REPORT FOR SECOND INTERIM ACTION

Kimberly-Clark Worldwide Site Upland Area
Everett, Washington

Prepared for: Kimberly-Clark Worldwide, Inc.

Project No. 110207-010-04 • March 3, 2021 • Final

earth + water

Aspect
CONSULTING

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Contents

List of Tables

List of Figures

List of Appendices

Acronyms

ACM	asbestos-containing materials
Aspect	Aspect Consulting, LLC
AST	aboveground storage tank
bgs	below ground surface
BBH	Boiler/Baghouse
BMP	best management practice
CDF	controlled density fill
City	City of Everett
CLP	Contract Laboratory Program
CM	crushed material
CMS	Central Maintenance Shop
CN	Clark Nickerson
COC	contaminants of concern
Corps	U.S. Army Corps of Engineers
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSO	combined sewer outfall
CWS	Clear Water Services Inc.
DA	discharge authorization
DAHP	Department of Archaeological and Historical Preservation
DMMU	Dredged Material Management Units
DNR	Washington State Department of Natural Resources
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbon
ERTS	Environmental Report Tracking System
FS	feasibility study
gpm	gallons per minute
IA	interim action
ICI	Interwest Construction Inc.

K-C	Kimberly-Clark Worldwide, Inc.
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/m^3	milligrams per cubic meter
MTCA	Washington State Model Toxics Control Act
Navy	United States Navy
NPDES	National Pollutant Discharge Elimination System
OMS	Old Machine Shop
PAH	polycyclic aromatic hydrocarbon
PAS	Performance Abatement Services
PCB	polychlorinated biphenyl
PCL	preliminary cleanup levels
PID	photoionization detector
Port	Port of Everett
POTW	publicly owned treatment works
ppm	parts per million
PQL	practical quantitation limits
PSCAA	Puget Sound Clean Air Agency
PVC	polyvinyl chloride
RI	remedial investigation
SVOC	semivolatile organic compound
SWPPP	stormwater pollution prevention plan
TEQ	toxic equivalency factor
TPH	total petroleum hydrocarbon
TSI	TSI Incorporated
UCL	upper confidence limit
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

Executive Summary

Aspect Consulting, LLC (Aspect) has prepared this Interim Action Report on behalf of Kimberly-Clark Worldwide, Inc. (K-C), to document completion of the second interim action (IA) within the Upland Area of the Kimberly-Clark Worldwide Site (Site; Figure 1). The interim action was conducted in accordance with the "Work Plan for Second Interim Action" (Work Plan; Aspect, 2019), which was included as Exhibit G to the First Amendment to Agreed Order No. ED 9476 (Order) between Washington State Department of Ecology (Ecology) and K-C. The First Amendment to the Order went through Ecology's public comment process in March–April 2019 and was then executed in November 2019. By that time, K-C had sold the property in two transactions, the wastewater treatment plant portion at the north to the City of Everett in July 2019, and the balance to the Port of Everett (Port). The interim action was limited solely to the Upland Area (bounded on the west by the mean higher high-water elevation) and did not include any work in the In-Water area of the Site as defined in Section IV of the Order.

The second IA proactively removed contaminated soils and associated groundwater identified from the Upland Area Remedial Investigation (RI) sampling and analysis, with a primary goal to control sources of leachable contaminants to groundwater while the rest of the Upland Area Model Toxics Control Act (MTCA) process proceeds.

In addition to the soil removal, inactive pipes discharging to the East Waterway were plugged to prevent them from serving as a potential pathway for discharge of Upland Area groundwater to the adjacent East Waterway. The second IA accomplished permanent removal of contaminated soil and groundwater from the Upland Area and eliminated potential conduits for groundwater discharge; as such, it does not conflict with or eliminate reasonable alternatives for the final Upland Area cleanup action in accordance with MTCA.

