBA
Dibenzofuran - BSD	EPA-8270	**79.4**	**10**		20	150	11/09/2023	DBA
2,4-Dinitrotoluene - BS	EPA-8270	**86.2**			55.3	130	11/09/2023	DBA
2,4-Dinitrotoluene - BSD	EPA-8270	**89.6**	**4**		55.3	130	11/09/2023	DBA
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**85.4**			20	150	11/09/2023	DBA
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**88.0**	**3**		20	150	11/09/2023	DBA
Diethylphthalate - BS	EPA-8270	**79.7**			20	150	11/09/2023	DBA
Diethylphthalate - BSD	EPA-8270	**85.0**	**7**		20	150	11/09/2023	DBA
Fluorene - BS	EPA-8270	**76.3**			20	150	11/09/2023	DBA
Fluorene - BSD	EPA-8270	**82.5**	**8**		20	150	11/09/2023	DBA
4-Chlorophenyl-Phenylether - BS	EPA-8270	**74.7**			20	150	11/09/2023	DBA
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**81.9**	**9**		20	150	11/09/2023	DBA
4-Nitroaniline - BS	EPA-8270	**140**			20	150	11/09/2023	DBA
4-Nitroaniline - BSD	EPA-8270	**139**	**1**		20	150	11/09/2023	DBA
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**83.0**			20	150	11/09/2023	DBA
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**66.8**	**22**		20	150	11/09/2023	DBA
Azobenzene - BS	EPA-8270	**65.0**			20	150	11/09/2023	DBA
Azobenzene - BSD	EPA-8270	**72.0**	**10**		20	150	11/09/2023	DBA
4-Bromophenyl-Phenylether - BS	EPA-8270	**68.3**			20	150	11/09/2023	DBA
4-Bromophenyl-Phenylether - BSD	EPA-8270	**72.9**	**7**		20	150	11/09/2023	DBA
Hexachlorobenzene - BS	EPA-8270	**68.2**			20	150	11/09/2023	DBA
Hexachlorobenzene - BSD	EPA-8270	**72.1**	**6**		20	150	11/09/2023	DBA
Pentachlorophenol - BS	EPA-8270	**93.4**			41.3	113	11/09/2023	DBA
Pentachlorophenol - BSD	EPA-8270	**92.1**	**1**		41.3	113	11/09/2023	DBA
Phenanthrene - BS	EPA-8270	**70.5**			20	150	11/09/2023	DBA
Phenanthrene - BSD	EPA-8270	**75.6**	**7**		20	150	11/09/2023	DBA
Anthracene - BS	EPA-8270	**67.8**			20	150	11/09/2023	DBA
Anthracene - BSD	EPA-8270	**73.7**	**8**		20	150	11/09/2023	DBA
Carbazole - BS	EPA-8270	**97.6**			20	150	11/09/2023	DBA
Carbazole - BSD	EPA-8270	**104**	**6**		20	150	11/09/2023	DBA
Di-N-Butylphthalate - BS	EPA-8270	**83.0**			20	150	11/09/2023	DBA
Di-N-Butylphthalate - BSD	EPA-8270	**89.9**	**8**		20	150	11/09/2023	DBA
Fluoranthene - BS	EPA-8270	**89.6**			20	150	11/09/2023	DBA

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

CLIENT CONTACT: Amy Tice
CLIENT PROJECT: 210368

DATE: 11/15/2023
ALS SDG#: EV23110006
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Fluoranthene - BSD	EPA-8270	**96.1**	**7**		20	150	11/09/2023	DBA
Pyrene - BS	EPA-8270	**70.7**			57.4	145	11/09/2023	DBA
Pyrene - BSD	EPA-8270	**74.0**	**5**		57.4	145	11/09/2023	DBA
Butylbenzylphthalate - BS	EPA-8270	**78.2**			20	150	11/09/2023	DBA
Butylbenzylphthalate - BSD	EPA-8270	**81.1**	**4**		20	150	11/09/2023	DBA
Benzo[A]Anthracene - BS	EPA-8270	**78.3**			20	150	11/09/2023	DBA
Benzo[A]Anthracene - BSD	EPA-8270	**83.1**	**6**		20	150	11/09/2023	DBA
Chrysene - BS	EPA-8270	**70.3**			20	150	11/09/2023	DBA
Chrysene - BSD	EPA-8270	**77.1**	**9**		20	150	11/09/2023	DBA
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**77.7**			20	150	11/09/2023	DBA
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**82.8**	**6**		20	150	11/09/2023	DBA
Di-N-Octylphthalate - BS	EPA-8270	**82.9**			20	150	11/09/2023	DBA
Di-N-Octylphthalate - BSD	EPA-8270	**89.0**	**7**		20	150	11/09/2023	DBA
Benzo[B]Fluoranthene - BS	EPA-8270	**81.6**			20	150	11/09/2023	DBA
Benzo[B]Fluoranthene - BSD	EPA-8270	**83.3**	**2**		20	150	11/09/2023	DBA
Benzo[K]Fluoranthene - BS	EPA-8270	**71.8**			20	150	11/09/2023	DBA
Benzo[K]Fluoranthene - BSD	EPA-8270	**79.1**	**10**		20	150	11/09/2023	DBA
Benzo[A]Pyrene - BS	EPA-8270	**69.1**			20	150	11/09/2023	DBA
Benzo[A]Pyrene - BSD	EPA-8270	**73.2**	**6**		20	150	11/09/2023	DBA
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**74.7**			20	150	11/09/2023	DBA
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**77.6**	**4**		20	150	11/09/2023	DBA
Dibenz[A,H]Anthracene - BS	EPA-8270	**66.8**			20	150	11/09/2023	DBA
Dibenz[A,H]Anthracene - BSD	EPA-8270	**68.9**	**3**		20	150	11/09/2023	DBA
Benzo[G,H,I]Perylene - BS	EPA-8270	**71.9**			20	150	11/09/2023	DBA
Benzo[G,H,I]Perylene - BSD	EPA-8270	**75.9**	**5**		20	150	11/09/2023	DBA

SR1 - RPD outside of control limits.

ALS Test Batch ID: R450962 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**108**			81.8	117	11/02/2023	RAL
Mercury - BSD	EPA-7471	**110**	**2**		81.8	117	11/02/2023	RAL

ALS Test Batch ID: R450967 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**106**			81.8	117	11/02/2023	RAL
Mercury - BSD	EPA-7471	**105**	**1**		81.8	117	11/02/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104
CLIENT CONTACT: Amy Tice
CLIENT PROJECT: 210368

DATE: 11/15/2023
ALS SDG#: EV23110006
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R450968 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**104**			81.8	117	11/03/2023	RAL
Mercury - BSD	EPA-7471	**106**	**2**		81.8	117	11/03/2023	RAL

ALS Test Batch ID: R450970 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**103**			81.8	117	11/03/2023	RAL
Mercury - BSD	EPA-7471	**108**	**5**		81.8	117	11/03/2023	RAL

ALS Test Batch ID: R451704 - TCLP Extract by EPA-7470

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7470	**102**			85	115	11/09/2023	RAL
Mercury - BSD	EPA-7470	**101**	**1**		85	115	11/09/2023	RAL

ALS Test Batch ID: 203360 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic - BS	EPA-6020	**91.4**			80	120	11/09/2023	EBS
Arsenic - BSD	EPA-6020	**95.3**	**4**		80	120	11/09/2023	EBS
Barium - BS	EPA-6020	**92.6**			80	120	11/09/2023	EBS
Barium - BSD	EPA-6020	**94.9**	**3**		80	120	11/09/2023	EBS
Cadmium - BS	EPA-6020	**94.0**			80	120	11/09/2023	EBS
Cadmium - BSD	EPA-6020	**98.8**	**5**		80	120	11/09/2023	EBS
Chromium - BS	EPA-6020	**96.1**			80	120	11/09/2023	EBS
Chromium - BSD	EPA-6020	**100**	**4**		80	120	11/09/2023	EBS
Lead - BS	EPA-6020	**85.7**			80	120	11/09/2023	EBS
Lead - BSD	EPA-6020	**88.3**	**3**		80	120	11/09/2023	EBS
Selenium - BS	EPA-6020	**90.8**			80	120	11/09/2023	EBS
Selenium - BSD	EPA-6020	**95.6**	**5**		80	120	11/09/2023	EBS
Silver - BS	EPA-6020	**101**			80	120	11/09/2023	EBS
Silver - BSD	EPA-6020	**105**	**4**		80	120	11/09/2023	EBS

APPROVED BY

Rob Greer
Laboratory Director

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2311006

Date 11/01/23 Page 1 Of 1

PROJECT ID:	210368
REPORT TO COMPANY:	Aspect Consulting
PROJECT MANAGER:	AMY TICE, Steve Germiat
ADDRESS:	710 2nd Ave #550 Seattle, WA
PHONE:	P.O. #: sgermiat@aspectconsulting.com
E-MAIL:	atice@aspectconsulting.com
INVOICE TO COMPANY:	Aspect Consulting
ATTENTION:	AP
ADDRESS:	

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. WSB-101-2	10/31/23	1130	S	1																										Total Hg by EPA 7471	X	1	
2. WSB-101-5.5		1145		2																												1	
3. WSB-101-11		1200		3																												1	
4. WSB-101-16		1205		4																												1	
5. WSB-101-20		1210		5																												1	
6. WSB-102-1.5		1300		6																												1	
7. WSB-102-6		1320		7																												1	
8. WSB-102-11.5		1330		8																												1	
9. WSB-102-17		1345		9																												1	
10. WSB-102-19		1350		10																												1	

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nikolia Carroll, Aspect, 11/1/23 1500
   Received By: Rachel & ALS 11/1/23 1500
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) | 3 | 1 | SAME DAY

OTHER: Please Specify: HOLD ALL ADDITIONAL SAMPLE Volume, pending total Hg result, for further analysis

*Turnaround request less than standard may incur Rush Charges

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2311000 6

Date 11/01/23 Page 2 Of 7

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice, Steve Germiat
ADDRESS:
PHONE: P.O. #:
E-MAIL:
INVOICE TO COMPANY:
ATTENTION: AP
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify): Total Hg by EPA 7471	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. WSB-103-2	10/30/23	1505	S	11																		Hg								X	1	
2. WSB-103-6.5		1525		12																												
3. WSB-103-12		1535		13																												
4. WSB-103-15.5		1545		14																												
5. WSB-103-18		1550		15																												
6. WSB-104-2		1000		16																												
7. WSB-104-7.5		1035		17																												
8. WSB-104-11.5		1045		18																												
9. WSB-104-15.5		1100		19		X										X				X		X										
10. WSB-104-18	↓	1105	↓	20																										↓	↓	

SPECIAL INSTRUCTIONS: X= Analyses Added on 11/6/23 By STEVE GERMIAT - 10 Day TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nikolai Cornin, Aspect, 11/01/23 1500
   Received By: Steve Germiat ALSE 11/1/23 1500
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Please HOLD all additional sample volume for future analyses, pending total Hg results.

*Turnaround request less than standard may incur Rush Charges

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2311[illegible]0006

Date 11/01/23 Page 3 Of 7

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice, Steve Germiat
ADDRESS:
PHONE: P.O. #:
E-MAIL:
INVOICE TO COMPANY:
ATTENTION: AP
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. WSB-105-15	10/31/23	1420	S	21																										Total Hg by EPA 7471	X	
2. WSB-105-5.5		1430		22																												
3. WSB-105-10.5		1440		23																												
4. WSB-105-16		1455		24																												
5. WSB-105-19		1500		25																												
6. WSB-106-3	10/30/23	1620		26																												
7. WSB-106-6.5		1630		27																												
8. WSB-106-13		1645		28																	X											
9. WSB-106-17.5		1655		29																												
10. WSB-106-20		1700		30																												

TCLP Hg

SPECIAL INSTRUCTIONS: X= Analysis Added on 11/7/23 By STEVE GERMIAT - 10 Day TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nikola Lavoie, Aspect, 11/01/23 1500
   Received By: [illegible] ASE 11/1/23 1500
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: [10] Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: HOLD additional sample volume for future analyses

*Turnaround request less than standard may incur Rush Charges

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV23110006

Date 11/01/23 Page 4 Of 7

PROJECT ID: 210368
REPORT TO COMPANY: AGRest
PROJECT MANAGER: Amy Tice, Steve Germino
ADDRESS:
PHONE: P.O. #:
E-MAIL:
INVOICE TO COMPANY:
ATTENTION: AP
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. WSB-107-1.5	10/30/23	1140	S	31																				TCLP Hg						Total Hg by EPA 7471		
2. WSB-107-6.5		1150		32																												
3. WSB-107-11		1200		33																												
4. WSB-107-16		1225		34																												
5. WSB-107-18		1230		35																												
6. WSB-108-1.5	10/31/23	1555		36																												
7. WSB-108-6		1605		37																												
8. WSB-108-11		1615		38																												
9. WSB-108-16		1625		39																												
10. WSB-108-17.5		1630		40																												

SPECIAL INSTRUCTIONS: X: Analyze Additional with by Steve Germino - 10 Day TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nikolai Carroll, AGRest, 11/01/23 1500
   Received By: ALSE 11/1/23 1500
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: [10] Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: HOLD additional sample volume for future analyses

*Turnaround request less than standard may incur Rush Charges

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2311000G

Date 11/01/23 Page 5 Of 7

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice, Steve Germiat
ADDRESS:
PHONE: P.O. #:
E-MAIL:
INVOICE TO COMPANY:
ATTENTION: AP
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. WSB-109-1.5	10/30/23	1300	S	41
2. WSB-109-7		1330		42
3. WSB-109-10		1345		43
4. WSB-109-13		1400		44
5. WSB-109-15		1425		45
6. WSB-110-1.5	11/01/23	0850		46
7. WSB-110-6.5		0900		47
8. WSB-110-12		0910		48
9. WSB-110-16		0930		49
10. WSB-110-19.5		0935		50

ANALYSIS REQUESTED

	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8260	BTEX by EPA 8021	MTBE by EPA 8260	MTBE by EPA 8021	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8 Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs
1.		X										X				X			X				
2.																							
3.																			X				
4.																							
5.																							
6.																							
7.																							
8.		X										X				X			X				
9.																			X				
10.																							

OTHER (Specify): Total Hg by EPA 7471; NUMBER OF CONTAINERS; RECEIVED IN GOOD CONDITION?

Turn it around

SPECIAL INSTRUCTIONS X = Analyses Also on 11/06s By STEVE GERMIAT - 10 Day TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nikoli Carroll, Aspect, 11/01/23, 1500
   Received By: [signature] ALS 11/1/23 1500
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: (10) Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: HOLD all additional sample volume for future analyses.

*Turnaround request less than standard may incur Rush Charges

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2311 0006

Date 11/04/23 Page 6 Of 7

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice, Steve Germiat
ADDRESS:
PHONE: P.O. #:
E-MAIL:
INVOICE TO COMPANY:
ATTENTION: AP
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8 Pri Pol TAL	Metals Other (Specify)	TCLP-Metals VOA Semi-Vol Pest Herbs	OTHER (Specify): Total Hg by EPA 7471								NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. WSB-111-1.5	10/31/23	0915	S	51																			X								1	
2. WSB-111-6		0935		52																												
3. WSB-111-11.5		0945		53																												
4. WSB-111-16.5		0955		54																												
5. WSB-111-20		1000		55																												
6. WSB-112-1.5	11/01/23	1000		56																												
7. WSB-112-7		1015		57																												
8. WSB-112-11		1025		58																												
9. WSB-112-16.5		1040		59		X									X					X	X										
10. WSB-112-20		1045		60																										1		

SPECIAL INSTRUCTIONS X= Analysis Added on 11/7/23 By STEVE GERMIAT - 10 Day TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nikolai Carroll, Aspect, 11/04/23, 1500
   Received By: ALSF 11/1/23 1500
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: HOLD all additional sample volume for future analyses.

*Turnaround request less than standard may incur Rush Charges

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2311 0006

Date 11/01/23 Page 1 Of 1

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice, Steve Germiat
ADDRESS:
PHONE: P.O. #:
E-MAIL:
INVOICE TO COMPANY:
ATTENTION: AP
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify)								NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. WSB-113-2	10/30/23	1730	S	61																					X					Total Hg by EPA 7471								1	
2. WSB-113-6		1740		62																																		
3. WSB-113-13		1750		63																																		
4. WSB-113-16.5		1400		64																																		
5. WSB-113-19	↓	1805		65																																		
6. WSB-FD1-17.5	10/30/23	0100		66																																		
7. WSB-FD2-16.5	10/30/23	0200		67																																		
8. WSB-FD3-6	10/31/23	0100		68																				X														
9. WSB-FD4-16	10/31/23	0200	↓	69																																1	
10.				3 dc																																		

TCLP Hg

SPECIAL INSTRUCTIONS X= Analyses Added on 11/7/23 By STEVE GERMIAT - 10 Day TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Nikoli Conrad, Aspect, 11/01/23, 1500
   Received By: Client ALSE 11/1/23 1500
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: [10] Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify: HOLD all additional sample volume for future analyses.

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Aspect ALS Job #: EV2311000 6e

Project: 210368

Received Date: 11/1/23 Received Time: 1500 By: CE

Type of shipping container: Cooler X Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Mail ___ Courier ___ Hand Delivered X
FedEx Express ___

	Yes	No	N/A
Were custody seals on outside of shipping container?	___	___	X
If yes, how many? ___ Where? ___			
Custody seal date: ___ Seal name: ___			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	___	___
Did all bottles have labels?	X	___	___
Did all bottle labels and tags agree with Chain of Custody?	X	___	___
Were samples received within hold time?	X	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	X	___	___
Was sufficient amount of sample sent for the tests indicated?	X	___	___
Was correct preservation added to samples?	___	___	X

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles?	___	___	X
Bubbles present in sample #: ___			

Temperature of cooler upon receipt: 4.1°C / 2.8°C / 1.9°C (c) Cold Cool Ambient N/A

Explain any discrepancies: some were very little sample #s 50 #s 5

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___

January 2, 2024

Ms. Amy Tice
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Ms. Tice,

On December 13th, 35 samples were received by our laboratory and assigned our laboratory project number EV23120110. The project was identified as your 210368. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-01
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 8:55:00 AM
CLIENT SAMPLE ID	WSB-114-0.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**60**	4.0	200	MG/KG	12/17/2023	RAL

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-02
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 9:05:00 AM
CLIENT SAMPLE ID	WSB-114-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**190**	20	1000	MG/KG	12/17/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-03
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 9:15:00 AM
CLIENT SAMPLE ID	WSB-114-13	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**52**	4.0	200	MG/KG	12/17/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-04
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 9:40:00 AM
CLIENT SAMPLE ID	WSB-114-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**46**	4.0	200	MG/KG	12/17/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-05
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 9:45:00 AM
CLIENT SAMPLE ID	WSB-114-19.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**1.1**	0.040	2	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-06
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 10:05:00 AM
CLIENT SAMPLE ID	WSB-115-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**53**	4.0	200	MG/KG	12/17/2023	RAL

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-07
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 10:15:00 AM
CLIENT SAMPLE ID	WSB-115-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**97**	8.0	400	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-08
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 10:25:00 AM
CLIENT SAMPLE ID	WSB-115-10.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**22**	2.0	100	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-09
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 10:30:00 AM
CLIENT SAMPLE ID	WSB-115-15.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**9.9**	2.0	100	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-10
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 10:35:00 AM
CLIENT SAMPLE ID	WSB-115-20	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**3.9**	0.20	10	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-11
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 11:15:00 AM
CLIENT SAMPLE ID	WSB-116-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**1.5**	0.10	5	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-12
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 11:25:00 AM
CLIENT SAMPLE ID	WSB-116-8	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.67**	0.050	2.5	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-13
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 11:30:00 AM
CLIENT SAMPLE ID	WSB-116-11.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.54**	0.040	2	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-14
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 11:35:00 AM
CLIENT SAMPLE ID	WSB-116-16	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.036**	0.020	1	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-15
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 11:40:00 AM
CLIENT SAMPLE ID	WSB-116-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.058**	0.020	1	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/2/2024
		ALS JOB#:	EV23120110
		ALS SAMPLE#:	EV23120110-16
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 12:35:00 PM
CLIENT SAMPLE ID	WSB-117-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**2.1**	0.20	10	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-17
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 12:40:00 PM
CLIENT SAMPLE ID	WSB-117-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.083**	0.020	1	MG/KG	12/17/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-18
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 12:45:00 PM
CLIENT SAMPLE ID	WSB-117-11	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.18**	0.020	1	MG/KG	12/17/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-19
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 12:50:00 PM
CLIENT SAMPLE ID	WSB-117-15	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.23**	0.020	1	MG/KG	12/17/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-20
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 12:55:00 PM
CLIENT SAMPLE ID	WSB-117-17	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.93**	0.040	2	MG/KG	12/17/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-21
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 2:05:00 PM
CLIENT SAMPLE ID	WSB-118-1.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.33**	0.020	1	MG/KG	12/20/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-22
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 2:10:00 PM
CLIENT SAMPLE ID	WSB-118-5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**17**	2.0	100	MG/KG	12/20/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-23
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 2:20:00 PM
CLIENT SAMPLE ID	WSB-118-12	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.10**	0.020	1	MG/KG	12/20/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-24
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 2:25:00 PM
CLIENT SAMPLE ID	WSB-118-16	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.58**	0.040	2	MG/KG	12/20/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/2/2024
		ALS JOB#:	EV23120110
		ALS SAMPLE#:	EV23120110-25
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 2:30:00 PM
CLIENT SAMPLE ID	WSB-118-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**2.6**	0.20	10	MG/KG	12/20/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-26
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 3:10:00 PM
CLIENT SAMPLE ID	WSB-119-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**76**	5.0	250	MG/KG	12/20/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-27
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 3:20:00 PM
CLIENT SAMPLE ID	WSB-119-5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**14**	2.0	100	MG/KG	12/20/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-28
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 3:25:00 PM
CLIENT SAMPLE ID	WSB-119-12	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.59**	0.050	2.5	MG/KG	12/20/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-29
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 3:30:00 PM
CLIENT SAMPLE ID	WSB-119-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**630**	40	2000	MG/KG	12/20/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-30
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 3:35:00 PM
CLIENT SAMPLE ID	WSB-119-19	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**1.2**	0.10	5	MG/KG	12/20/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-31
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 4:25:00 PM
CLIENT SAMPLE ID	WSB-120-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.22**	0.020	1	MG/KG	12/20/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-32
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 4:30:00 PM
CLIENT SAMPLE ID	WSB-120-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.10**	0.020	1	MG/KG	12/20/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-33
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 4:35:00 PM
CLIENT SAMPLE ID	WSB-120-14	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.28**	0.020	1	MG/KG	12/20/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/2/2024 EV23120110 EV23120110-34
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 4:40:00 PM
CLIENT SAMPLE ID	WSB-120-16.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**780**	40	2000	MG/KG	12/20/2023	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/2/2024
		ALS JOB#:	EV23120110
		ALS SAMPLE#:	EV23120110-35
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	12/13/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 4:45:00 PM
CLIENT SAMPLE ID	WSB-120-19	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	**0.82**	0.040	2	MG/KG	12/20/2023	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/2/2024
		ALS SDG#:	EV23120110
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MBLK-R455600 - Batch R455600 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	12/17/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R455602 - Batch R455602 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	12/20/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/2/2024
		ALS SDG#:	EV23120110
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R455600 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**100**			81.8	117	12/17/2023	RAL
Mercury - BSD	EPA-7471	**100**	**0**		81.8	117	12/17/2023	RAL

ALS Test Batch ID: R455602 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**108**			81.8	117	12/20/2023	RAL
Mercury - BSD	EPA-7471	**108**	**0**		81.8	117	12/20/2023	RAL

APPROVED BY

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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ALS Environmental
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Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV23120110

Date 12/12/23 Page 1 Of 4

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice
ADDRESS: 710 2nd Ave #550
Seattle, WA
PHONE: P.O. #:
E-MAIL: amy.tice@aspectconsulting.com
INVOICE TO COMPANY: AP
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify): Hold for TCLP, Total Hg by EPA 7471	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. WSB-114-0.5	12/11/23	0855	S	1																										X	1	
2. WSB-114-6		0905		2																												
3. WSB-114-13		0915		3																												
4. WSB-114-17.5		0940		4																												
5. WSB-114-19.5		0945		5																												
6. WSB-115-2.5		1005		6																												
7. WSB-115-6		1015		7																												
8. WSB-115-10.5		1025		8																												
9. WSB-115-15.5		1030		9																												
10. WSB-115-20	↓	1035	↓	10																										↓	↓	

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Matthew Vanderhaar 12/13/23 15:35
   Received By: AFREESE, ALS, 12-13-23 @1535
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: (10 Standard) 5 3 2 1 SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard 3 1 SAME DAY

OTHER:
Specify: HOLD add'l Normal Volume for TCLP pending My results (TCLP EPA 1311)

*Turnaround request less than standard may incur Rush Charges

ALS Environmental
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Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2312011O

Date 12/12/23 Page 2 Of 4

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice
ADDRESS:
PHONE: P.O. #:
E-MAIL: amy.tice@aspectconsulting.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. WSB-116-1.5	12/11/23	1115	S	11																										To be Hg by EPA 7471	1	
2. WSB-116-8		1125		12																												
3. WSB-116-11.5		1130		13																												
4. WSB-116-16		1135		14																												
5. WSB-116-18		1140		15																												
6. WSB-117-2		1235		16																												
7. WSB-117-7		1240		17																												
8. WSB-117-11		1245		18																												
9. WSB-117-15		1250		19																												
10. WSB-117-17		1255		20																												

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Mike Matthew Vanderville 12/13/23 15:35
   Received By: AFREESE, ALS, 12-13-23 @1535
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: [10] Standard [5] [3] [2] [1] [SAME DAY]

Fuels & Hydrocarbon Analysis: [5] Standard [3] [1] [SAME DAY]

OTHER:
Specify: HOLD additional volume for TCLP pending Hg results.

*Turnaround request less than standard may incur Rush Charges

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Everett, WA 98208
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Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV23120110

Date _____ Page 3 Of 4

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice
ADDRESS:
PHONE: P.O. #:
E-MAIL: amy.tice@aspectconsulting.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. WSB-118-1.5	12/1/23	1405	S	21
2. WSB-118-5		1410		22
3. WSB-118-12		1420		23
4. WSB-118-16		1425		24
5. WSB-118-18		1430		25
6. WSB-119-1		1510		26
7. WSB-119-5		1520		27
8. WSB-119-12		1525		28
9. WSB-119-17.5		1530		29
10. WSB-119-19	↓	1535	↓	30

ANALYSIS REQUESTED

NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs

OTHER (Specify): Total Hg by EPA 7471

NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1	

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Mike Matthews/Landau 12/13/2023 15:35
   Received By: AFREESE, ALS, 12-13-23 @1535
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: HOLD additional volume

*Turnaround request less than standard may incur Rush Charges

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)
EV23120110

Date _____ Page 4 Of 4

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice
ADDRESS:
PHONE: P.O. #:
E-MAIL: amy.tice@aspectconsulting.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. WSB-120-2	12/11/23	1625	S	31
2. WSB-120-7	"	1630	"	32
3. WSB-120-14	"	1635	"	33
4. WSB-120-16.5	"	1640	"	34
5. WSB-120-19	↓	1645	↓	35
6.				
7.				
8.				
9.				
10.				

ANALYSIS REQUESTED

NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 / BTEX by EPA 8260	MTBE by EPA 8021 / MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 / Pesticides by EPA 8081	Metals-MTCA-5 RCRA-8 Pri Pol TAL	Metals Other (Specify)	TCLP-Metals VOA Semi-Vol Pest Herbs

OTHER (Specify)

Total Hg by EPA 7471							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
X							1	
↓							↓	

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Matthew Vorderstrasse 12/13/2023 15:35
   Received By: AFREEST ALS 12-13-23 @1535
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis
[X] 10 Standard | [ ] 5 | [ ] 3 | [ ] 2 | [ ] 1 | [ ] SAME DAY

Fuels & Hydrocarbon Analysis
[ ] 5 Standard | [ ] 3 | [ ] 1 | [ ] SAME DAY

OTHER:
Specify: HOLD additional volume

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: ASPECT ALS Job#: EV2312°110

Project: 210368

Login Date: 12-13-23 Login Time: 1535 Login By: DHF

Type of Shipping Container: Cooler____ Box____ Other_____

Shipped via: FedEx Ground____ UPS____ Courier____ Hand Delivered____ ALS Courier X
FedEx Express____

	Yes	No	N/A
Were custody seals on outside of shipping container? If yes, how many? _____ Where? _____ Custody seal date: _____ Seal name: _____	____	____	X
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	____	____
Did all bottles have labels?	X	____	____
Did all bottle labels and tags agree with Chain of Custody?	X	____	____
Were samples received within hold time?	X	____	____
Did all bottles arrive in good condition (unbroken, etc.)?	X	____	____
Was sufficient amount of sample sent for the tests indicated?	X	____	____
Was correct preservation added to samples?	X	____	____
Subcontract test containers added to Subcontract Bin?	____	____	N
Wetchem test containers marked with required Tests?	____	____	X
Short hold time test containers delivered to analysts?	____	____	X
Were VOA vials checked for absence of air bubbles?	____	____	X
Bubbles present in sample #: _____			
5035A kits received? # Low Kits: _____ # High Kits: _____	____	____	X
5035A kits returned? # Low Kits: _____ # High Kits: _____			
Temperature of cooler upon receipt: 4.2°C On ice?	X	____	____

Explain any discrepancies:

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call:

January 10, 2024

Ms. Amy Tice
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Ms. Tice,

On January 3rd, 13 samples were received by our laboratory and assigned our laboratory project number EV24010010. The project was identified as your 210368. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/10/2024
		ALS JOB#:	EV24010010
		ALS SAMPLE#:	EV24010010-01
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 8:55:00 AM
CLIENT SAMPLE ID	WSB-114-0.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.0078**	0.00040	2	MG/L	01/05/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-02
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 9:05:00 AM
CLIENT SAMPLE ID	WSB-114-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.0015**	0.00020	1	MG/L	01/05/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-03
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 9:15:00 AM
CLIENT SAMPLE ID	WSB-114-13	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.0023**	0.00020	1	MG/L	01/05/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-04
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 9:40:00 AM
CLIENT SAMPLE ID	WSB-114-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.00076**	0.00020	1	MG/L	01/05/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-05
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 10:05:00 AM
CLIENT SAMPLE ID	WSB-115-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.00065**	0.00020	1	MG/L	01/05/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-06
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 10:15:00 AM
CLIENT SAMPLE ID	WSB-115-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.0020**	0.00020	1	MG/L	01/05/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-07
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 10:25:00 AM
CLIENT SAMPLE ID	WSB-115-10.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	U	0.00020	1	MG/L	01/05/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-08
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 10:30:00 AM
CLIENT SAMPLE ID	WSB-115-15.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	U	0.00020	1	MG/L	01/05/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-09
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 2:10:00 PM
CLIENT SAMPLE ID	WSB-118-5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	U	0.00020	1	MG/L	01/05/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-10
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 3:10:00 PM
CLIENT SAMPLE ID	WSB-119-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.00049**	0.00020	1	MG/L	01/05/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/10/2024
		ALS JOB#:	EV24010010
		ALS SAMPLE#:	EV24010010-11
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 3:20:00 PM
CLIENT SAMPLE ID	WSB-119-5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	U	0.00020	1	MG/L	01/05/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	1/10/2024 EV24010010 EV24010010-12
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 3:30:00 PM
CLIENT SAMPLE ID	WSB-119-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.012**	0.0010	5	MG/L	01/05/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/10/2024
		ALS JOB#:	EV24010010
		ALS SAMPLE#:	EV24010010-13
CLIENT CONTACT:	Amy Tice	DATE RECEIVED:	01/03/2024
CLIENT PROJECT:	210368	COLLECTION DATE:	12/11/2023 4:40:00 PM
CLIENT SAMPLE ID	WSB-120-16.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury (TCLP)	EPA-7470/1311	**0.020**	0.0010	5	MG/L	01/05/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/10/2024
		ALS SDG#:	EV24010010
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MBLK-R456134 - Batch R456134 - TCLP Extract by EPA-7470

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7470	U	MG/L	0.00020	01/05/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	1/10/2024
		ALS SDG#:	EV24010010
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Amy Tice		
CLIENT PROJECT:	210368		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R456134 - TCLP Extract by EPA-7470

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7470	**104**			85	115	01/05/2024	RAL
Mercury - BSD	EPA-7470	**105**	**1**		85	115	01/05/2024	RAL

APPROVED BY

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24010010

Date 12/12/23 Page 1 Of ~~4~~ 3

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice
ADDRESS: 710 2nd Ave #550
Seattle, WA
PHONE: P.O. #:
E-MAIL: amy.tice@aspectconsulting.com
INVOICE TO COMPANY: AP
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. WSB-114-0.5	12/11/23	0855	S	1
2. WSB-114-6		0905		2
3. WSB-114-13		0915		3
4. WSB-114-17.5		0940		4
~~5. WSB-114-19.5~~		~~0945~~		~~5~~
6. WSB-115-2.5		1005		6 5
7. WSB-115-6		1015		7 6
8. WSB-115-10.5		1025		8 7
9. WSB-115-15.5		1030		9 8
~~10. WSB-115-20~~	↓	~~1035~~	↓	~~10~~

ANALYSIS REQUESTED

NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs
																				Hg by 1631				
																				X				

OTHER (Specify)

Total Hg by EPA 7471	TCLP Hg	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
X	X	1	
	X		
	X		
	X		
	X		
	X		
	X		
	X		
↓		↓	

SPECIAL INSTRUCTIONS: Add-on req'd 1/3/24, Standard TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [illegible] Matthew Wardenaar 12/13/23 15:35
   Received By: AFREESE, ALS, 12-13-23 @1535
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify: HOLD add'l Homal Volume for TCLP pending My results (TCLP EPA 1311)

*Turnaround request less than standard may incur Rush Charges

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

EV2401010
ALS Job# (Laboratory Use Only)

~~EV2312010~~

Date _____ Page ~~2~~ 2 Of ~~4~~ 3

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice
ADDRESS:
PHONE: P.O. #:
E-MAIL: amy.tice@aspectconsulting.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify)							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
~~1. WSB 118 1.5~~	~~12/12~~	~~1405~~	~~S~~	~~21~~																										Total Hg by EPA 7471			TCLP Hg					
2. WSB-118-5		1410		~~22~~ 9																										X			X				1	
~~3. WSB 118 10~~		~~1420~~		~~23~~																																	
4. WSB-118-15		1425		24																																	
~~5. WSB 118 19~~		~~1430~~		~~25~~																																	
6. WSB-119-1		1510		~~26~~ 10																																	
7. WSB-119-5		1520		~~27~~ 11																																	
~~8. WSB 119-12~~		~~1525~~		~~28~~																																	
9. WSB-119-17.5		1530		~~29~~ 12																																	
~~10. WSB 119 19~~		~~1535~~		~~30~~																																	

SPECIAL INSTRUCTIONS Add-on ICID 1/3/24, Stand TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Mike Matthew Vanderhoek 12/13/2023 15:35
   Received By: AFREESE, ALS, 12-13-23 @1535
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: HOLD additional volume

*Turnaround request less than standard may incur Rush Charges

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

EV2401001D
ALS Job# (Laboratory Use Only)

~~EV2312011D~~

Date _____ Page ~~1~~ 3 Of ~~1~~ 3

PROJECT ID: 240368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Amy Tice
ADDRESS:
PHONE: P.O. #:
E-MAIL: amy.tice@aspectsconsulting.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. ~~WSB-120-2~~	~~12/12~~	1605	S	31
2. ~~WSB-120-~~		1630		32
3. ~~WSB-120-14~~		1635		~~33~~
4. WSB-120-16.5		1640		~~34~~ 13
5. ~~WSB-120-19~~		~~1645~~		~~35~~
6.				
7.				
8.				
9.				
10.				

ANALYSIS REQUESTED

NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify)							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
																				X					Total Hg by EPA 7471							1	
																									TCLP Hg								

SPECIAL INSTRUCTIONS Add-on rec'd 1/3/24, Standard TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Matthew Vorderstrasse 12/13/2023 15:35
   Received By: AFREEST ALS 12-13-23 @1535
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify: HOLD additional volume

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist EV2401001D

Client: ASPECT ALS Job#: EV2312110

Project: 210368

Login Date: 12-13-23 Login Time: 1535 Login By: DHF

Type of Shipping Container: Cooler____ Box____ Other_____

Shipped via: FedEx Ground____ UPS____ Courier____ Hand Delivered____ ALS Courier X
FedEx Express____

	Yes	No	N/A
Were custody seals on outside of shipping container? If yes, how many? _____ Where? _____ Custody seal date: _____ Seal name: _____	___	___	X
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	___	___
Did all bottles have labels?	X	___	___
Did all bottle labels and tags agree with Chain of Custody?	X	___	___
Were samples received within hold time?	X	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	X	___	___
Was sufficient amount of sample sent for the tests indicated?	X	___	___
Was correct preservation added to samples?	X	___	___
Subcontract test containers added to Subcontract Bin?	___	___	X
Wetchem test containers marked with required Tests?	___	___	X
Short hold time test containers delivered to analysts?	___	___	X
Were VOA vials checked for absence of air bubbles?	___	___	X
Bubbles present in sample #: _____			
5035A kits received? # Low Kits: _____ # High Kits: _____	___	___	X
5035A kits returned? # Low Kits: _____ # High Kits: _____			
Temperature of cooler upon receipt: 4.2 °C On ice?	X	___	___

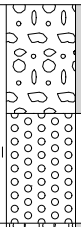
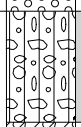
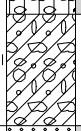
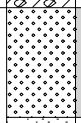
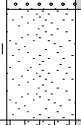
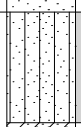
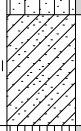
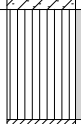
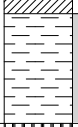
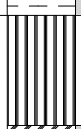
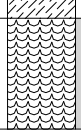
Explain any discrepancies:

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call:

APPENDIX C

Boring and Monitoring Well Logs

Coarse-Grained Soils - More than 50%[1] Retained on No. 200 Sieve	Gravels - More than 50%[1] of Coarse Fraction Retained on No. 4 Sieve	≤5% Fines		GW	Well-graded GRAVEL Well-graded GRAVEL WITH SAND
				GP	Poorly-graded GRAVEL Poorly-graded GRAVEL WITH SAND
		≥15% Fines		GM	SILTY GRAVEL SILTY GRAVEL WITH SAND
				GC	CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND
	Sands - 50%[1] or More of Coarse Fraction Passes No. 4 Sieve	≤5% Fines		SW	Well-graded SAND Well-graded SAND WITH GRAVEL
				SP	Poorly-graded SAND Poorly-graded SAND WITH GRAVEL
		≥15% Fines		SM	SILTY SAND SILTY SAND WITH GRAVEL
				SC	CLAYEY SAND CLAYEY SAND WITH GRAVEL
Fine-Grained Soils - 50%[1] or More Passes No. 200 Sieve	Silts and Clays Liquid Limit Less than 50%			ML	SILT SANDY or GRAVELLY SILT SILT WITH SAND SILT WITH GRAVEL
				CL	LEAN CLAY SANDY or GRAVELLY LEAN CLAY LEAN CLAY WITH SAND LEAN CLAY WITH GRAVEL
				OL	ORGANIC SILT SANDY or GRAVELLY ORGANIC SILT ORGANIC SILT WITH SAND ORGANIC SILT WITH GRAVEL
	Silts and Clays Liquid Limit 50% or More			MH	ELASTIC SILT SANDY or GRAVELLY ELASTIC SILT ELASTIC SILT WITH SAND ELASTIC SILT WITH GRAVEL
				CH	FAT CLAY SANDY or GRAVELLY FAT CLAY FAT CLAY WITH SAND FAT CLAY WITH GRAVEL
				OH	ORGANIC CLAY SANDY or GRAVELLY ORGANIC CLAY ORGANIC CLAY WITH SAND ORGANIC CLAY WITH GRAVEL
Highly Organic Soils				PT	PEAT and other mostly organic soils

"WITH SILT" or "WITH CLAY" means 5 to 15% silt and clay, denoted by a "-" in the group name; e.g., SP-SM • "SILTY" or "CLAYEY" means >15% silt and clay • "WITH SAND" or "WITH GRAVEL" means 15 to 30% sand and gravel. • "SANDY" or "GRAVELLY" means >30% sand and gravel. • "Well-graded" means approximately equal amounts of fine to coarse grain sizes • "Poorly graded" means unequal amounts of grain sizes • Group names separated by "/" means soil contains layers of the two soil types; e.g., SM/ML.

Soils were described and identified in the field in general accordance with the methods described in ASTM D2488. Where indicated in the log, soils were classified using ASTM D2487 or other laboratory tests as appropriate. Refer to the report accompanying these exploration logs for details.

1. Estimated or measured percentage by dry weight
2. (SPT) Standard Penetration Test (ASTM D1586)
3. Determined by SPT, DCPT (ASTM STP399) or other field methods. See report text for details.