Concurrent with the second IA, removal and off-Site disposition of the crushed demolition debris (termed crushed material; CM) was completed as a separate project, outside of the Order, in accordance with the "Plan of Operations for Crushed Material Removal" (Plan for CM Removal; K-C, 2018). The second IA included monitoring of groundwater pH throughout the CM removal project to assess whether the action created an increase in groundwater pH that posed a risk of migration to the East Waterway.

The second IA achieved permanent removal of approximately 17,610 tons of contaminated material from the Upland Area and, to the extent practicable, met industrial-based soil PCLs for the contaminants targeted for removal. In some excavation areas, Ecology concurred that further excavation to remove additional exceedances was not practicable, as described in Section 5 of this report. In addition, approximately 2.28 million gallons of groundwater were removed from the collective excavation areas for treatment, providing additional removal of contamination (in dissolved phase) from within the source areas.

K-C completed the second IA in close consultation with Ecology and the action fulfilled the requirements of the Work Plan. Once this report is finalized and approved by Ecology, K-C requests from Ecology written confirmation that all requirements for the second IA have been fulfilled and completed.

1 Introduction

Aspect Consulting, LLC (Aspect) has prepared this Interim Action Report on behalf of Kimberly-Clark Worldwide, Inc. (K-C), to document completion of the second interim action (IA) within the Upland Area of the Kimberly-Clark Worldwide Site (Site; Figure 1). The interim action was conducted in accordance with the "Work Plan for Second Interim Action" (Work Plan; Aspect, 2019), which was included as Exhibit G to the First Amendment to Agreed Order No. ED 9476 (Order) between Washington State Department of Ecology (Ecology) and K-C. The First Amendment to the Order went through Ecology's public comment process in March–April 2019 and was then executed in November 2019. By that time, K-C had sold the property in two transactions, the wastewater treatment plant portion at the north to the City of Everett in July 2019, and the balance to the Port of Everett (Port) (see Figure 3). The interim action was limited solely to the Upland Area (bounded on the west by the mean higher high-water elevation) and did not include any work in the In-Water area of the Site as defined in Section IV of the Order.

The second IA proactively removed contaminated soils and associated groundwater identified from the Upland Area Remedial Investigation (RI) sampling and analysis, with a primary goal to control sources of leachable contaminants to groundwater while the rest of the Upland Area Model Toxics Control Act (MTCA) process proceeds. In addition to the soil excavations, inactive pipes discharging to the East Waterway were plugged to prevent them from serving as a potential pathway for discharge of Upland Area groundwater to the adjacent East Waterway. The second IA accomplished permanent removal of contaminated soil and groundwater from the Upland Area, and eliminated potential conduits for groundwater discharge; as such, it does not conflict with or eliminate reasonable alternatives for the final Upland Area cleanup action in accordance with Washington Administrative Code (WAC) 173-340-430(3)(b).

Concurrent with the second IA, removal and off-Site disposition of the crushed demolition debris (termed crushed material; CM) was completed as a separate project, outside of the Order, in accordance with the "Plan of Operations for Crushed Material Removal" (Plan for CM Removal; K-C, 2018) and under jurisdiction of the local solid waste authority, Snohomish Health District. The second IA included monitoring of groundwater pH throughout the CM removal project to assess whether the action created an increase in groundwater pH that posed a risk of migration to the East Waterway. The monitoring data document that there was no migration of high-pH groundwater generated from the CM removal activities. Appendix F provides a tabulation and discussion of the groundwater pH monitoring data collected.

The following sections of this report are as follows:

- **Section 2—Interim Action Overview** describes the contractors performing the second IA work under contract to K-C, and the overall schedule for completing the work.

- **Section 3—Plugging of Shoreline Pipes** describes the activities used to clean and plug 21 pipes formerly open at the East Waterway shoreline, and clean and preserve one operating stormwater pipe.
- **Section 4—General Approach for Soil Removal** describes the generalized soil removal activities including the areas excavated, soil cleanup levels applied, erosion, sediment, and dust controls, dewatering and water management, materials excavation and handling, performance monitoring, archaeological monitoring in selected excavations, off-Site disposition of excavated materials, and excavation backfilling.
- **Section 5—Interim Action Soil Cleanup by Area** describes the removal of contaminated material completed for each of the soil cleanup areas included in the second IA.
- **Section 6—Conclusions** briefly summarizes the second IA results relative to the Work Plan requirements.
- **Section 7—References** lists the documents cited in this report.