GEOTECHNICAL LAB TESTS

MC	=	Natural Moisture Content
PS	=	Particle Size Distribution
FC	=	Fines Content (% < 0.075 mm)
GH	=	Hydrometer Test
AL	=	Atterberg Limits
C	=	Consolidation Test
Str	=	Strength Test
OC	=	Organic Content (% Loss by Ignition)
Comp	=	Proctor Test
K	=	Hydraulic Conductivity Test
SG	=	Specific Gravity Test

CHEMICAL LAB TESTS

Organic Chemicals

BTEX	=	Benzene, Toluene, Ethylbenzene, Xylenes
TPH-Dx	=	Diesel and Oil-Range Petroleum Hydrocarbons
TPH-G	=	Gasoline-Range Petroleum Hydrocarbons
VOCs	=	Volatile Organic Compounds
SVOCs	=	Semi-Volatile Organic Compounds
PAHs	=	Polycyclic Aromatic Hydrocarbon Compounds
PCBs	=	Polychlorinated Biphenyls

Metals

RCRA8	=	As, Ba, Cd, Cr, Pb, Hg, Se, Ag, (d = dissolved, t = total)
MTCA5	=	As, Cd, Cr, Hg, Pb (d = dissolved, t = total)
PP-13	=	Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn (d=dissolved, t=total)

FIELD TESTS

PID	=	Photoionization Detector
Sheen	=	Oil Sheen Test
SPT[2]	=	Standard Penetration Test
NSPT	=	Non-Standard Penetration Test
DCPT	=	Dynamic Cone Penetration Test

COMPONENT DEFINITIONS

Descriptive Term		*Size Range and Sieve Number*
Boulders	=	Larger than 12 inches
Cobbles	=	3 inches to 12 inches
Coarse Gravel	=	3 inches to 3/4 inches
Fine Gravel	=	3/4 inches to No. 4 (4.75 mm)
Coarse Sand	=	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	=	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	=	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	=	Smaller than No. 200 (0.075 mm)

ESTIMATED[1] PERCENTAGE

% by Weight		*Modifier*	*% by Weight*		*Modifier*
<1	=	Subtrace	15 to 25	=	Little
1 to <5	=	Trace	30 to 45	=	Some
5 to 10	=	Few	>50	=	Mostly

MOISTURE CONTENT

Dry	=	Absence of moisture, dusty, dry to the touch
Slightly Moist	=	Perceptible moisture
Moist	=	Damp but no visible water
Very Moist	=	Water visible but not free draining
Wet	=	Visible free water, usually from below water table

RELATIVE DENSITY

Non-Cohesive or Coarse-Grained Soils

Density[3]		*SPT*[2] *Blows/Foot*	*Penetration with 1/2" Diameter Rod*
Very Loose	=	0 to 4	≥ 2'
Loose	=	5 to 10	1' to 2'
Medium Dense	=	11 to 30	3" to 1'
Dense	=	31 to 50	1" to 3"
Very Dense	=	> 50	< 1"

CONSISTENCY

Cohesive or Fine-Grained Soils

Consistency[3]		*SPT*[2] *Blows/Foot*	*Manual Test*
Very Soft	=	0 to 1	Penetrated >1" easily by thumb. Extrudes between thumb & fingers.
Soft	=	2 to 4	Penetrated 1/4" to 1" easily by thumb. Easily molded.
Medium Stiff	=	5 to 8	Penetrated >1/4" with effort by thumb. Molded with strong pressure.
Stiff	=	9 to 15	Indented ~1/4" with effort by thumb.
Very Stiff	=	16 to 30	Indented easily by thumbnail.
Hard	=	> 30	Indented with difficulty by thumbnail.

GEOLOGIC CONTACTS

Observed and Distinct — Observed and Gradual — Inferred

Aspect CONSULTING

Exploration Log Key

AI Path: Q:_ACAD Standards\FIELD REFERENCE\MASTERS\Exploration Log Key-2018.ai // user: jinman // last saved: 12/31/2018

Aspect CONSULTING	PRDI3 Implementation - Monitoring Well Installation - Sep 2023 - 210368		Monitoring Well Log	
	Project Address & Site Specific Location Chlor-Alkali RAU, Outside north corner of Port of Bellingham maintenance parking lot		*Coordinates (Lat,Lon WGS84)* 640641, 1240959	*Exploration Number* **CP-MW101**
Contractor Cascade Environmental	*Equipment* Geoprobe MC5	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 15.6'	Ecology Well Tag No. BPR-534
Operator Scott	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 9/14/2023	*Top of Casing Elev. (NAVD88)* 15.3'	*Depth to Water (Below GS)* 4.77' (Static)

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)
0	15	Flush 8-inch Morris monument set in concrete. 2-inch Schedule 40 PVC pipe set in concrete.					Approximately 4 inches of asphalt.	0
		▽ 9/14/2023					SILTY SAND WITH GRAVEL (SM); dry, brown; fine to coarse sand; fine, subangular to subrounded gravel. Becomes gray.	
		2-inch Schedule 40 PVC pipe set in 3/8-inch hydrated bentonite chips.					SILTY SAND (SM); moist, dark brown; fine to coarse sand.	
							SILTY SAND WITH GRAVEL (SM); wet, gray; fine to coarse sand; fine to coarse, subangular to subrounded gravel.	
5	10	2-inch Schedule 40 PVC pipe set in 2/12 sand. ▼ 9/20/2023						5
10	5	2-inch pre-packed 0.010 slotted Schedule 40 PVC pipe set in sand.		CP-MW101-5-15 total Hg, total sulfide			Becomes with 1- to 2-inch silt interbeds.	10
							SILT (MH); wet, gray; medium plasticicty; 1- to 2-inch sand interbeds.	
							SILTY SAND (SM); wet, gray; fine to medium sand.	
15	0	Threaded PCV endcap.					Bottom of exploration at 15 ft. bgs.	15
20	-5							20

Legend

Sample Type
- Continuous core 1" ID
- Grab sample

Water Level
- ▼ Static Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: Bo Ward
Approved by: AET

Exploration Log CP-MW101
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - PRDI3 IMPLEMENTATION - MONITORING WELL INSTALLATION SEP 2023.GPJ February 22, 2024

Aspect CONSULTING	PRDI3 Implementation - Monitoring Well Installation - Sep 2023 - 210368		Monitoring Well Log	
	Project Address & Site Specific Location		Coordinates (Lat,Lon WGS84)	Exploration Number
	Chlor-Alkali RAU, North corner of Opportunity Council South Office		640432, 1240976	CP-MW102
Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)	Ecology Well Tag No. BPR-535
Cascade Environmental	Geoprobe MC5	Percussion hammer	14.6'	
Operator	Exploration Method(s)	Work Start/Completion Dates	Top of Casing Elev. (NAVD88)	Depth to Water (Below GS)
Scott	Direct push	9/14/2023	14.34'	6.37' (Static)

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)
		Flush 8-inch Morris monument set in concrete. 2-inch Schedule 40 PVC pipe set in concrete.					Approximately 4 inches of asphalt.	
							GRAVEL WITH SAND (GP); dry, gray; fine, subangular to rounded gravel; fine to coarse sand.	
		2-inch Schedule 40 PVC pipe set in 3/8-inch hydrated bentonite chips.					SILTY SAND WITH GRAVEL (SM); moist, brown; fine to coarse sand; fine subangular to subrounded gravel. Becomes gray.	
	10						SILT (ML); moist, brown; nonplastic; abundant organics (woody debris).	
5		2-inch Schedule 40 PVC pipe set in 2/12 sand. ▼ 9/20/2023					SILTY SAND (SM); moist, gray; fine to coarse sand; trace fine, subangular to subrounded gravel.	5
	5	▽ 9/14/2023					SANDY SILT (MH); moist, gray; medium plasticity; fine to medium sand; abundant organics (woody debris).	
10		2-inch pre-packed 0.010 slotted Schedule 40 PVC pipe set in sand.					SILTY SAND (SM); wet, gray; fine to medium sand; subtrace organics (shell fragments).	10
	0							
15		Threaded PCV endcap.					SANDY SILT (MH); wet, gray; medium plasticity; fine sand.	15
	-5						SILTY SAND (SM); wet, gray; fine to medium sand.	
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type: ◫ Continuous core 1" ID

Water Level: ▼ Static Water Level; ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: Bo Ward
Approved by: AET

Exploration Log CP-MW102
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINT\PROJECTS\210368 - PRDI3 IMPLEMENTATION - MONITORING WELL INSTALLATION SEP 2023.GPJ February 22, 2024

Aspect CONSULTING	PRDI3 Implementation - Monitoring Well Installation - Sep 2023 - 210368		Monitoring Well Log	
	Project Address & Site Specific Location: Chlor-Alkali RAU, Approx. 85 feet north of Chlor-Alkali RAU guard station		Coordinates (Lat,Lon WGS84): 640486, 1240692	Exploration Number: **CP-MW103**
Contractor: Cascade Environmental	Equipment: Geoprobe MC5	Sampling Method: Percussion hammer	Ground Surface Elev. (NAVD88): 14.5'	Ecology Well Tag No. BPR-536
Operator: Scott	Exploration Method(s): Direct push	Work Start/Completion Dates: 9/14/2023	Top of Casing Elev. (NAVD88): 14.21'	Depth to Water (Below GS): 6.93' (Static)

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)
		Flush 8-inch Morris monument set in concrete. 2-inch Schedule 40 PVC pipe set in concrete.					Approximately 4 inches of asphalt.	
							GRAVEL WITH SAND (GW); dry, gray; fine to coarse, subangular to rounded gravel; fine to coarse sand.	
		2-inch Schedule 40 PVC pipe set in 3/8-inch hydrated bentonite chips.						
		2-inch Schedule 40 PVC pipe set in 2/12 sand.					SILTY SAND WITH GRAVEL (SM); dry, gray; fine to coarse sand; fine to coarse, subangular to rounded gravel.	
	10						SILTY SAND (SM); slightly moist, gray; fine to medium sand; subtrace organics (shell fragments).	
5		9/20/2023						5
							Becomes wet.	
	5	2-inch pre-packed 0.010 slotted Schedule 40 PVC pipe set in sand.						
10								10
		Thread PCV endcap.					SILT WITH SAND (MH); wet, gray; medium plasticity; fine sand.	
	0						SANDY SILT (ML); wet, gray; nonplastic; fine sand; subtrace organics (woody debris).	
15							Bottom of exploration at 15 ft. bgs.	15
	-5							
20								20

Legend

Sample Type: Continuous core 1" ID

Water Level: Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: Bo Ward
Approved by: AET

Exploration Log CP-MW103
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - PRDI3 IMPLEMENTATION - MONITORING WELL INSTALLATION SEP 2023.GPJ February 22, 2024

Aspect CONSULTING	PRDI 3 - 210368B	Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, In asphalt parking lot, west of former WSB	*Coordinates (SPN NAD83 ft)* E:1240504.50 N:641044.21 (est)	*Exploration Number* **WSB-101**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 13.7' (est)
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 10/31/2023	*Top of Casing Elev. (NAVD88)* NA
			Depth to Water (Below GS) 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)
							ASPHALT; parking lot.	
					XRF=ND		**FILL** SILTY SAND (SM); moist, brown; fine to coarse sand; trace fine to coarse angular to subangular gravel.	
				WSB-101-2 Total Hg by EPA 7471	XRF=ND		Becomes gray.	
					XRF=ND		Becomes black.	
	10							
5		▽ 10/31/2023		WSB-101-5.5 Total Hg by EPA 7471	XRF=ND XRF=9ppm		SAND WITH SILT (SP-SM); wet, gray; medium sand. GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse subrounded to subangular gravel; fine to coarse sand.	5
	5							
10		Boring backfilled with 3/8" hydrated bentonite chips NSF 60		WSB-101-11 Total Hg by EPA 7471	XRF=ND XRF=ND		SILTY SAND (SM); wet, black; fine to medium sand, trace coarse sand; trace fine to coarse subrounded to subangular gravel; trace roots and wood fragments; 2-inch chunks of wood debris at 10.2-feet bgs and 11.5-feet bgs with a creosote-like odor.	10
	0							
15				WSB-101-16 Total Hg by EPA 7471	XRF=ND XRF=ND		WOODY DEBRIS; Drilled through solid wood; creosote-like odor.	15
	-5						**NATIVE** SILT (ML); moist, dark gray, low plasticity; trace fine to coarse sand; trace roots and wood fibers; moderate sulfur-like odor.	
20				WSB-101-20 Total Hg by EPA 7471	XRF=ND XRF=ND		Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▯ Continuous core 1.85" ID
- ▩ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-101
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, West of ABC Recycling fence, east of WSB-101		*Coordinates (SPN NAD83 ft)* E:1240522.04 N:641065.55 (est)	*Exploration Number* **WSB-102**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 14' (est)	
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 10/31/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 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)
0	10			WSB-102-1.5 Total Hg by EPA 7471	XRF=ND XRF=ND		**FILL** SILTY SAND (SM); moist, gray; fine to coarse sand; trace fine subrounded to subangular gravel; brick debris; 1-inch chunks of wood debris at 0.6-feet bgs and 1-foot bgs.	0
5	5	▽ 10/31/2023		WSB-102-6 Total Hg by EPA 7471	XRF=70ppm XRF=896ppm XRF=19ppm		SILTY SAND WITH GRAVEL (SM); wet, black; fine to coarse sand; fine to coarse angular to subangular gravel; creosote-like odor. GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse angular to subangular gravel; fine to coarse sand.	5
10	0	Boring backfilled with 3/8" hydrated bentonite chips NSF 60		WSB-102-11.5 Total Hg by EPA 7471	XRF=51ppm XRF=94ppm XRF=ND XRF=ND		Becomes gray. SILTY SAND WITH GRAVEL (SM); wet, dark gray; fine to coarse sand; fine to coarse subrounded to subangular gravel; slight creosote-like odor.	10
15	-5			WSB-102-17 Total Hg by EPA 7471 WSB-102-19 Total Hg by EPA 7471	XRF=45ppm XRF=74ppm XRF=85ppm XRF=21ppm		Becomes gray brown.	15
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▯ Continuous core 1.85" ID
- Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-102
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, East of ABC Recycling fence, west of WSB-104		*Coordinates (SPN NAD83 ft)* E:1240542.16 N:641084.55 (est)	*Exploration Number* **WSB-103**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 14' (est)	
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 10/30/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 6' (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)
0	14				XRF=44ppm		**FILL** SILTY SAND (SM); moist, brown; fine to coarse sand; broken cobble in sampler at 1-foot bgs; organic fines; trace roots and wood fragments.	0
				WSB-103-2 Total Hg by EPA 7471	XRF=152ppm		SILTY SAND (SM); moist, gray brown; fine to coarse sand; trace fine to coarse angular to subangular gravel; trace wood fragments.	
					XRF=ND		Becomes very moist, gray.	
5	10	▽ 10/30/2023			XRF=31ppm			5
				WSB-103-6.5 Total Hg by EPA 7471	XRF=40ppm		Becomes wet.	
					XRF=24ppm			
10	5	Boring backfilled with 3/8" hydrated bentonite chips NSF 60			XRF=ND		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse subrounded to subangular gravel; fine to coarse sand.	10
				WSB-103-12 Total Hg by EPA 7471	XRF=ND			
					XRF=ND			
15	0			WSB-103-15.5 Total Hg by EPA 7471	XRF=39ppm			15
					XRF=18ppm			
					XRF=21ppm			
				WSB-103-18 Total Hg by EPA 7471	XRF=ND		**NATIVE** SILT (ML); moist, gray, low plasticity.	
20	-5						Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▯ Continuous core 1.85" ID
- ▩ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-103
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B	Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, NW of ABC Recycling property, east of WBS-103	*Coordinates (SPN NAD83 ft)* E:1240563.95 N:641099.64 (est)	*Exploration Number* **WSB-104**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 14.1' (est)
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 10/30/2023	*Top of Casing Elev. (NAVD88)* NA
			Depth to Water (Below GS) 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)
					XRF=ND		**FILL** SILTY SAND (SM); moist, brown; fine to medium sand; trace fine to coarse subanguar gravel; organic fines; brick debris.	
				WSB-104-2 Total Hg by EPA 7471	XRF=150ppm		SILTY SAND (SM); very moist, black; fine to coarse sand; few fine subangular gravel; wood fragments; slight sulfur-like odor; broken cobbles in sampler at 2-feet bgs and 2.5-feet bgs.	
					XRF=83ppm		Becomes brown.	
	10							
5		▽ 10/30/2023						5
					XRF=23ppm		GRAVEL WITH SILT AND SAND (GP-GM); wet, light brown; fine angular to subangular gravel; fine to coarse sand.	
					XRF=14ppm			
				WSB-104-7.5 Total Hg by EPA 7471	XRF=787ppm		SANDY SILT (ML); wet, black, low plasticity; few, fine to medium sand; trace fine subangular gravel; trace roots and wood fragments; slight sulfur-like odor.	
	5							
10		Boring backfilled with 3/8" hydrated bentonite chips NSF 60					GRAVEL WITH SILT AND SAND (GP-GM); wet, light brown; fine angular to subangular gravel; fine to coarse sand.	10
					XRF=20ppm			
				WSB-104-11.5 Total Hg by EPA 7471	XRF=160ppm		SILT (ML); wet, black, low plasticity; trace fine to coarse sand; few roots and wood fragments; slight sulfur-like odor.	
					XRF=ND			
					XRF=14ppm		SILTY SAND (SM); wet, gray; fine to medium sand.	
	0							
15							**NATIVE** SILT (ML); very moist, black, low to medium plasticity; trace fine sand; few roots and wood fragments; 3-inch chunk of wood at 15-feet bgs.	15
				WSB-104-15.5 Total Hg by EPA 7471	XRF=ND			
					XRF=ND		Becomes moist, gray; no sand.	
				WSB-104-18 Total Hg by EPA 7471	XRF=ND			
	-5							
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▯ Continuous core 1.85" ID
- Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-104
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, SE of WSB-101		*Coordinates (SPN NAD83 ft)* E:1240559.29 N:641068.91 (est)	*Exploration Number* **WSB-105**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 14.5' (est)	
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 10/31/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 2' (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=ND		**FILL** SILTY SAND (SM); moist, brown; fine to medium sand; trace fine to coarse subrounded to subangular gravel; broken cobble in sampler at 0.5-feet bgs; trace roots.	
				WSB-105-1.5 Total Hg by EPA 7471	XRF=136ppm			
		10/31/2023					SANDY SILT (ML); very moist, brown, low plasticity; trace wood fragments.	
					XRF=69ppm		GRAVEL WITH SILT AND SAND (GP-GM); wet, dark gray; fine to coarse angular to subangular gravel; fine to coarse sand.	
	10							
5				WSB-105-5.5 Total Hg by EPA 7471	XRF=11ppm			5
					XRF=ND			
	5							
10		Boring backfilled with 3/8" hydrated bentonite chips NSF 60		WSB-105-10.5 Total Hg by EPA 7471	XRF=11ppm			10
					XRF=13ppm			
	0							
15				WSB-105-16 Total Hg by EPA 7471	XRF=25ppm		Becomes black; creosote-like odor.	15
					XRF=36ppm			
					XRF=ND		**NATIVE** SILT (ML); very moist, dark gray, low to medium plasticity; trace wood fragments; moderate sulfur-like odor.	
	-5			WSB-105-19 Total Hg by EPA 7471	XRF=ND			
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- No Soil Sample Recovery
- Continuous core 1.85" ID
- Grab sample

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-105
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location		*Coordinates (SPN NAD83 ft)*	*Exploration Number*
	Laurel St & Cornwall Ave, Bellingham, WA 98225, South of WSB-103		E:1240585.93 N:641082.13 (est)	**WSB-106**
Contractor	*Equipment*	*Sampling Method*	*Ground Surface Elev. (NAVD88)*	
Cascade Drilling	Geoprobe 7822DT	Percussion hammer	14.7' (est)	
Operator	*Exploration Method(s)*	*Work Start/Completion Dates*	*Top of Casing Elev. (NAVD88)*	*Depth to Water (Below GS)*
Scott Busby	Direct push	10/30/2023	NA	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)
					XRF=ND		**FILL** SILTY SAND (SM); moist, brown; fine to medium sand; trace fine to coarse angular to subangular gravel; organic fines.	
					XRF=ND		SILTY SAND (SM); moist, gray brown; fine to coarse sand; trace fine to coarse angular to subangular gravel; broken cobbles in sampler at 1-foot bgs and 2.5-feet bgs.	
				WSB-106-3 Total Hg by EPA 7471	XRF=ND			
	10							
5		▽ 10/30/2023			XRF=18ppm		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray; fine to coarse subrounded to subangular gravel; fine to coarse sand.	5
				WSB-106-6.5 Total Hg by EPA 7471	XRF=28ppm			
					XRF=19ppm			
	5							
10		Boring backfilled with 3/8" hydrated bentonite chips NSF 60			XRF=ND			10
					XRF=ND			
				WSB-106-13 Total Hg by EPA 7471	XRF=146ppm		SILTY SAND WITH GRAVEL (SM); wet, dark gray; fine to coarse sand; fine subrounded to subangular gravel. 3-inch layer of black sediment at 12.5-feet bgs.	
	0							
15					XRF=ND		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse subrounded to subangular gravel; fine to coarse sand.	15
					XRF=64ppm			
				WSB-106-17.5 Total Hg by EPA 7471	XRF=605ppm			
					XRF=60ppm			
	-5			WSB-106-20 Total Hg by EPA 7471	XRF=ND			
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▯ Continuous core 1.85" ID
- Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-106
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, SW of WSB-104		*Coordinates (SPN NAD83 ft)* E:1240611.82 N:641062.20 (est)	*Exploration Number* **WSB-107**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 15' (est)	
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 10/30/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 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)
				WSB-107-1.5 Total Hg by EPA 7471	XRF=14ppm XRF=89ppm XRF=71ppm XRF=23ppm		**FILL** SILTY SAND (SM); moist, brown; fine to coarse sand; trace fine to coarse subrounded to subangular gravel; organic fines; trace roots and wood fragments; broken cobble in sampler at 1.5-feet bgs. Becomes dark brown. Becomes gray, decreased silt content.	
5	10	▽ 10/30/2023		WSB-107-6.5 Total Hg by EPA 7471	XRF=52ppm XRF=77ppm XRF=74ppm		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse angular to subrounded gravel; fine to coarse sand.	5
10	5	Boring backfilled with 3/8" hydrated bentonite chips NSF 60		WSB-107-11 Total Hg by EPA 7471	XRF=148ppm XRF=223ppm XRF=89ppm		SILTY SAND WITH GRAVEL (SM); wet, gray; fine to coarse sand; fine to coarse angular to subrounded gravel.	10
15	0			WSB-107-16 Total Hg by EPA 7471 WSB-107-18 Total Hg by EPA 7471	XRF=86ppm XRF=267ppm XRF=134ppm XRF=ND		**NATIVE** SILT (ML); moist, dark gray, low to medium plasticity; trace wood fragments. 1-inch layer of black sediment at 17.3-feet bgs.	15
20	-5						Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 1.85" ID
- ▩ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-107
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location		*Coordinates (SPN NAD83 ft)*	*Exploration Number*
	Laurel St & Cornwall Ave, Bellingham, WA 98225, South of WSB-105		E:1240599.56 N:641039.07 (est)	**WSB-108**
Contractor	*Equipment*	*Sampling Method*	*Ground Surface Elev. (NAVD88)*	
Cascade Drilling	Geoprobe 7822DT	Percussion hammer	15' (est)	
Operator	*Exploration Method(s)*	*Work Start/Completion Dates*	*Top of Casing Elev. (NAVD88)*	*Depth to Water (Below GS)*
Scott Busby	Direct push	10/31/2023	NA	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)
					XRF=ND		**FILL** SILTY SAND (SM); moist, yellow brown; fine to medium sand, trace coarse sand; broken cobble at 0.5-feet bgs.	
				WSB-108-1.5 Total Hg by EPA 7471	XRF=147ppm		SILTY SAND (SM); moist, brown; fine to coarse sand; few fine to coarse angular to subangular gravel.	
							Becomes gray.	
5	10	▽ 10/31/2023			XRF=14ppm		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse angular to subangular gravel; fine to coarse sand.	5
				WSB-108-6 Total Hg by EPA 7471	XRF=19ppm			
10	5	Boring backfilled with 3/8" hydrated bentonite chips NSF 60		WSB-108-11 Total Hg by EPA 7471	XRF=135ppm		SAND WITH SILT (SP-SM); wet, dark gray; fine to coarse sand. GRAVEL WITH SILT AND SAND (GP-GM); wet, dark gray; fine to coarse angular to subangular gravel; fine to coarse sand.	10
					XRF=88ppm			
15	0			WSB-108-16 Total Hg by EPA 7471	XRF=11ppm		SAND WITH SILT (SP-SM); wet, dark gray; fine to medium sand. GRAVEL WITH SILT AND SAND (GP-GM); wet, black; fine to coarse angular to subangular gravel; fine to coarse sand; creosote-like odor.	15
				WSB-108-17.5 Total Hg by EPA 7471	XRF=14ppm		**NATIVE** SILT (ML); moist, dark gray, low plasticity; trace fine to coarse sand; moderate sulfur-like odor; few wood fragments and roots; white clam shell fragments.	
20	-5				XRF=ND		Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▯ Continuous core 1.85" ID
- ☑ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-108
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location		*Coordinates (SPN NAD83 ft)*	*Exploration Number*
	Laurel St & Cornwall Ave, Bellingham, WA 98225, SW of WSB-107		E:1240578.29 N:641007.81 (est)	**WSB-109**
Contractor	*Equipment*	*Sampling Method*	*Ground Surface Elev. (NAVD88)*	
Cascade Drilling	Geoprobe 7822DT	Percussion hammer	14.8' (est)	
Operator	*Exploration Method(s)*	*Work Start/Completion Dates*	*Top of Casing Elev. (NAVD88)*	*Depth to Water (Below GS)*
Scott Busby	Direct push	10/30/2023	NA	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)
0	10			WSB-109-1.5 Total Hg by EPA 7471	XRF=ND		**FILL** SILTY SAND (SM); moist, brown; fine to coarse sand; trace wood fragments.	0
					XRF=26ppm		Becomes gray brown.	
					XRF=15ppm		3-inch layer of black sediment observed.	
							SANDY SILT (ML); moist, dark gray/light brown/gray layers mixed, non-plastic; trace fine to coarse sand; trace wood debris.	
5					XRF=ND			5
				WSB-109-7 Total Hg by EPA 7471	XRF=ND			
					XRF=ND		Becomes dark gray; few wood fragments and roots.	
10	5	Boring backfilled with 3/8" hydrated bentonite chips NSF 60 ▽ 10/30/2023		WSB-109-10 Total Hg by EPA 7471	XRF=733ppm		SILTY SAND (SM); moist, black; fine to coarse sand.	10
							Becomes brown; trace wood fragments.	
					XRF=ND		SAND WITH SILT (SP-SM); very moist, light gray; fine to medium sand, appears granitic.	
					XRF=ND		SILT (ML); moist, brown, low plasticity; trace fine gravel; some roots.	
				WSB-109-13 Total Hg by EPA 7471	XRF=ND		SILTY SAND (SM); moist, gray; fine to medium sand.	
							Becomes yellow brown.	
15	0			WSB-109-15 Total Hg by EPA 7471	XRF=ND			15
20	-5						Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 1.85" ID
- ▩ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-109
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, West of ABC Recycling fence, north of WSB-112		*Coordinates (SPN NAD83 ft)* E:1240551.84 N:641004.83 (est)	*Exploration Number* **WSB-110**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 14.1' (est)	
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 11/1/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 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)
0	10			WSB-110-1.5 Total Hg by EPA 7471	XRF=ND		**FILL** SILTY SAND (SM); moist, gray brown; fine to coarse sand; trace fine to coarse angular to subrounded gravel.	0
					XRF=ND			
					XRF=ND			
5		▽ 11/1/2023						5
					XRF=ND		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse angular to subrounded gravel; fine to coarse sand.	
				WSB-110-6.5 Total Hg by EPA 7471	XRF=ND			
	5							
10		Boring backfilled with 3/8" hydrated bentonite chips NSF 60			XRF=10ppm			10
				WSB-110-12 Total Hg by EPA 7471	XRF=510ppm		SANDY SILT (ML); very moist, dark gray, non-plastic; fine to coarse sand; few fine subrounded to subangular gravel; brick debris.	
					XRF=72ppm		SILTY SAND (SM); wet, gray brown; fine to coarse sand; few fine subrounded to subangular gravel.	
	0							
15					XRF=559ppm			15
				WSB-110-16 Total Hg by EPA 7471	XRF=441ppm			
					XRF=112ppm			
					XRF=118ppm			
	-5			WSB-110-19.5 Total Hg by EPA 7471	XRF=ND		**NATIVE** SILT (ML); moist, dark gray, low to medium plasticity; trace fine to coarse sand; trace wood fragments; moderate sulfur-like odor.	
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 1.85" ID
- ◩ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-110
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B	Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, East of ABC Recycling fence, north of WSB-113	*Coordinates (SPN NAD83 ft)* E:1240528.74 N:641027.92 (est)	*Exploration Number* **WSB-111**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 14' (est)
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 10/31/2023	*Top of Casing Elev. (NAVD88)* NA
			Depth to Water (Below GS) 6' (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)
0	14				XRF=ND		**FILL** SILTY SAND (SM); moist, brown; fine to medium sand; subtrace coarse subangular gravel; trace roots and wood fragments.	0
				WSB-111-1.5 Total Hg by EPA 7471	XRF=161ppm			
5	10				XRF=ND		SILTY SAND (SM); moist, gray brown; fine to coarse sand; trace fine to coarse angular to subangular gravel.	5
							SILTY SAND WITH GRAVEL (SM); very moist, gray; fine to coarse sand; fine to coarse angular to subangular gravel.	
		▽ 10/31/2023		WSB-111-6 Total Hg by EPA 7471	XRF=ND		Becomes brown.	
					XRF=17ppm		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse angular to subangular gravel; fine to coarse sand.	
10	5	Boring backfilled with 3/8" hydrated bentonite chips NSF 60			XRF=11ppm			10
				WSB-111-11.5 Total Hg by EPA 7471	XRF=ND			
					XRF=400ppm			
15	0				XRF=23ppm			15
				WSB-111-16.5 Total Hg by EPA 7471	XRF=10ppm			
					XRF=76ppm			
	-5				XRF=25ppm			
					XRF=26ppm			
20				WSB-111-20 Total Hg by EPA 7471	XRF=ND		**NATIVE** SILT (ML); moist, dark gray, low to medium plasticity; trace fine to coarse sand; clam shell fragment; trace wood fragments; slight sulfur-like odor.	20
							Bottom of exploration at 20 ft. bgs.	

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▮ Continuous core 1.85" ID
- Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-111
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, West of ABC Recycling fence, north of construction entrance		*Coordinates (SPN NAD83 ft)* E:1240598.41 N:640987.32 (est)	*Exploration Number* **WSB-112**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 15' (est)	
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 11/1/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 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)
					XRF=ND		**FILL** SILTY SAND (SM); moist, gray brown; fine to coarse sand; trace fine to coarse angular to subangular gravel; trace wood fragments; brick debris.	
				WSB-112-1.5 Total Hg by EPA 7471	XRF=ND			
					XRF=ND			
5	10	▽ 11/1/2023			XRF=12ppm		SILTY SAND (SM); wet, gray brown; fine to coarse sand; trace fine to angular to subrounded gravel.	5
					XRF=ND			
				WSB-112-7 Total Hg by EPA 7471	XRF=ND		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray; fine to coarse angular to subrounded gravel; fine to coarse sand.	
10	5	Boring backfilled with 3/8" hydrated bentonite chips NSF 60			XRF=ND		Becomes gray brown.	10
				WSB-112-11 Total Hg by EPA 7471	XRF=688ppm		SANDY SILT (ML); very moist, dark gray, non-plastic; trace fine angular to subangular gravel; slight creosote-like odor.	
					XRF=14ppm		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse angular to subrounded gravel; fine to coarse sand.	
15	0				XRF=16ppm		SILTY SAND (SM); wet, dark gray; fine to coarse sand; few fine to angular to subangular gravel.	15
				WSB-112-16.5 Total Hg by EPA 7471	XRF=633ppm			
					XRF=656ppm		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse angular to subrounded gravel; fine to coarse sand.	
					XRF=65ppm			
				WSB-112-20 Total Hg by EPA 7471	XRF=19ppm			
20	-5						Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▯ Continuous core 1.85" ID
- ▩ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-112
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, East of ABC Recycling fence, north of construction entrance		*Coordinates (SPN NAD83 ft)* E:1240628.78 N:641013.95 (est)	*Exploration Number* **WSB-113**
Contractor Cascade Drilling	*Equipment* Geoprobe 7822DT	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 15.2' (est)	
Operator Scott Busby	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 10/30/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 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)
	15				XRF=ND		**FILL** SILTY SAND (SM); moist, brown; fine to medium sand; trace fine roots; broken cobble in sampler at 1-foot bgs	
					XRF=59ppm			
				WSB-113-2 Total Hg by EPA 7471	XRF=59ppm		SILTY SAND (SM); moist, gray; fine to coarse sand; trace fine to coarse angular to subangular gravel.	
5	10	▽ 10/30/2023			XRF=ND		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse angular to subangular gravel; fine to coarse sand.	5
				WSB-113-6 Total Hg by EPA 7471	XRF=ND			
10	5	Boring backfilled with 3/8" hydrated bentonite chips NSF 60			XRF=ND			10
					XRF=ND			
				WSB-113-13 Total Hg by EPA 7471	XRF=77ppm			
15	0				XRF=ND			15
				WSB-113-16.5 Total Hg by EPA 7471	XRF=175ppm			
					XRF=12ppm			
				WSB-113-19 Total Hg by EPA 7471	XRF=36ppm		**NATIVE** SILT (ML); moist, dark gray, low plasticity; trace fine to medium sand; trace roots and wood fragments.	
20	-5						Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▯ Continuous core 1.85" ID
- ▩ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-113
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, North side of concrete slab, south of construction entrance		*Coordinates (SPN NAD83 ft)* E:1240630.29 N:640956.37 (est)	*Exploration Number* **WSB-114**
Contractor Cascade Drilling	*Equipment* Truck-Mounted Geoprobe 6600	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 15.9' (est)	
Operator Josh	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 12/11/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 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)
				WSB-114-0.5 Total Hg by EPA 7471	XRF=193ppm		**FILL** SILTY SAND (SM); moist, brown; fine to coarse sand; trace fine subrounded to subangular gravel.	
	15				XRF=ND		Becomes very moist.	
5		▽ 12/11/2023			XRF=ND		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray; fine to coarse subrounded to subangular gravel; fine to coarse sand.	5
	10			WSB-114-6 Total Hg by EPA 7471	XRF=ND			
10		Boring backfilled with 3/8" hydrated bentonite chips NSF 60			XRF=38ppm			10
	5				XRF=ND		SILTY SAND (SM); wet, gray brown; fine to coarse sand; trace fine subrounded to subangular gravel.	
				WSB-114-13 Total Hg by EPA 7471	XRF=315ppm			
					XRF=23ppm		Becomes gray; increased gravel content.	
15					XRF=75ppm		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray; fine to coarse subrounded to subangular gravel; fine to coarse sand.	15
	0				XRF=105ppm			
					XRF=112ppm		SILTY SAND (SM); wet, gray brown; fine to coarse sand; trace fine subrounded to subangular gravel; brick debris.	
				WSB-114-17.5 Total Hg by EPA 7471	XRF=302ppm		SILTY SAND WITH GRAVEL (SM); very moist, black; fine to coarse sand; fine angular to subangular gravel; trace wood fragments; brick debris.	
					XRF=ND		**NATIVE** SILT (ML); very moist, gray brown, low plasticity; trace roots and wood fragments.	
				WSB-114-19.5 Total Hg by EPA 7471	XRF=ND			
20	-5						Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 1.85" ID
- ◩ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-114
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, NW corner of ABC Recycling construction entrance		*Coordinates (SPN NAD83 ft)* E:1240587.53 N:640968.94 (est)	*Exploration Number* **WSB-115**
Contractor Cascade Drilling	*Equipment* Truck-Mounted Geoprobe 6600	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 15' (est)	
Operator Josh	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 12/11/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 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)
					XRF=ND		**FILL** SILTY SAND (SM); moist, brown; fine to coarse sand; trace fine subrounded to subangular gravel; broken cobble in sampler at 1.5-feet bgs.	
				WSB-115-2.5 Total Hg by EPA 7471	XRF=28ppm XRF=65ppm		SILTY SAND (SM); very moist, gray brown; fine to coarse sand; trace fine subrounded to subangular gravel.	
5	10	▽ 12/11/2023		WSB-115-6 Total Hg by EPA 7471	XRF=64ppm XRF=171ppm XRF=105ppm		Becomes wet, light brown. Becomes gray.	5
10	5	Boring backfilled with 3/8" hydrated bentonite chips NSF 60		WSB-115-10.5 Total Hg by EPA 7471	XRF=53ppm XRF=ND		GRAVEL WITH SILT AND SAND (GP-GM); wet, dark gray; fine to coarse subrounded to subangular gravel; fine to coarse sand; moderate sheen; slight creosote-like odor	10
15	0			WSB-115-15.5 Total Hg by EPA 7471	XRF=18ppm XRF=ND XRF=ND XRF=ND		Broken cobble at 19-feet bgs.	15
20	-5			WSB-115-20 Total Hg by EPA 7471	XRF=ND		**NATIVE** SILT (ML); very moist, gray brown, low to medium plasticity; trace roots and wood fragments. Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▮ Continuous core 1.85" ID
- ⊠ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-115
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, SE of WSB-117		*Coordinates (SPN NAD83 ft)* E:1240630.19 N:641075.07 (est)	*Exploration Number* **WSB-116**
Contractor Cascade Drilling	*Equipment* Truck-Mounted Geoprobe 6600	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 15' (est)	
Operator Josh	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 12/11/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 11.5' (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)
					XRF=ND		**FILL** SILTY SAND (SM); moist, brown; fine to coarse sand; trace fine to coarse subrounded to subangular gravel; broken cobble in sampler at 0.5-feet bgs.	
				WSB-116-1.5 Total Hg by EPA 7471	XRF=ND		Becomes dark brown.	
					XRF=ND		SANDY SILT (ML); moist, gray green and brown, low to non-plasticity; fine to coarse sand; trace fine to coarse subrounded to subangular gravel; trace wood fragments.	
5	10				XRF=ND		Becomes gray.	5
					XRF=ND			
					XRF=ND			
				WSB-116-8 Total Hg by EPA 7471	XRF=ND		Becomes very moist; increased sand content.	
10	5	Boring backfilled with 3/8" hydrated bentonite chips NSF 60 ▽ 12/11/2023			XRF=ND			10
				WSB-116-11.5 Total Hg by EPA 7471	XRF=ND		SILTY SAND (SM); wet, dark gray; fine to coarse sand; trace fine subrounded to subangular gravel; trace roots and wood fragments.	
					XRF=ND		Yellow brown layer of sediment from 12.5 to 13-feet bgs.	
					XRF=ND		Becomes very moist; increased silt content.	
					XRF=ND			
15	0						SANDY SILT (ML); wet, brown and gray, non-plastic; trace wood debris.	15
				WSB-116-16 Total Hg by EPA 7471	XRF=ND		SILTY SAND (SM); wet, gray; fine to medium sand.	
					XRF=ND			
				WSB-116-18 Total Hg by EPA 7471	XRF=ND		SANDY SILT (ML); very moist, brown and gray, non-plastic.	
20	-5						Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ▮▯ Continuous core 1.85" ID
- ⊠ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-116
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, SE of WSB-118		*Coordinates (SPN NAD83 ft)* E:1240604.93 N:641095.35 (est)	*Exploration Number* **WSB-117**
Contractor Cascade Drilling	*Equipment* Truck-Mounted Geoprobe 6600	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 14.3' (est)	
Operator Josh	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 12/11/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 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)
							FILL SILTY SAND (SM); moist, brown; fine to coarse sand; trace fine to coarse subrounded to subangular gravel; broken cobble in sampler at 1.5-feet bgs.	
					XRF=ND			
				WSB-117-2 Total Hg by EPA 7471	XRF=16ppm		SANDY SILT (ML); moist, gray, non plastic; fine to coarse sand; trace fine to coarse subrounded to subangular gravel; trace roots and wood fragmenrs; brick debris.	
					XRF=ND			
	10							
5		▽ 12/11/2023			XRF=ND		GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse subrounded to subangular gravel; fine to coarse sand.	5
					XRF=ND		SILTY SAND (SM); very moist, gray; fine to medium sand, trace coarse sand; trace fine subrounded to subangular gravel; trace roots and wood fragments.	
				WSB-117-7 Total Hg by EPA 7471	XRF=ND			
	5							
10		Boring backfilled with 3/8" hydrated bentonite chips NSF 60					GRAVEL WITH SILT AND SAND (GP-GM); wet, gray brown; fine to coarse angular to subangular gravel; fine to coarse sand.	10
				WSB-117-11 Total Hg by EPA 7471	XRF=ND		SANDY SILT (ML); very moist, brown, low plasticity; fine to coarse sand; trace roots and wood fragments.	
					XRF=ND			
	0				XRF=ND			
15				WSB-117-15 Total Hg by EPA 7471	XRF=ND		SILTY SAND (SM); wet, gray; fine to medium sand.	15
				WSB-117-17 Total Hg by EPA 7471	XRF=ND		**NATIVE** SILT (ML); moist, dark gray, low to medium plasticity; trace roots and wood fragments.	
	-5							
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 1.85" ID
- Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-117
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, SE of WSB-119		*Coordinates (SPN NAD83 ft)* E:1240582.50 N:641112.82 (est)	*Exploration Number* **WSB-118**
Contractor Cascade Drilling	*Equipment* Truck-Mounted Geoprobe 6600	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 14' (est)	
Operator Josh	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 12/11/2023	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 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)
					XRF=ND		**FILL** SILTY SAND (SM); moist, brown; fine to coarse sand; trace fine subangular gravel.	
				WSB-118-1.5 Total Hg by EPA 7471	XRF=19ppm		SANDY SILT (ML); moist, gray/brown/yellow brown, non plastic; fine to coarse sand; trace fine subangular gravel; broken cobbles in sampler at 0.5-feet and 2-feet bgs.	
					XRF=ND			
					XRF=ND			
	10							
5		▽ 12/11/2023		WSB-118-5 Total Hg by EPA 7471	XRF=14ppm			5
					XRF=ND		SAND (SW); moist, light gray; medium sand; appears granitic.	
					XRF=ND		SANDY SILT (ML); moist, dark gray, non plastic; fine to coarse sand; brick debris.	
	5						SILTY SAND (SM); moist, gray; fine to medium sand; brick debris.	
10		Boring backfilled with 3/8" hydrated bentonite chips NSF 60			XRF=ND		SANDY SILT (ML); very moist, dark gray, low plasticity; fine to coarse sand; trace roots and wood fragments; brick debris.	10
					XRF=ND		SAND WITH SILT (SP-SM); wet, gray; fine to medium sand; subtrace fine to coarse subrounded to subangular gravel.	
				WSB-118-12 Total Hg by EPA 7471	XRF=ND			
					XRF=ND		SAND (SW); moist, light gray; medium sand; appears granitic.	
	0							
15							GRAVEL WITH SILT AND SAND (GP-GM); wet, gray; fine to coarse angular to subangular gravel; fine to coarse sand.	15
				WSB-118-16 Total Hg by EPA 7471	XRF=ND		SILTY SAND (SM); very moist, gray brown; fine to medium sand, trace coarse sand; trace roots.	
					XRF=ND		Becomes black; trace wood fragments; brick debris.	
				WSB-118-18 Total Hg by EPA 7471	XRF=ND			
	-5							
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 1.85" ID
- ⊠ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-118
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location: Laurel St & Cornwall Ave, Bellingham, WA 98225, Along North ABC Recycling fenceline		Coordinates (SPN NAD83 ft): E:1240560.12 N:641125.53 (est)	Exploration Number: **WSB-119**
Contractor: Cascade Drilling	Equipment: Truck-Mounted Geoprobe 6600	Sampling Method: Percussion hammer	Ground Surface Elev. (NAVD88): 13.8' (est)	
Operator: Josh	Exploration Method(s): Direct push	Work Start/Completion Dates: 12/11/2023	Top of Casing Elev. (NAVD88): NA	Depth to Water (Below GS): 12.5' (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)
				WSB-119-1 Total Hg by EPA 7471	XRF=106ppm		**FILL** SILTY SAND (SM); moist, brown; fine to coarse sand; trace fine to coarse subrounded to subangular gravel; trace wood fragments; broken cobble in sampler at 0.5-feet bgs.	
					XRF=ND		Becomes dark gray.	
					XRF=ND		SANDY SILT (ML); moist, gray brown, non-plastic; fine to coarse sand; trace roots and wood fragments; brick debris.	
	10							
5				WSB-119-5 Total Hg by EPA 7471	XRF=15ppm			5
					XRF=ND		SAND WITH SILT (SP-SM); moist, yellow brown; fine to medium sand.	
					XRF=ND		SANDY SILT (ML); moist, gray, non-plastic; fine to coarse sand	
	5				XRF=ND		SILTY SAND (SM); very moist, gray; fine to coarse sand; trace fine to coarse subrounded to subangular gravel.	
10		Boring backfilled with 3/8" hydrated bentonite chips NSF 60					SANDY SILT (ML); very moist, gray, low plasticity; fine to coarse sand; subtrace fine subangular gravel; trace roots and wood fragments.	10
					XRF=ND			
		▽ 12/11/2023		WSB-119-12 Total Hg by EPA 7471	XRF=ND			
					XRF=ND		SILTY SAND (SM); wet, gray; fine to medium sand.	
	0							
15					XRF=ND			15
					XRF=ND		Becomes very moist; trace roots and wood fragments. 3-inch layer of black sediment at 17.5-feet bgs.	
				WSB-119-17.5 Total Hg by EPA 7471	XRF=1052ppm		**NATIVE** SILT (ML); moist, dark gray, low to medium plasticity; few roots and wood fragments.	
	-5			WSB-119-19 Total Hg by EPA 7471	XRF=ND			
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◫ Continuous core 1.85" ID
- ⊠ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-119
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTWPROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

Aspect CONSULTING	PRDI 3 - 210368B		Environmental Exploration Log	
	Project Address & Site Specific Location Laurel St & Cornwall Ave, Bellingham, WA 98225, 10-feet east of WSB-119		*Coordinates (SPN NAD83 ft)* E:1240570.82 N:641133.76 (est)	*Exploration Number* **WSB-120**
Contractor Cascade Drilling	*Equipment* Truck-Mounted Geoprobe 6600	*Sampling Method* Percussion hammer	*Ground Surface Elev. (NAVD88)* 13.9' (est)	
Operator Josh	*Exploration Method(s)* Direct push	*Work Start/Completion Dates* 12/11/2023	*Top of Casing Elev. (NAVD88)* NA	*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)
0	10			WSB-120-2 Total Hg by EPA 7471	XRF=ND		**FILL** SILTY SAND (SM); moist, dark brown; fine to coarse sand; trace fine to coarse subrounded to subangular gravel; trace wood fragments.	0
					XRF=ND		Becomes gray, increased gravel content.	
					XRF=ND		Becomes light brown.	
					XRF=ND		SANDY SILT (ML); moist, gray, non-plastic; fine to coarse sand; trace roots and wood fragments; brick debris.	
5							Broken cobble in sampler at 3-feet bgs.	5
					XRF=ND			
				WSB-120-7 Total Hg by EPA 7471	XRF=ND		SILTY SAND (SM); very moist, dark gray; fine to coarse sand; trace fine to coarse subrounded to subangular gravel.	
10	5	▽ 12/11/2023					Becomes wet.	10
		Boring backfilled with 3/8" hydrated bentonite chips NSF 60			XRF=ND			
					XRF=ND			
					XRF=ND			
					XRF=ND		SANDY SILT (ML); wet, dark gray and black, low plasticity; fine to coarse sand; trace roots and wood fragments.	
	0			WSB-120-14 Total Hg by EPA 7471	XRF=ND			
15							SILTY SAND (SM); wet, dark gray; fine to medium sand.	15
					XRF=ND			
				WSB-120-16.5 Total Hg by EPA 7471	XRF=406ppm		3-inch layer of black sediment at 16.5-feet bgs.	
					XRF=ND		**NATIVE** SILT (ML); very moist, dark gray, low to medium plasticity; few roots and wood fragments.	
	-5			WSB-120-19 Total Hg by EPA 7471	XRF=ND			
20							Bottom of exploration at 20 ft. bgs.	20

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 1.85" ID
- ▩ Grab sample

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: NTC
Approved by: SJG

Exploration Log WSB-120
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE \\ASP-BAI-01\PROJECTS\GINTW\PROJECTS\210368 - LIGNIN OU GW MNA.GPJ April 4, 2024

APPENDIX D

Test Pit Logs

D-1.

ISS Test Pit Logs

ATP 13-A

TP-13

LOG OF TEST PIT ATP-14A

ATP-14A

Project ISS
Location GP West

Hour 09:30
Date 10/10/23

Job No. 210348-B-10
Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately ____ Feet
				~3" asphalt
			1	Brown, moist silty sand w/ gravel; f-c sand; pc, SA-R gravel; 2"-4" SR-R cobbles & boulders
			2	
			3	FILL
			4	
			5	NATIVE moist gray silty sand; f-m sand
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Encountered railroad steel ties just below asphalt at 1' bdg below CSBC
Large chunk of loose concrete

Bottom of Test Pit ____ Feet

Completed ____

Remarks ____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-14A

ATP-14A

ATP-14B

LOG OF TEST PIT ATP-14B

Project LSS
Location GP West

Hour 10:45
Date 10/10/23

Job No. 210366-B-10
Observer BLW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	6" asphalt 1" fine gravel; C, A-SA gravel
			2	FILL Brown, moist silty, sand w/ gravel; fine sand; SA-Rgravel 13"-4" SA-R cobbles, + cobbles
			3	
			4	
			5	NATIVE Gray silty sand, fine sand
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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Bainbridge Island, WA 98110
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Seattle, WA 98104
(206)-328-7443

ATP-14B

ATP-14B

ATP-15A

LOG OF TEST PIT ATP-15A

Project ISS
Location GP West

Hour 11:55
Date 10/10/23

Job No. 210368-8-10
Observer BLW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately ____ Feet
			1	4" asphalt
			2	4" asphalt
				Gray, moist silty sand w/ gravel + cobbles; f-c sand; f-c, SA-R gravel; 3"-4" SR-R cobbles
			3	Encountered small pipe in TP sidewall. Empty.
			4	
			5	Encountered piece of rebar.
			6	Gray, moist silty sand w/ gravel; f-m sand
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit ____ Feet Completed ____

Remarks

Aspect consulting
IN-DEPTH PERSPECTIVE

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Seattle, WA 98104
(206)-328-7443

ATP-15B

LOG OF TEST PIT ATP-15B

Project 155
Location GP West

Hour 13:25
Date 10/10/25

Job No. 210368-B-10
Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	SBC 6" asphalt
			2	6" brown gravel w/ silt + sand; f-c sand; f-c A-SA gravel
			3	Gray, moist silty sand w/ gravel + cobbles; f-c sand; f-c, SA-R gravel; 3"-4" cobbles
			4	
			5	
			6	▽ on Becomes wet
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

No structures encountered

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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Seattle, WA 98104
(206)-328-7443

ATP-15B

ATP-16A

LOG OF TEST PIT ATP-16A

Project ISS
Location GP West

Hour 13:55
Date 10/10/23

Job No. 210368-TS-10
Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	6" asphalt
				USBC 6" brown gravel w/ silt + sand; f-c sand; f, SA-A gravel
			2	Gray, silty, sand w/ gravel; f-c sand; f-c, SA-A, gravel
		Large chunk of loose concrete (Wire conduit, loose, in side wall	3	
			4	
			5	
		shiny	6	
		Large metal beam (Not Hydraulic)	7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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Bainbridge Island, WA 98110
(206) 780-9370

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Seattle, WA 98104
(206)-328-7443

ATP-16A

ATP-17A

LOG OF TEST PIT ATP-17A

Project LSS
Location GP West

Hour 14:45 / 13:30
Date 10/10/23 / 10/11/23

Job No. 210560-B-10
Observer BW

Sample	Water Content %	Other Tests	Depth feet
			0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
			15

SOIL INTERPRETATION PIT
Ground Surface Elevation Approximately _____ Feet

4" asphalt
8" concrete pavement in places

Gray, moist silty sand w/ gravel; f-c sand; p-d, sR-R gravel

SUBSURFACE STRUCTURE (COLLECTION TANK)

4"-6" asphalt

Concrete wall of Collection Tank ≥ 7' deep, 5" thick; broken loose rebar

Trending 278° to 98° from N.

Conflict pipe bottom abandoned due to tag caving + excessive hydration

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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Bainbridge Island, WA 98110
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ATP-17A

ATP-17A

ATP-17A

ATP-18A

LOG OF TEST PIT ATP-18A

Project 155
Location GP West

Hour 15:30
Date 10/10/23

Job No. 210368-8-10
Observer BW

MERCURY RECLAIM STORAGE TANK

TANK FOOTING ~~EAST~~ EAST OF MERC REC STOR TANK

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION PT Ground Surface Elevation Approximately ____ Feet
			0	6"-8" Concrete pavement
			1	
			2	Gray, moist silty sand w/ gravel f-c sand; f-c, SR-R gravel
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

8"	2' rounded concrete footing	2' rounded concrete footing
	Brown silty sand f-c sand	Brown silty sand f-c sand
	Gray, moist silty sand w/ gravel	Gray, moist silty sand w/ gravel

Bottom of Test Pit ____ Feet Completed ____

Remarks ____

Aspect consulting
IN-DEPTH PERSPECTIVE

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ATP-18A

ATP-18A

ATP-18A

ATP-20A

LOG OF TEST PIT ATP-20A

Project ISS
Location GP West

Hour 09:10
Date 10/10/23

Job No. 210356-B-D
Observer BLW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	6" asphalt
			2	Gray, moist silty sand w/ gravel
			3	2' concrete wall w/ rebar stickup (1' thick)
			4	Testpit 28" to 208° pond North
			5	Gray wet silty sand w/ gravel
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

BRINE SLUDGE PIT

▽ (South) water table

→ concrete flooring on inside (south) of concrete wall

DRAWING ON BACK

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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Bainbridge Island, WA 98110
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Seattle, WA 98104
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LOG OF TEST PIT ATP-19A

ATP-20A

ATP-20A

ATP-20A

ATP-20A

ATP-21A

LOG OF TEST PIT ATP-21A

Project ISS
Location GP West

Hour 08:30
Date 10/10/23

Job No. 210356-B-40
Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	PIT Ground Surface Elevation Approximately ____ Feet
			1	6" asphalt
			2	
			3	Grey moist silty sand w/ gravel & cobbles
			4	
			5 ▽	
			6	Becomes wet
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

BRINE SLUDGE WALL Approximately ____ Feet

6" asphalt

6" thick Concrete wall of Brine Sludge Pit
Trending 251° to 101° from N

DRAWING ON BACK

8" footing?

Bottom of Test Pit ____ Feet

Completed ____

Remarks ____

Aspect consulting
IN-DEPTH PERSPECTIVE
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Seattle, WA 98104
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LOG OF TEST PIT ATP-20A

Project ISS
Location GP West

Hour 09:10
Date 10/10/23

Job No. 210356-B-D
Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately ____ Feet
			1	

ATP-21A

ATP-21A

ATP-21A

ATP-21A

ATP-21A

ATP-21A

ATP-21A

ATP-21A

D-2.
ISN Test Pit Logs

ATP-01z

LOG OF TEST PIT ATP-01z

Project JSS
Location GP West

Hour 0830
Date 1/22/24

Job No. AS210368-B-10
Observer BW

50% Caustic

Sample	Water Content %	Other Tests	Depth feet
			0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
			15

SOIL INTERPRETATION

PIT

Ground Surface Elevation Approximately _____ Feet

3" asphalt / 3" CSBC

Gray brown silty sand w/ gravel + cobble moist

Becomes wet

3" asphalt / 4" csbc

2'3" concrete wall

50% caustic tank coating

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE
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LOG OF TEST PIT ATP-02z

ATP-01z

ATP-02z

LOG OF TEST PIT ATP-02z

Project ISS
Location GP West

Hour 0930
Date 1/22/24

Job No. 210368-B-10
Observer BW

Sample	Water Content %	Other Tests	Depth feet
			0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
			15

SOIL INTERPRETATION

Ground Surface Elevation Approximately _____ Feet

3" asphalt
3" base

Grey brown, moist, silty sand w/ cobbles & boulders, abundant woody debris

3" asphalt
3" base

2'3" concrete wall ep. Subpile. And tank grating (rebar present)

Drawing by BW

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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LOG OF TEST PIT ATP-03

ATP-02z

ATP-03zA

LOG OF TEST PIT ATP-03z A

Project ISS
Location GP West

Hour 1030
Date 1/22/24

Job No. 210368-B-10
Observer BLW

Chlorine Storage Tank

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	~2" topsoil / ~4" CRBC
			1	
			2	Gray brown silty sand w/ gravel & cobbles
			3	
			4	
			5	Dk gry sandy silt ~~w/ organics~~
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Ground Surface Elevation Approximately _____ Feet

~2" topsoil / ~4" CRBC

5'4" concrete footing per Chlorine Storage Tank

Drawing

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE
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LOG OF TEST PIT ATP-04z

Hour _____

Job No. _____

ATP-03zA

ATP-03zA

ATP-03zA

ATP-03zA

ATP-03zA

ATP-03zA

ATP-03zA

ATP-03zA

ATP-03zA

ATP-03zA

ATP-03zA

ATP-03zA

D-3.
Chemfix Area
Test Pit Logs

LOG OF TEST PIT ~~ATP-01~~

ATP-01

Project _____

Location ABC Recycling

Hour 11:00

Date 10/9/25

Job No. 210638-8-10

Observer RJ

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			0	~3" asphalt
			0.4	~~Sand~~ Brown, moist, silty sand; f-m sand
			1.0	Grayish brown, moist, silty sand w/gravel (fill); f-c sand; f-c gravel
			1	
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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Seattle, WA 98104
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ATP-01

LOG OF TEST PIT ATP-02A

ATP-02A

Project _____

Location ABC Recycling

Hour 16:55

Date 10/9/23

Job No. 210368-B-10

Observer BJO

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
				~6" asphalt
			1	~6" gray moist silty sandy fine to medium GRAVEL w/ gravel
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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Bainbridge Island, WA 98110
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ATP-02A

LOG OF TEST PIT ATP-04A

ATP-04A

Project _____

Location ABC Recycling

Hour 15:40 Job No. 210368-8-10

Date 10/9/23 Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
				4" asphalt
			1	11" brown, moist silty sand/fine sand
				Geofabric @ 8"
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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Seattle, WA 98104
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ATP-04A

LOG OF TEST PIT ATP-04B

ATP-04B

Project _____

Location ABC Recycling

Hour 16:40 Job No. 210368-B-10

Date 10/9/23 Observer RW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	~3" asphalt
			2	5" gray moist silty sand w/ gravel; f-c sand, f-c GBR gravel
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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ATP-04B

LOG OF TEST PIT ATP-05A

ATP-05A

Project _____

Location ABC Recycling

Hour 15:10

Date 10/9/15

Job No. 210318-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	4" asphalt.
			2	8" dry/moist, silty sand w/ gravel; f-c sand; f-c, SR-R gravel
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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ATP-05A

LOG OF TEST PIT ATP-05B

ATP-05B

Project _____

Location ABC Recycling

Hour 15:25

Date 10/9/23

Job No. 21088-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	~~3" asphalt~~
			2	~~4" base, moist silty sand, fine sand~~
			3	Geofabric @ 7"
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
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Seattle, WA 98104
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ATP-05B

LOG OF TEST PIT ATP-06A

ATP-06A

Project _____

Location ABC Recycling

Hour 15:30

Date 10/9/23

Job No. 210368-8-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	6" asphalt
			2	10" of top. moist silty sand w/ gravel, trace sand, trace SR+R gravel
			3	On boundary of red concrete layer
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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ATP-06A

LOG OF TEST PIT ATP-06B

ATP-06B

Project _____

Location ABC Recycling

Hour 15:40 Job No. 210355 B-10

Date 10/9/23 Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	6" asphalt
			2	6" gray mottled, silty sandy gravel, fine to coarse sand; fine, SE-R gravel
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
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Seattle, WA 98104
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ATP-06B

LOG OF TEST PIT ATP-06C

ATP-06C

Project _____

Location ABC Recycling

Hour 15:50 Job No. 210366-B-D

Date 10/9/23 Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
				~5" asphalt
			1	4" brown silty sandy f-m sand
				Geoprobe observed @ 9"
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

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Seattle, WA 98104
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ATP-06C

LOG OF TEST PIT ATP-06D

ATP-06D

Project _____

Location ARC Recycling

Hour 16:00

Date 10/9/23

Job No. 210365-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet
			0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
			15

SOIL INTERPRETATION

Ground Surface Elevation Approximately _____ Feet

5" asphalt
4" brown silty sand, fine sand
Excavation @ 9"

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-06D

LOG OF TEST PIT ATP-08A

ATP-08A

Project _____

Location ABC Recycling

Hour 15:00

Date 4b/9/23

Job No. 210368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
				2" asphalt
			1	10" gray, moist silty sand w/ gravel; fine sand; fine, sandy gravel
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit ____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-08A

LOG OF TEST PIT ATP-08B

ATP-08B

Project _____

Location ABC Recycling

Hour 15:05 Job No. 210365-B-10

Date 10/9/23 Observer BW

Sample	Water Content %	Other Tests	Depth feet
			0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
			15

SOIL INTERPRETATION

Ground Surface Elevation Approximately _____ Feet

5" asphalt
4" brown silty sandy gravel
Grapestake @ 9"

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-08B

LOG OF TEST PIT ATP-09A

ATP-09A

Project _____

Location ~~ABC~~ ABC Recycling

Hour 11:15

Date 10/9/23

Job No. 210638-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			0.6'	Asphalt (~16")
			0.7'	
			1.6'	~11" brown/orange wood chips
			1.7'	~~Brown/orange silty gravel w/ sand (PM Base)~~
				Brown/orange silty gravel w/ sand (fill)
				Brown/gravel (A-5A, C gravel) (fill)
			1	
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09A

LOG OF TEST PIT ATP-09B

ATP-09B

Project _____

Location ABC Recycling

Hour 11:35

Date 10/9/23

Job No. 21038-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	SA ATP-09A
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09B

LOG OF TEST PIT ATP-09C

ATP-09C

Project _____

Location ABC Recycling

Hour 11:55

Date 10/9/23

Job No. 210366-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	~2" asphalt/base
			2	~3" of gravel silty gravel w/ sub-r, sa-R, sub-r sand
			3	~18" of gray, moist silty sand w/ gravel & cobbles/ sub-r, sa-R, sub-r, sa-R, gravel, rounded cobbles & boulders (~1.5' dia) + boulders
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09C

LOG OF TEST PIT ATP-09D

ATP-09D

Project _____

Location ABC Recycling

Hour 12:15

Date 10/9/23

Job No. 210368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	~3" asphalt
			2	1' brown silty sand w/ gravel, trace wood chips
			3	~12" gray-moist, silty sand w/ gravel & cobble-size rock frags, SR-R gravel, SR-R cobbles
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrona Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09D

LOG OF TEST PIT ATP-09E

ATP-09E

Project _____

Location ABC Recycling

Hour 14:00 Job No. 21038-B-10

Date 10/9/23 Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
				~6" asphalt
			1	~4" brown silty sand fine to medium sand
				Encountered @ 10"
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09E

LOG OF TEST PIT ATP-09F

ATP-09F

Project _____

Location ABC Recycling

Hour 14:10

Date 10/9/23

Job No. 210368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
				~6" asphalt
			1	~4" brown, moist, silty sand/f-m sand
				Organic-ic @ 0'
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09F

LOG OF TEST PIT ATP-09G

ATP-09G

Project _____

Location ABC Recycling

Hour 14:25

Date 10/9/23

Job No. 21036-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	~6" asphalt
			2	~3" gray brown silty sand w/ gravel (fill - sand, fine, some gravel
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09G

LOG OF TEST PIT ATP-09H

ATP-09H

Project _____

Location ABC Recycling

Hour 14:30

Date 10/9/23

Job No. 210366-8-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
				2.5" asphalt
				4" below: silty sand; f-m sand
				Grey/brn @ 9"
			1	
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09H

LOG OF TEST PIT ATP-09J

ATP-09J

Project _____

Location ABC Recycling

Hour 14:40 Job No. 210368-8-16

Date 10/9/25 Observer BW

Sample	Water Content %	Other Tests	Depth feet
			0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
			15

SOIL INTERPRETATION

Ground Surface Elevation Approximately _____ Feet

~3" asphalt
Brown silty sand, gravel
Excavatable @ 3"

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09J

LOG OF TEST PIT ATP-09K

ATP-09K

Project _____

Location ABC Recycling

Hour 14:50

Date 10/9/25

Job No. 210368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
				~5" asphalt
			1	~4" brown, moist silty sand, fine sand
				Grab sample @ 9"
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09L

LOG OF TEST PIT ATP-09L

Project _____

Location ABC Recycling

Hour 14:50

Date 10/9/23

Job No. 210368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	~2" asphalt
			2	~6" gravelly, moist silty sand w/ gravel (fine sand; fine, subrounded gravel)
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-8370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-09L

LOG OF TEST PIT ATP-10A

ATP-10A

Project _____

Location ABC Recycling

Hour 12:30

Date 10/9/23

Job No. 210368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet
			0
			1
			2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13
			14
			15

SOIL INTERPRETATION

Ground Surface Elevation Approximately _____ Feet

~2" asphalt

~10" silty sand w/ gravel (gray/brown); f-c sand; f-c, SR-R gravel; abundant woody debris encountered buried (by)

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-10A

LOG OF TEST PIT ATP-10B

ATP-10B

Project _____

Location ABC Recycling

Hour 12:40

Date 10/9/23

Job No. 210368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	~6" asphalt
			2	~7" gray, moist silty sand w/ gravel, fine sand, fine, SR-R gravel, 5" to cobbles, SR-R cobbles
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-10B

LOG OF TEST PIT ATP-10C

ATP-10C

Project _____

Location ABC Recycling

Hour 13:15

Date 10/9/23

Job No. ~~21603~~ 210368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	SA ATP-103
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrona Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-10C

LOG OF TEST PIT ATP-11A

ATP-11A

Project _____

Location ABC Recycling

Hour 13:50

Date 10/9/23

Job No. 210368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	SA ATP-10B
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-11A

LOG OF TEST PIT ATP-11B

ATP-11B

Project _____

Location ABC Recycling

Hour 13:25

Date 10/9/23

Job No. 20368-B-10

Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	SA ATP-10C
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet

Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-11B

LOG OF TEST PIT ATP-11C

ATP-11C

Project _____

Location ABC Recycling

Hour 13:35 Job No. 210368B-10

Date 10/9/23 Observer BW

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	~11" of asphalt
			2	~12" gray, moist silty sand w/ gravel & cobbles; f-c, SR-R grnd; SR-R, up to 5" cobbles
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-11C

LOG OF TEST PIT ATP-11D

ATP-11D

Project Chempix
Location ABC Recycling

Hour _____ Date _____

Job No. _____ Observer _____

Sample	Water Content %	Other Tests	Depth feet	SOIL INTERPRETATION
			0	Ground Surface Elevation Approximately _____ Feet
			1	5" asphalt
			2	Gray, moist silty sand, w/ gravel; p-c, sand; f-c, sub-e gravel
			3	
			4	
			5	NO WATER ENCOUNTERED
			6	Gray, sandy silt w/ gravel + cobbles; pr sorting; p-c, sub-e gravel; 3"-5" cobbles; cemented (hard)
			7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	
			15	

Bottom of Test Pit _____ Feet Completed _____

Remarks _____

Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

ATP-11D

ATP-11D

ATP-11D

APPENDIX E

ISN Treatability - Titration Test Results

Table E-1. Phase 1 Titration Test Data

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Ferrous Sulfate ($FeSO_4$.7H20) Heptahydrate																	
Raw Groundwater						100:1 Liquid to Solid ratio						10:1 Liquid to Solid ratio					
pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)	pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)	pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)
11.24	0.1	0	0	0	0	11.15	0.1	0	0	0	0	11.05	0.1	0	0	0	0
11.14	0.1	2	56	1	275	10.98	0.1	5	139	2	678	10.82	0.1	5	139	2	678
11.06	0.1	4	111	2	545	10.78	0.1	10	278	5	1324	10.66	0.1	10	278	5	1324
10.98	0.1	6	167	3	810	10.6	0.1	15	417	7	1940	10.47	0.1	15	417	7	1940
10.9	0.1	8	222	4	1069	10.44	0.1	20	556	9	2527	10.28	0.1	20	556	9	2527
10.83	0.1	10	278	5	1324	10.27	0.1	25	695	11	3089	10.05	0.1	25	695	11	3089
10.76	0.1	12	334	6	1574	10.06	0.1	30	834	13	3626	9.78	0.1	30	834	13	3626
10.68	0.1	14	389	7	1819	9.8	0.1	35	973	15	4140	9.4	0.1	35	973	15	4140
10.61	0.1	16	445	7	2059	9.39	0.1	40	1112	17	4633	8.64	0.1	40	1112	17	4633
10.54	0.1	18	500	8	2295	8.7	0.1	45	1251	18	5106	8.08	0.1	45	1251	18	5106
10.46	0.1	20	556	9	2527	8.34	0.1	50	1390	20	5560						
10.38	0.1	22	612	10	2755												
10.29	0.1	24	667	11	2979												
10.21	0.1	26	723	12	3198												
10.1	0.1	28	778	12	3414												
9.99	0.1	30	834	13	3626												
9.87	0.1	32	890	14	3834												
9.73	0.1	34	945	15	4039												
9.57	0.1	36	1001	15	4241												
9.38	0.1	38	1056	16	4439												
9.12	0.1	40	1112	17	4633												
8.77	0.1	42	1168	17	4825												
8.45	0.1	44	1223	18	5013												
8.26	0.1	46	1279	19	5198												
8.14	0.1	48	1334	19	5381												

Ferric Sulfate $Fe_2(SO_4)_3$.H20 Monohydrate																	
Raw Groundwater						100:1 Liquid to Solid ratio						10:1 Liquid to Solid ratio					
pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)	pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)	pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)
11.2	0.1	0	0	0	0	11.11	0.1	0	0	0	0	11.03	0.1	0	0	0	0
10.96	0.1	2	80	1	396	10.59	0.1	5	200	2	976	10.52	0.1	5	200	2	976
10.77	0.1	4	160	2	784	10.15	0.1	10	400	5	1905	10.04	0.1	10	400	5	1905
10.58	0.1	6	240	3	1165	9.54	0.1	15	600	7	2791	9.24	0.1	15	600	7	2791
10.4	0.1	8	320	4	1538	7.55	0.1	20	800	9	3636	7.21	0.1	20	800	9	3636
10.21	0.1	10	400	5	1905												
10	0.1	12	480	6	2264												
9.73	0.1	14	560	7	2617												
9.33	0.1	16	640	7	2963												
8.43	0.1	18	720	8	3303												
7.48	0.1	20	800	9	3636												

Table E-1. Phase 1 Titration Test Data

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Aluminum Sulfate ($Al_2(SO_4)_3$) x 14 H_2O																	
Raw Groundwater						100:1 Liquid to Solid ratio						10:1 Liquid to Solid ratio					
pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)	pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)	pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)
11.11	0.1	0	0	0	0	11.08	0.1	0	0	0	0	11.06	0.1	0	0	0	0
10.83	0.1	2	120	1	594	10.47	0.1	5	300	2	1463	10.81	0.1	2	120	1	594
10.63	0.1	4	240	2	1176	9.76	0.1	10	600	5	2857	10.58	0.1	4	240	2	1176
10.38	0.1	6	360	3	1748	7.3	0.1	15	900	7	4186	10.36	0.1	6	360	3	1748
10.1	0.1	8	480	4	2308							10.08	0.1	8	480	4	2308
9.67	0.1	10	600	5	2857							9.68	0.1	10	600	5	2857
8.46	0.1	12	720	6	3396							8.66	0.1	12	720	6	3396
7.4	0.1	14	840	7	3925							7.54	0.1	14	840	7	3925

Ferric Chloride ($FeCl_3$)																	
Raw Groundwater						100:1 Liquid to Solid ratio						10:1 Liquid to Solid ratio					
pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)	pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)	pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)
11.11	0.1	0	0	0	0	11.09	0.1	0	0	0	0	11.04	0.1	0	0	0	0
10.95	0.1	2	32	1	161	10.96	0.1	2	32	1	161	10.92	0.1	2	32	1	161
10.84	0.1	4	65	2	318	10.86	0.1	4	65	2	318	10.81	0.1	4	65	2	318
10.74	0.1	6	97	3	472	10.78	0.1	6	97	3	472	10.71	0.1	6	97	3	472
10.66	0.1	8	130	4	624	10.67	0.1	8	130	4	624	10.61	0.1	8	130	4	624
10.57	0.1	10	162	5	772	10.58	0.1	10	162	5	772	10.53	0.1	10	162	5	772
10.47	0.1	12	195	6	918	10.52	0.1	12	195	6	918	10.44	0.1	12	195	6	918
10.38	0.1	14	227	7	1061	10.4	0.1	14	227	7	1061	10.36	0.1	14	227	7	1061
10.29	0.1	16	260	7	1202	10.31	0.1	16	260	7	1202	10.26	0.1	16	260	7	1202
10.19	0.1	18	292	8	1339	10.23	0.1	18	292	8	1339	10.17	0.1	18	292	8	1339
10.09	0.1	20	324	9	1475	10.13	0.1	20	324	9	1475	10.07	0.1	20	324	9	1475
9.99	0.1	22	357	10	1607	10.02	0.1	22	357	10	1607	9.96	0.1	22	357	10	1607
9.87	0.1	24	389	11	1738	9.92	0.1	24	389	11	1738	9.83	0.1	24	389	11	1738
9.73	0.1	26	422	12	1866	9.79	0.1	26	422	12	1866	9.69	0.1	26	422	12	1866
9.55	0.1	28	454	12	1992	9.64	0.1	28	454	12	1992	9.52	0.1	28	454	12	1992
9.32	0.1	30	487	13	2116	9.46	0.1	30	487	13	2116	9.28	0.1	30	487	13	2116
9	0.1	32	519	14	2237	9.21	0.1	32	519	14	2237	8.95	0.1	32	519	14	2237
8.42	0.1	34	552	15	2357	8.82	0.1	34	552	15	2357	8.46	0.1	34	552	15	2357
7.77	0.1	36	584	15	2474	8.2	0.1	36	584	15	2474	7.86	0.1	36	584	15	2474

Table E-2. Phase 2 Titration Test Data

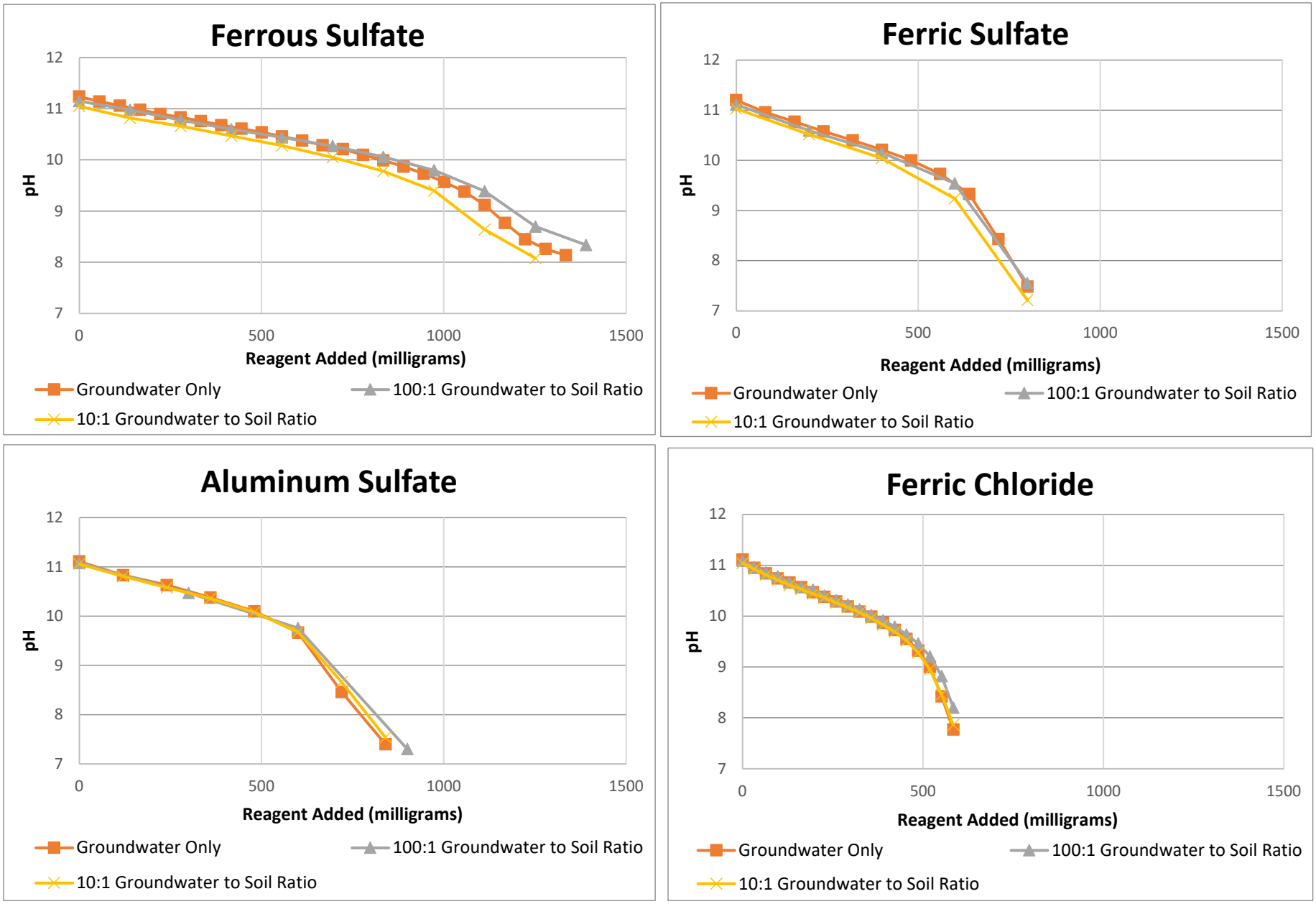
Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

Ferrous Sulfate ($FeSO_4$.7H20) Heptahydrate					
pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)
11.13	0.1	0	0	0	0
10.8	0.1	5	139	3	897
10.53	0.1	10	278	6	1738
10.22	0.1	15	417	9	2527
9.82	0.1	20	556	12	3271
9.15	0.1	25	695	14	3971
8.48	0.1	30	834	17	4633
7.74	0.1	35	973	19	5259
7.47	0.1	40	1112	21	5853
7.39	0.1	45	1251	23	6415
7.34	0.1	50	1390	25	6950
7.3	0.1	55	1529	27	7459
7.29	0.1	60	1668	29	7943
7.28	0.1	65	1807	30	8405
7.25	0.1	70	1946	32	8845
7.24	0.1	75	2085	33	9267
7.23	0.1	80	2224	35	9670
7.2	0.1	85	2363	36	10055
7.19	0.1	90	2502	38	10425
7.17	0.1	95	2641	39	10780
7.15	0.1	100	2780	40	11120

Aluminum Sulfate ($Al_2(SO_4)_3$) x 14 H_2O					
pH	Reagent Strength (mol/L)	Cumulative Volume Added (mL)	Cumulative Reagent Added (mg)	Concentration (mmol/L)	Concentration (mg/L)
11.14	0.1	0	0	0	0
9.96	0.1	5	300	3	1935
7.21	0.1	10	600	6	3750
5.25	0.1	15	900	9	5455
4.35	0.1	20	1200	12	7059
4.14	0.1	25	1500	14	8571
4.04	0.1	30	1800	17	10000
3.95	0.1	35	2100	19	11351
3.93	0.1	40	2400	21	12632
3.9	0.1	45	2700	23	13846
3.86	0.1	50	3000	25	15000
3.86	0.1	55	3300	27	16098

Figure E-1. Phase 1 Titration Test Results

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington

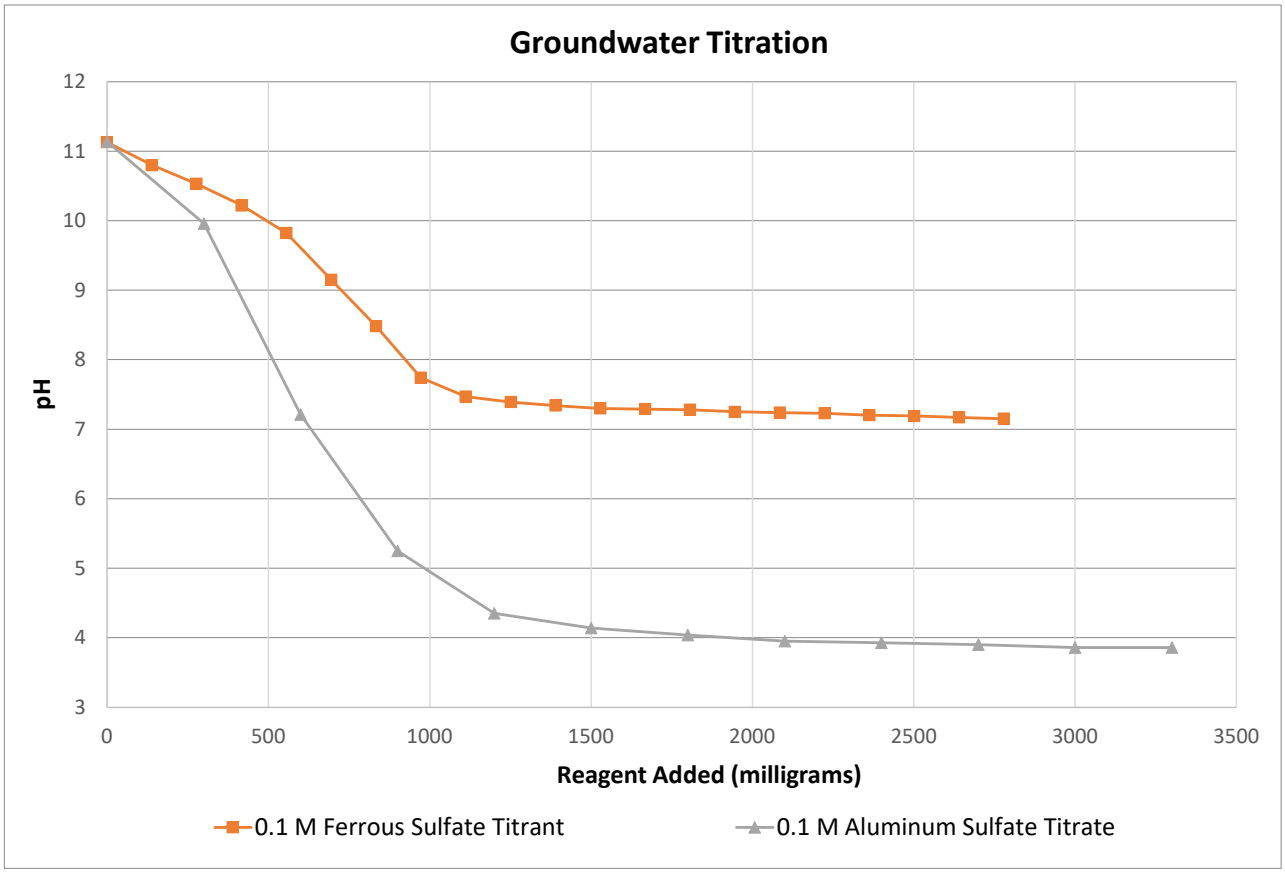


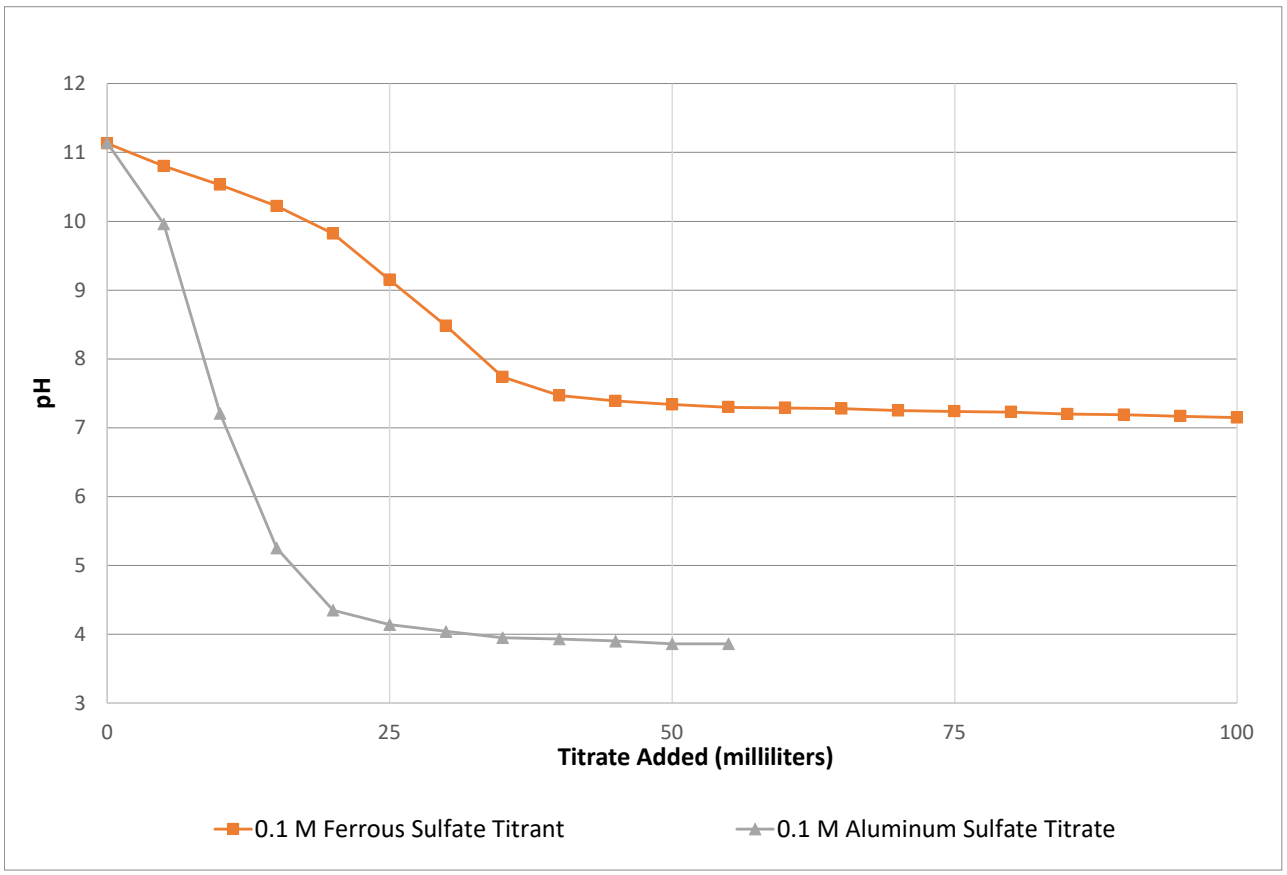
Aspect Consulting
8/19/2024
Titration Curves

Figure E-1
Pre-Remedial Design Investigation 3 Data Report

Figure E-2. Phase 2 Titration Test Results

Project No. AS210368B-11, Chlor-Alkali RAU, GP West Site, Bellingham, Washington





APPENDIX F

ISN Treatability – Column Test Logs, Photographs, Reagent Specification Sheets, and Lab Report

F1. Column Test Logs

Aspect CONSULTING

#1 SAND 100% (control)

COLUMN TESTING FIELD LOG

Project Name: GP West
Date: 10/24/23
Performed By: AMF
Testing Start: 13:40 10/24
Testing End: 1410 10/25

Column Number: ~~#1~~ CC
Project Number: 210368
Column Material: Sand (100%)
Column Composition:
~~Purge Time (CO2 - min)~~:
Purge Volume (DI - mL): 2000mL 1100 start 1132 end

COLUMN MEASUREMENTS

Elapsed Time (hr) min	Sample Location	Cumul. Volume (L)	Flow Rate (mL/min)	Temp. (°C)	Specific Conduct. (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)	Comments
1347			125						
1423	I		175	13.38	1169	1.36	10.56	-68.1	Sand in effluent tubing
1433	P		150	13.44	1366	0.73	10.30	-184	
1438	E		175	13.72	10337	3.90	9.58	-105	
1815									PUMP OFF
10/25									
1025			150						PUMP ON
1143	I		250	14.38	1029	1.36	10.56	-133	Increased flowrate for sampling
1215	E		225		887	0.49	10.43	-216	
1355			250						
1420									PUMP OFF

METHODS

Field equipment: Peristaltic pump, Aquatroll 500 SN = 943233
Disposal: Onsite vault
Decon Equipment:
Observations/Comments: Some unsaturated areas visible; sections of pack material supported by water column before collapsing

Aspect CONSULTING

#1 CONTROL

COLUMN SAMPLING FIELD LOG

Column Number: ~~CC~~ CC

Project Name: GP West

Project Number: 210368

Date:

Column Material: Sand (105 µ)

Performed By:

Column Composition:

Testing Start:

Testing End:

SAMPLING INVENTORY

Time	Sample Name	Vol (mL)	Bottle Type	Quantity	Filter	Preservation	Remarks
1545	CC-In-102423	250	Poly	1		None	300mL flushed
↓	↓	↓	↓	1		None	
				1		NaOH	
				1		H_2SO_4	
				1		H_2SO_4	
				1	X	HNO_3	
↓	↓	125	↓	1	X	HCl	
1630	CC-P-102423	250	Poly	1		}	Column became unsaturated during sampling
				1			
				1			
				1		SAA	
				1			
				1	X		low flow, small V
↓	↓	125	↓	1	X	}	
1145	CC-In-102523	250	Poly	1		}	
				1			
				1			
				1		SAA	
				1			
				1	X		
↓	↓	125	↓	1	X	}	
1215	CC-Eff-102523	250	Poly	1		}	
				1			
				1			
				1		SAA	
				1			
		↓		1	X		
↓	↓	125	↓	1	X	}	

Notes/Comments/Observations:

Aspect CONSULTING

#2 10% Siderite/90% Sand

COLUMN TESTING FIELD LOG

Column Number: ~~#2~~ C2

Project Name: GP West
Date: 10/24/23
Performed By: AMF
Testing Start: 1140 10/24
Testing End: ~~1410~~ 10/26 1717

Project Number: 210368
Column Material: —
Column Composition: —
Purge Time (CO_2 - min): 11:00 start
Purge Volume (DI - mL): 2000 mL 11:36 end

COLUMN MEASUREMENTS

Elapsed Time (hr)	Sample Location	Cumul. Volume (L)	Flow Rate (mL/min)	Temp. (°C)	Specific Conduct. (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)	Comments
1350			175						
1455	I		350	13.40	1579	0.31	10.63	-233.7	
1501	M			13.21	1414	0.64	10.50	~~-299.2~~	
1505	E			13.52	1291	0.59	10.34	-218	
1615									PUMP OFF
10/25 1025			225						PUMP ON
1250									Noticed port was closed (no flow) → opened
1350			300						
1410	E		300	15.66	1421	0.16	10.49	-238	SAMPLED
1420									PUMP OF
10/26 1105									PUMP ON
1230	I		300	15.80	1590	0.32	10.55	-256	Column unsaturated throughout
1605	P		~~17.01~~	17.61	1715	0.07	8.59	-483	pH climbing
1618	P			17.27	1624	0.02	9.58	-563	↳ emptied flow cell of residual matter from C6
1620	P			17.31	1626	0.01	10.27	-604	
1625	P			17.11	1628	0.00	10.46	-676	
1630	E			17.73	1507	0.03	10.38	-397	
1635	E			17.66	1584	0.00	10.36	-409	
~~1705~~									
1700	E			16.95	1630	0.00	10.25	-417	Sampled
1710	E			16.66	1688	0.00	10.30	-422	
1717									PUMP OFF
~~1730~~									

METHODS

Field equipment: Peristaltic Pump, Aquatrol 500 SN=943233
Decon Equipment: —
Disposal: onsite vault
Observations/Comments: some unsaturation and bridging

Aspect CONSULTING

#2 10% Sideite 10%

COLUMN SAMPLING FIELD LOG

Column Number: #2 Sideite

Project Name:
Date:
Performed By:
Testing Start:
Testing End:

Project Number: 210263

Column Material:
Column Composition:

SAMPLING INVENTORY

	Time	Sample Name	Vol (mL)	Bottle Type	Quantity	Filter	Preservation	Remarks
10/25	1410	C2-Eff-102523	250	Poly	2	None	None	
	↓	↓	250	Poly	2	None	Sulfuric	
			250	Poly	1	45µm	Nitric	
			250	Poly	1	None	NaOH	
	↓	↓	125	Poly	1	45µm	HCl	
10/26	1700	C2-Eff-102623	250	Poly	2	None	None	
	↓	↓	↓	↓	2	None	Sulfuric	~~Nitric~~
					1	45µm	Nitric	
			↓		1	None	NaOH	
	↓	↓	125	↓	1	45µm	HCl	

Notes/Comments/Observations:

Aspect CONSULTING

#3 10% metafix / 90% sand

COLUMN TESTING FIELD LOG

Column Number: #3

Project Name: GSP West
Date: 10/24/23
Performed By: AMF
Testing Start: 1354 10/24/23
Testing End: 1815 10/24/23

Project Number:
Column Material:
Column Composition:
Purge Time (CO_2 - min): 1100 start 1208 end
Purge Volume (DI - mL): 1000mL

COLUMN MEASUREMENTS

Elapsed Time (hr)	Sample Location	Cumul. Volume (L)	Flow Rate (mL/min)	Temp. (°C)	Specific Conduct. (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)	Comments

METHODS

Field equipment:
Decon Equipment:
Disposal:
Observations/Comments: Difficulty purging w/ DI - low flowrate even w/ high pump rate. Lots of fine particulate in effluent. Tubing replaced twice during purge.

Started @ 1354 but flow is start/stop w/ high pressure build up.
Testing abandoned in column, batch reaction recommended.

Aspect CONSULTING

#4 50% $Al_2(SO_4)_3$ / 50% sand

COLUMN TESTING FIELD LOG Column Number: C4

Project Name: GIP West
Date: 10/24/23
Performed By: AMF
Testing Start: 1403 10/24
Testing End: 1815 10/24

Project Number:
Column Material: —
Column Composition: —
~~Purge Time (CO2 - min)~~: —
Purge Volume (DI - mL): 2000mL 11:00 start 11:45 end

COLUMN MEASUREMENTS

Elapsed Time (hr)	Sample Location	Cumul. Volume (L)	Flow Rate (mL/min)	Temp. (°C)	Specific Conduct. (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)	Comments
1405			100						PUMP ON
1510	I		300	11.76	1708	0.68	10.64	-272.3	
1514	D		"	12.03	5448	1.54	3.93	-19.6	DO dropping
1518	E		"	11.93	5190	1.95	3.916	-34.3	
1720									SAMPLED
1805	P			12.97	12716	3.42	9.88	-226.5	Water is black and gaps
10/24 1815									Pump off

METHODS

Field equipment: Peripump, Aquatrol 500 SN: 943233
Decon Equipment: —
Disposal: Onsite vault
Observations/Comments: DI purge appears to have dissolved most of reagent already. Column packed @ ~1/2 original volume after DI flush

Aspect CONSULTING

#5 20% $Al_2(SO_4)_3$ + 80% sand

COLUMN TESTING FIELD LOG | Column Number: C5

Project Name: GP West
Date: 10/25/23
Performed By: AMF
Testing Start: 1715 10/25
Testing End: 1845 10/25

Project Number: 210368
Column Material:
Column Composition: 20% Alum + 80% Sand
Purge Time (CO_2 - min): —
Purge Volume (DI - mL): —

COLUMN MEASUREMENTS

Elapsed Time (hr)	Sample Location	Cumul. Volume (L)	Flow Rate (mL/min)	Temp. (°C)	Specific Conduct. (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)	Comments
1715	I		200	14.24	1424	0.90	10.56	-139.3	PUMP ON
1730									Water flowing in column
1745	P			18.21	30733	4.81	2.90	480.9	effluent is dark/turbid
1755	E			19.79	30194	4.52	2.78	512	
1805	E			18.09	27540	3.21	3.10	497	Sampled
1815	P			13.76	8772	1.58	3.56	416	Sampled
1830	P			13.00	1617	1.18	4.75	98.1	
1840	P			12.94	1305	0.39	8.27	-136.5	
1842	P			12.88	1284	0.31	9.30	-198	
1845	—								PUMP OFF

METHODS

Field equipment: Peristaltic, Aquatrol 500 SN = 943233
Decon Equipment: —

Disposal: Onsite Vault
Observations/Comments: Roughly 1/6 column pack gone within 30 minutes, no visible signs of reagent @ end of test.

Aspect CONSULTING

#5 20% $Al_2(SO_4)_3$

COLUMN SAMPLING FIELD LOG

Column Number: C5

Project Name:
Date:
Performed By:
Testing Start:
Testing End:

Project Number: 210308

Column Material:
Column Composition:

SAMPLING INVENTORY

Time	Sample Name	Vol (mL)	Bottle Type	Quantity	Filter	Preservation	Remarks
1805	CS-EFF-102523	250	POLY	2	No	No	
↓	↓	↓	↓	2	No	sulfuric	
				1	45µm	nitric	
		↓		1	No	NaOH	
↓	↓	125	↓	1	45µm	HCl	
1815	CS-P-102523	250	POLY	2	No	No	
↓	↓	↓	↓	2	No	sulfuric	
				1	45µm	nitric	
		↓		1	No	NaOH	
↓	↓	125	↓	1	45µm	HCl	

Notes/Comments/Observations:

Aspect CONSULTING

#6 20% FeSO4 + 80% SAND

COLUMN TESTING FIELD LOG

Column Number: C16

Project Name: GSP West
Date: 10/26/23
Performed By: AMF
Testing Start: 1245 10/26
Testing End: 1500 10/26

Project Number: 210368
Column Material:
Column Composition:
Purge Time (CO_2 - min): —
Purge Volume (DI - mL): —

COLUMN MEASUREMENTS

Elapsed Time (hr)	Sample Location	Cumul. Volume (L)	Flow Rate (mL/min)	Temp. (°C)	Specific Conduct. (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)	Comments
1230	I			15.80	1590	0.32	10.55	-256	
1245			200						
1257	P			8.87	35194	8.39	3.29	274	Pump ON
1306	P			9.22	38144	7.12	3.11	286	min pump rate, clogging
1310									Sampled
1313	P			12.02	21573	5.85	3.41	265	Bubbles
1316	P			12.47	17743	5.52	3.57	258	flocs in soln.
1320									
1325									25% of V displaced
1331	E			10.58	37120	9.83	2.84	319.4	flocs arrived at
1335	E			10.65	38237	8.64	3.00	309	effluent is sludgy, turbid
1340	E					8.73	3.38	266	~~Sampled~~ clogging
1345	E						4.74		Sampled
1346	E			14.47	136603	1.89	5.14	75.2	SALT!
1350	E			14.93	12498	0.67	5.40	-3.3	
1356	E			15.59	8291	0.32	5.37	-18.7	
1359	E			15.69	7655	0.27	5.47	-35.9	
1404	E			16.25	4833	0.10	5.87	-101	flocs in ~~upper~~
1406	E			16.49	3769	0.07	6.00	-119	water (suspended)
1412	E			16.61	3159	0.06	6.20	-141	flocs coating out
1422	E			16.63	2209	0.03	6.50	-176	
1428	E			16.66	1574	0.02	6.75	-195	
1432	E			16.57	1602	0.02	6.85	-199	flocs resuspended
1446	E			16.45	1574	0.01	~~6.99~~	-220	
1500							7.11		Pumps OFF

METHODS

Field equipment: Peristaltic pump, Aquatrol 500 SN = 94325
Decon Equipment:
Disposal: Onsite vault
Observations/Comments: Slower wetting front than CS @ min. pump rate; less coarse
lots of salt residue upon drying; clogging issues possibly due to

Aspect CONSULTING

#6 20% $FeSO_4$

COLUMN SAMPLING FIELD LOG

Column Number: C6

Project Name:
Date:
Performed By:
Testing Start:
Testing End:

Project Number: 210308

Column Material:
Column Composition:

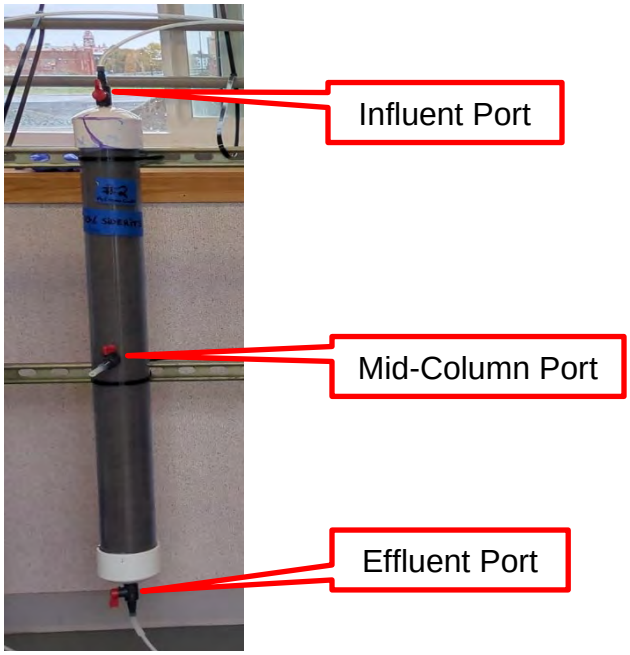
SAMPLING INVENTORY

Time	Sample Name	Vol (mL)	Bottle Type	Quantity	Filter	Preservation	Remarks
1306	C6-P-102623	250	Poly	2	No	No	Sludgy, turbid
↓	↓	↓	↓	2	No	Sulfuric	
				1	No	NaOH	
				1	0.45µm	Nitric	Blue-green clear soln
		125		1	0.45µm	HCl	
1340	C6-FH-102623	250	Poly	2	No	No	
↓	↓	↓	↓	2	No	Sulfuric	
				1	No	NaOH	
				1	0.45µm	Nitric	
		125		1	0.45µm	HCl	

Notes/Comments/Observations:

F2. Photographs of Column Set Up

Photograph 1. In Situ Neutralization Column Testing Setup within Trailer On Site



Photograph 2. Close Up of Column with Sample Ports Labeled

F3. Manufacturer Specifications For Reagents Used in Treatability Testing

GEO®
SPECIALTY CHEMICALS

Product Specifications
Aluminum Sulfate Hydrate
Standard
Technical Grade

Formula $Al_2(SO_4)_3 \cdot 14.3\ H_2O$

Nomenclature
Aluminum Sulfate, Hydrate
Dry Alum
Filter Alum
Papermaker's Alum

CAS Number 10043-01-3

CAS Index Name Sulfuric Acid, Aluminum Salt (3:2)

Grade Technical

Molecular Weight 599.8

Description
Aluminum Sulfate Hydrate - Standard, technical grade is a white to light tan colored, ground crystalline solid. It complies with the chemical specifications of the American Water Works Association B403-03 and Federal Specification O-A-429D, Type 1, Class 2. It has been certified by the National Sanitation Foundation (NSF) for use in the treatment of drinking water at a maximum dosage of 150 mg/L.

Specifications

Assay (As available water soluble Al_2O_3):	17.0% min.
(As Aluminum Sulfate, Anhydrous ($Al_2(SO_4)_3$):	57.0% min.
Water Soluble Iron (as Fe_2O_3):	0.009% max.
Water Insolubles:	0.5% max.

Note: Depending on local requirements, solutions of variable acidity or basicity may be produced, as well as lower assay.

Typical Properties

pH (1% solution):	3.5
Solubility (pounds per gallon of water at 68® F):	7.28
Sieving:	
Ground: Through 10 mesh	>90%*
Powder: Through 100 mesh	>95%
Bulk Density (pounds per cubic foot):	65 (ground)

Continued On Reverse Side

Distributed by Cascade Columbia Distribution
Seattle, WA (206) 282-6834 - Sherwood, OR (503) 625-5293

Containers

50 pound net weight Paper Bags
2250 pound net weight Super Sacks

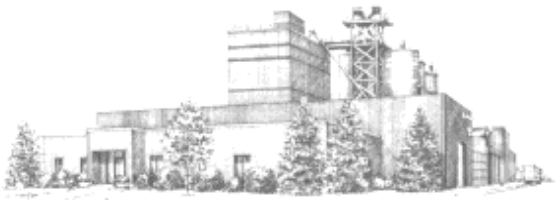
Uses

Chemical: In the treatment of waste.
Pulp and Paper: In the production of paper.
Water Treatment: In the treatment of water and wastewater for coagulation, flocculation, pH control and phosphorus removal.

* Meets O-A-429-D, Type 1, Class 2 and B403-93 Ground

Distributed by Cascade Columbia Distribution
Seattle, WA (206) 282-6334 - Sherwood, OR (503) 625-5293

CROWN
TECHNOLOGY, INC.
ISO 9001:2000 CERTIFIED



Since 1946

FERROUS SULFATE (DRY)

FORMULA: $FeSO_4 \cdot 7H_2O$ F.W. = 278 CAS# 7782-63-0

TYPICAL CHEMICAL ANALYSIS:

FeSO4*7H2O	minimum	99.5% *
Ferrous Iron	minimum	20.0% *
pH (5% Solution)		2.5 to 5
Adherent water		<0.30%

*Complies with American Water Works Association Standard B402.

Heavy Metals (mg/kg)

Arsenic	< 0.2	Lead	< 2	Cadmium	< 3	Mercury	< 0.05
Chromium	< 40	Nickel	< 150	Copper	< 30	Zinc	< 80

Note: Some metals can be lowered upon special request.
Calcium Carbonate can be added as anti-caking agent upon request.

PHYSICAL

Physical Form	Blue-Green, Free Flowing Crystal
Bulk Density	55 lb. per cu. Ft.
Main Particle Size Range (90 – 95%)	- 7 + 60 MESH

TYPICAL USES: ODOR/CORROSION CONTROL-Most cost effective method of controlling odors and corrosion from hydrogen sulfide liquid and gas. Also, ammonia gas odor. Treat at 1.62 lbs. iron per 1.0 lbs. hydrogen sulfide in solution.
(8# FSH) $FeSO_4 + H_2S \rightarrow FeS + H_2SO_4$.

PHOSPHATE REMOVAL/CLARIFICATION during aeration, FSH can reduce phosphate levels to meet regulations. It increases the size of the floc particles for faster settling and is not pH sensitive. Replaces Alum to eliminate aluminum carry over.

HEXAVALENT CHROMIUM REDUCTION to trivalent.

FERTILIZER: SOIL/TURF/PLANTS:
Acidifying soil and correcting iron deficiencies in plants developing chlorosis. Flowers and vegetables apply at the rate of 4.5 oz. (2 Tbs.) per 100 square feet. Blend into the soil and water thoroughly. Trees/Shrubs, dissolve ¼ to ½ oz. (1/2 to 1 tsp.) in one gallon of water and apply to the soil along the drip line. Large Pin Oaks, pour ½ cup in hole along drip line for each inch of tree diameter. Water thoroughly. Lawns, dissolve 2 cups in three gallons of water per 1000 sq. feet of lawn. Water thoroughly.

7513 E. 96th Street • P.O. Box 50426 • Indianapolis, IN 46250-0426
(317) 845-0045 • Fax: (317) 845-9086

PACKAGING AND SHIPPING: Bulk - 40,000# Tandem Truck, Pneumatic Truck LTL or Truckload 50# Poly or 2000# Bulk Bags

CAUTION: Keep out of reach of children. Keep from contact with eyes, cuts, or sores. Not for human consumption. This product will stain concrete surfaces such as drives and sidewalks. Wash or sweep from concrete surfaces immediately after application.

FREIGHT CLASSIFICATIONS: Ferrous Sulfate has an RQ of 1000 pounds, if less than 1000 pounds is in a single container the material is not regulated by D.O.T. as a hazardous material. Bulk Bag and Bulk DOT Description (> 1000 in container): Environmentally hazardous substances, solid, n.o.s., 9, UN3077, III, RQ, (ferrous sulfate)

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

SIDCO Minerals,Inc.

2801 Richmond Rd. #51
Texarkana, Texas 75503
(903) 838-4493
(903) 838-0275 Fax

September 1, 2017

IRON CARBONATE 38%-40% FE
TYPICAL ANALYSIS
CAS #563-71-3

Fe as elemental	39.32%
Fe_2CO_3	81.57%
SiO_2	9.39%
Al_2O_3	2.86%
K_2O	1.98%
P_2O_5	1.25%
CaO	0.85%
MgO	0.79%
ZnO	0.75%
S	0.40%
Cu	0.30%
Other	0.035%
Pb (lead)	<20 ppm
As (arsenic)	<20 ppm
Cd (cadmium	<5 ppm
Sb (antimony)	<5 ppm
Hg (mercury)	<0.050 ppm

Particle size.....90% thru 100 mesh, 80% thru 200
Bulk Density.....110 pounds per cubic foot
Specific Gravity....3.68
Ph ……..6.8
Color……..Dark grey to reddish brown

Product Sheet

METAFIX® REAGENT

MetaFix® Reagent

CUSTOMIZED METALS TREATMENT SOLUTIONS

METAFIX® represent a unique treatment approach for soil, sediment, industrial wastes, and groundwater contaminated with heavy metals.
METAFIX® REAGENTS are customized to cost effectively address even the most challenging site conditions.

METAFIX® REAGENTS are formulated blends of reducing agents, reactive minerals, mineral activators, catalysts, and pH modifiers. Following placement of METAFIX® REAGENT into the treatment zone, a number of physical and chemical processes combine to create geochemical conditions under which common heavy metals are subjected to reduction, adsorption, precipitation, and conversion to stable sulfide and iron-sulfide precipitates. These heavy metal sulfide precipitates have greater stability than metal hydroxide precipitates which are formed with traditional metals treatment approaches based on pH adjustment.

Moreover, since METAFIX® utilizes multiple mechanisms, it allows for robust performance in challenging environments, with high metals concentrations, high concentrations of organic contaminants such as solvents, high salt content, or extreme pH levels.

A custom METAFIX® blend is developed based on a site's specific conditions through a low-cost treatability study to address soil and/or groundwater impacts.

KEY BENEFITS

The METAFIX® approach offers a truly one of a kind, proprietary, customized solution for the most challenging metals sites.

- The proven ability to address multiple heavy metals including; Al, As, Cd, Cu, Cr, Hg, Ni, Pb, Se, V, and Zn
- Superior Cr(VI) treatment with the formation of more stable mixed (Cr, Fe) hydroxides
- The capability of treating comingled plumes of heavy metals and chlorinated solvents
- Low overall treatment costs based on lower reagent dosing rates, as low as 0.1% – 4% (wt/wt), versus other metals treatment technologies
- The treatment mechanism is not dependent on alkalinity for removal of metals, therefore not susceptible to rebound when the matrix pH returns to ambient levels

APPLICATION METHODS

- Direct push injection
- Hydraulic and pneumatic fracturing
- Direct soil mixing
- Permeable Reactive Barriers

For more information and detailed case studies, please visit our website.

Disclaimer This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

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Active Oxygens
remediation@evonik.com
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EVONIK
Leading Beyond Chemistry

F4. Laboratory Report

November 13, 2023

Mr. Adam Griffin
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Mr. Griffin,

On October 27th, 12 samples were received by our laboratory and assigned our laboratory project number EV23100160. The project was identified as your 210368. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/13/2023 EV23100160 EV23100160-01
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/24/2023 3:45:00 PM
CLIENT SAMPLE ID	CC-In-102423	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**43**	0.92	10	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	0.29	2	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**160**	2.6	10	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**780**	50	1	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**2500**	50	1	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**5000**	50	1	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**110**	50	1	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**50**	2.0	1	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**1700**	50	1	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**370000**	50	1	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	**720**	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**34**	5.0	10	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**57000**	120	250	NG/L	11/01/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/13/2023 EV23100160 EV23100160-02
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/24/2023 4:30:00 PM
CLIENT SAMPLE ID	CC-P-102423	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**49**	0.92	10	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	0.29	2	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**160**	2.6	10	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**290**	50	1	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**16000**	50	1	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**1800**	50	1	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**3000**	50	1	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**16**	2.0	1	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**1500**	50	1	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**390000**	50	1	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	**680**	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**35**	5.0	10	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**24000**	120	250	NG/L	11/01/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/13/2023
		ALS JOB#:	EV23100160
		ALS SAMPLE#:	EV23100160-03
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/24/2023 5:20:00 PM
CLIENT SAMPLE ID	C4-P-102423	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**70**	1.8	20	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	0.29	2	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**290**	5.2	20	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**11000**	50	1	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**2100**	50	1	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**4200**	50	1	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**140**	50	1	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**44**	2.0	1	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**1100**	50	1	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**370000**	50	1	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	**610**	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**59**	5.0	10	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**28000**	120	250	NG/L	11/01/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/13/2023 EV23100160 EV23100160-04
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/25/2023 11:45:00 AM
CLIENT SAMPLE ID	CC-In-102523	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**16**	0.46	5	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	0.29	2	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**48**	1.3	5	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**300**	50	1	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**790**	50	1	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**1100**	50	1	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**77**	50	1	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**21**	2.0	1	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**960**	50	1	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**180000**	50	1	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	**260**	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**16**	2.5	5	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**20000**	120	250	NG/L	11/01/2023	CAS

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CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/13/2023 EV23100160 EV23100160-05
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/25/2023 12:15:00 PM
CLIENT SAMPLE ID	CC-Eff-102523	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**27**	0.46	5	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	0.29	2	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**77**	1.3	5	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**120**	50	1	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**6000**	50	1	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**460**	50	1	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**1200**	50	1	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**6.3**	2.0	1	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**930**	50	1	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**230000**	50	1	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	**340**	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**20**	2.5	5	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**14000**	120	250	NG/L	11/01/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/13/2023
		ALS JOB#:	EV23100160
		ALS SAMPLE#:	EV23100160-06
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/25/2023 2:10:00 PM
CLIENT SAMPLE ID	C2-Eff-102523	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**37**	0.92	10	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	0.29	2	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**150**	2.6	10	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**130**	50	1	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**870**	50	1	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**3200**	50	1	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**7.9**	2.0	1	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**1700**	50	1	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**340000**	50	1	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	**590**	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**30**	5.0	10	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**11000**	120	250	NG/L	11/01/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/13/2023
		ALS JOB#:	EV23100160
		ALS SAMPLE#:	EV23100160-07
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/25/2023 5:30:00 PM
CLIENT SAMPLE ID	C5-Eff-102523	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	9.2	100	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	14	100	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**160000**	5.20E+03	2.00E+04	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**17000000**	5000	100	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**290000**	500	10	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**13000**	500	10	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**91000**	500	10	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**4300**	20	10	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**17000**	500	10	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**340000**	500	10	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	U	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**44**	5.0	10	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**190**	2.5	5	NG/L	11/01/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/13/2023
		ALS JOB#:	EV23100160
		ALS SAMPLE#:	EV23100160-08
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/25/2023 6:15:00 PM
CLIENT SAMPLE ID	C5-P-102523	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**34**	1.8	20	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	2.9	20	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**12000**	260	1000	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**420000**	100	2	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**28000**	100	2	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**530**	100	2	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**5000**	100	2	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**220**	4.0	2	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**1600**	100	2	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**310000**	100	2	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	U	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**22**	2.5	5	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**570**	2.5	5	NG/L	11/01/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/13/2023 EV23100160 EV23100160-09
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/26/2023 1:06:00 PM
CLIENT SAMPLE ID	C6-P-102623	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**49**	3.7	40	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	5.7	40	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**68000**	2.60E+03	1.00E+04	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**620**	500	10	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**60000**	500	10	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**5200000**	500	10	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**13000**	500	10	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**13000**	20	10	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**3400**	500	10	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**340000**	500	10	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	U	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**5.5**	2.5	5	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**5.2**	0.50	1	NG/L	11/01/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/13/2023 EV23100160 EV23100160-10
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/26/2023 1:40:00 PM
CLIENT SAMPLE ID	C6-Eff-102623	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**63**	1.8	20	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	2.9	20	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**16000**	260	1000	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	U	500	10	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**52000**	500	10	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**8100000**	5000	100	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**5500**	500	10	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**14000**	20	10	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**3000**	500	10	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**230000**	500	10	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	U	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**10**	2.5	5	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**5.8**	0.50	1	NG/L	11/01/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/13/2023 EV23100160 EV23100160-11
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/26/2023 5:00:00 PM
CLIENT SAMPLE ID	C2-Eff-102623	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	**56**	2.3	25	MG/L	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	0.29	2	MG/L	10/27/2023	RAL
Sulfate	EPA-300.0	**170**	6.5	25	MG/L	10/27/2023	RAL
Aluminum (Dissolved)	EPA-200.8	**600**	50	1	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**10000**	50	1	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	**4500**	50	1	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**2000**	50	1	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**36**	2.0	1	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**1600**	50	1	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**440000**	50	1	UG/L	11/03/2023	EBS
Alkalinity as CaCO3, Total	SM2320B	**730**	2.0	1	MG/L	11/03/2023	CAS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Total Organic Carbon (TOC)	SM5310C	**35**	5.0	10	MG/L	11/06/2023	CAS
Mercury, Dissolved	E1631E	**20000**	120	250	NG/L	11/01/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/13/2023 EV23100160 EV23100160-12
CLIENT CONTACT:	Adam Griffin	DATE RECEIVED:	10/27/2023
CLIENT PROJECT:	210368	COLLECTION DATE:	10/27/2023 11:15:00 AM
CLIENT SAMPLE ID	Metafix-102723	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved)	EPA-200.8	U	50	1	UG/L	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	**11000**	50	1	UG/L	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	**5300**	50	1	UG/L	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	**1700**	2.0	1	UG/L	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	**1300**	50	1	UG/L	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	**380000**	50	1	UG/L	11/03/2023	EBS
Sulfide	EPA-376.1	U	0.050	1	MG/L	10/31/2023	CAS
Mercury, Dissolved	E1631E	**33**	0.50	1	NG/L	11/01/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/13/2023
		ALS SDG#:	EV23100160
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Adam Griffin		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MBLK-R451613 - Batch R451613 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.092	10/27/2023	RAL
Nitrate/Nitrite	EPA-300.0	U	MG/L	0.14	10/27/2023	RAL
Sulfate	EPA-300.0	U	MG/L	0.26	10/27/2023	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-110223W - Batch 203032 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved)	EPA-200.8	U	UG/L	50	11/03/2023	EBS
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	11/03/2023	EBS
Iron (Dissolved)	EPA-200.8	U	UG/L	50	11/03/2023	EBS
Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	11/03/2023	EBS
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	11/03/2023	EBS
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	11/03/2023	EBS
Sodium (Dissolved)	EPA-200.8	U	UG/L	50	11/03/2023	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R451617 - Batch R451617 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	9.0	11/03/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R451618 - Batch R451618 - Water by EPA-376.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Sulfide	EPA-376.1	U	MG/L	0.050	10/31/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R451621 - Batch R451621 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	11/06/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/13/2023
		ALS SDG#:	EV23100160
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Adam Griffin		
CLIENT PROJECT:	210368		

LABORATORY BLANK RESULTS

MBLK-R451679 - Batch R451679 - Water by E1631E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury, Dissolved	E1631E	U	NG/L	0.50	11/01/2023	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104
CLIENT CONTACT: Adam Griffin
CLIENT PROJECT: 210368

DATE: 11/13/2023
ALS SDG#: EV23100160
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R451613 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**97.0**			80	120	10/27/2023	RAL
Chloride - BSD	EPA-300.0	**95.0**	**2**		80	120	10/27/2023	RAL
Nitrate/Nitrite - BS	EPA-300.0	**97.5**			80	120	10/27/2023	RAL
Nitrate/Nitrite - BSD	EPA-300.0	**93.5**	**4**		80	120	10/27/2023	RAL
Sulfate - BS	EPA-300.0	**94.0**			80	120	10/27/2023	RAL
Sulfate - BSD	EPA-300.0	**92.0**	**2**		80	120	10/27/2023	RAL

ALS Test Batch ID: 203032 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Aluminum (Dissolved) - BS	EPA-200.8	**101**			80	120	11/03/2023	EBS
Aluminum (Dissolved) - BSD	EPA-200.8	**101**	**0**		80	120	11/03/2023	EBS
Calcium (Dissolved) - BS	EPA-200.8	**95.0**			80	120	11/03/2023	EBS
Calcium (Dissolved) - BSD	EPA-200.8	**96.0**	**1**		80	120	11/03/2023	EBS
Iron (Dissolved) - BS	EPA-200.8	**99.9**			80	120	11/03/2023	EBS
Iron (Dissolved) - BSD	EPA-200.8	**100**	**0**		80	120	11/03/2023	EBS
Magnesium (Dissolved) - BS	EPA-200.8	**99.9**			80	120	11/03/2023	EBS
Magnesium (Dissolved) - BSD	EPA-200.8	**99.5**	**0**		80	120	11/03/2023	EBS
Manganese (Dissolved) - BS	EPA-200.8	**95.5**			82.2	110	11/03/2023	EBS
Manganese (Dissolved) - BSD	EPA-200.8	**97.3**	**2**		82.2	110	11/03/2023	EBS
Potassium (Dissolved) - BS	EPA-200.8	**98.4**			80	120	11/03/2023	EBS
Potassium (Dissolved) - BSD	EPA-200.8	**101**	**2**		80	120	11/03/2023	EBS
Sodium (Dissolved) - BS	EPA-200.8	**99.4**			80	105	11/03/2023	EBS
Sodium (Dissolved) - BSD	EPA-200.8	**99.5**	**0**		80	105	11/03/2023	EBS

ALS Test Batch ID: R451617 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**103**			1	200	11/03/2023	CAS

ALS Test Batch ID: R451618 - Water by EPA-376.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfide - BS	EPA-376.1	**97.6**					10/31/2023	CAS

ALS Test Batch ID: R451621 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**98.0**			80	120	11/06/2023	CAS

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CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/13/2023
		ALS SDG#:	EV23100160
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Adam Griffin		
CLIENT PROJECT:	210368		

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY

ALS Test Batch ID: R451679 - Water by E1631E

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury, Dissolved - BS	E1631E	**101**			77	123	11/01/2023	CAS

APPROVED BY

Rob Greer
Laboratory Director

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2310016

Date 10/27/23 Page 1 Of 2

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Adam Griffin
ADDRESS: 710 2nd Ave Seattle WA
PHONE: P.O. #:
E-MAIL: agriffin@aspectconsulting.com
INVOICE TO COMPANY: accountspayable@aspectconsulting.com
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. CC-In-102423	10/24	1545	W	1
2. CC-P-102423	10/24	1630		2
3. C4-P-102423	10/24	1720		3
4. CC-In-102523	10/25	1145		4
5. CC-Eff-102523	10/25	1215		5
6. C2-Eff-102523	10/25	1410		6
7. CS-Eff-102523	10/25	1730		7
8. CS-P-102523	10/25	1815		8
9. C6-P-102623	10/26	1306		9
10. C6-Eff-102623	10/26	1340		10

ANALYSIS REQUESTED

NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs

OTHER (Specify)

LL Diss. Hg EPA 1631	Diss. Metals, Cations EPA 200.8	Comm. Anions EPA 300.0	Sulfide EPA 376.1	Total Alk. SM 2320B	TOC SM 5310C		NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
X	X	X	X	X	X		7	

SPECIAL INSTRUCTIONS: Metals – Fe, Al, Mn, Ca, K, Mg, Na field-filtered Anions – Cl, NO2+NO3, SO4

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Alexandra Franco, Aspect, 10/27/23 1115
   Received By: AFREESE, ALS, 10-27-23@1145
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: [10] Standard 5 3 2 1 SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard 3 1 SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

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8620 Holly Drive, Suite 100
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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): 1123100160

Date 10/27/23 Page 2 Of 2

PROJECT ID: 210368
REPORT TO COMPANY: Aspect
PROJECT MANAGER: Adam Griffin
ADDRESS: 710 2nd Ave Seattle WA
PHONE: P.O. #:
E-MAIL: agriffin@aspectconsulting.com
INVOICE TO COMPANY: accountspayable@aspectconsulting.com
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	OTHER (Specify): LL Dissolved Hg EPA 1631	Diss. Metals, Cations EPA 200.8	Comm. Anions EPA 300.0	Sulfide EPA 376.1	Total Alk. SM 2320B	TOC SM 5310C		NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. C2-Eff-102623	10/26	1700	W	11																										X	X	X	X	X	X		7	
2. Metafix-102723	10/27	1115	W	12																										X	X	→	X	→	→		3	
3.																														↓	↓	↓	↓	↓	↓			
4.																																						
5.																																						
6.																																						
7.																																						
8.																																						
9.																																						
10.																																						

SPECIAL INSTRUCTIONS Metals - Fe, Al, Mn, Ca, K, Mg, Na field-filtered Anions - Cl, NO2+NO3, SO4

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Alexandra Franco, Aspect, 10/27/23 1145
   Received By: AFREESE, ALS, 10-27-23 @1145
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: [10] Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: ASPECT ALS Job #: EV2310016O

Project: 210368

Received Date: 10-27-23 Received Time: 1145 By: ~~AHF~~/CC/CN

Type of shipping container: Cooler X Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Mail ___ Courier ALS X Hand Delivered ___
FedEx Express ___

	Yes	No	N/A
Were custody seals on outside of shipping container?	___	___	X
If yes, how many? ___ Where? ___			
Custody seal date: ___ Seal name: ___			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	✓	___	___
Did all bottles have labels?	✓	___	___
Did all bottle labels and tags agree with Chain of Custody?	X	___	___
Were samples received within hold time?	✓	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	✓	___	___
Was sufficient amount of sample sent for the tests indicated?	___	X*	___
Was correct preservation added to samples?	X	___	___

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles? ___ ___ X

Bubbles present in sample #: ___

Temperature of cooler upon receipt: 0.5 (ice) 1.2°C (ice) Cold Cool Ambient N/A

Explain any discrepancies: * INSUFFIENT SAMPLES PROVIDED FOR TESTS INDICATED ON LAB #12. CLIENT EMAILED TO INFORM LESS TESTS REQUIRED.

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___