This report also includes the following appendices:

- Appendices A and B include photographs from the pipe plugging and soil removal activities, respectively.
- Appendix C includes data quality assurance validation reports for excavation soil samples analytical data collected during this interim action.
- Appendix D presents an archaeological monitoring report prepared by Perteet Inc.
- Appendix E provides statistical calculations that assisted with decision making for terminating excavation in selected soil cleanup areas.
- Appendix F describes and tabulates the groundwater pH monitoring data collected during the CM removal project as required by the Work Plan.
- Appendix G includes a tabulation of dust monitoring data, observations, and dust control measures implemented during the combined interim action and CM removal projects.
- Appendix H provides records documenting quantities of contaminated soils landfilled during this interim action.
- Appendix I provides documentation from City of Everett's decommissioning of their PS04 outfall.

2 Interim Action Overview

Through a competitive bid process, K-C selected Interwest Construction Inc. (ICI) of Burlington, Washington, as the construction Contractor for the second IA. ICI was also selected to conduct removal of CM from the Site, a project conducted outside of the Order and under jurisdiction of Snohomish Health District. K-C also selected Clear Water Services Inc. (CWS) to receive water generated from dewatering of excavations to remove contaminated soil (second IA) and CM (CM removal project) present beneath groundwater, pretreat the water on Site, and discharge it to City of Everett's (City) combined sewer.

ICI and CWS began mobilization to the Site in February 2020, including mobilizing equipment, establishing a wheel wash and other erosion-control best management practices (BMPs), and beginning to install an on-Site truck scale. Also prior to start of construction, Aspect directed a licensed well driller's decommissioning of all monitoring wells within footprints of the second IA soil cleanup areas. Start of the IA activities was then delayed for approximately 2 months due to the state's restrictions addressing the COVID-19 pandemic. Once the state allowed essential construction work, including environmental cleanup, to resume, and ICI put in place a COVID-19 exposure prevention plan for all on-Site workers, second IA work began in earnest on May 6, 2020. The pipe plugging activities were performed primarily between May 6 and June 15, 2020, with one final pipe video-survey and catch basin cleanout on October 29, 2020. The soil removal activities were completed primarily between May 28 and November 4, 2020. Final off-Site transport of excavated material and backfill and compaction of interim action excavations was substantively complete by November 12, 2020.

Aspect was the engineering firm responsible for overseeing, monitoring, and reporting the second IA activities on behalf of K-C (termed the Engineer in this report). Aspect consulted with Ecology throughout the duration of the second IA activities, including weekly teleconferences with a broad stakeholder group, including Ecology, the Port, Snohomish Health District, K-C, and the contractors ICI and CWS.

3 Plugging Shoreline Pipes

Plugging open pipes at the shoreline was conducted between May 6 and June 15, 2020, in general accordance with procedures outlined in Appendix C to the Work Plan (Aspect, 2019). Video survey of Pipe A, which is to be reused and thus not plugged, was completed on October 29, 2020, following placement and grading of backfill in that general area. The plugging approach was modified for some pipes with Ecology concurrence, as described in the following subsections. Appendix C to the Work Plan included plugging of the City's combined sewer outfall (CSO) pipe that traversed the Upland Area and discharged to the East Waterway via outfall PS04 beneath K-C's pier in the southwest portion of the Site. The City decommissioned their CSO line in September 2019. The City's documentation of that decommissioning is provided in Appendix I.

3.1 General Procedures

In accordance with Appendix C to the Work Plan, all the cutting and filling of pipes was completed by excavation in the upland, east of the bulkhead with an emphasis on avoiding impacts to the shoreline from equipment and materials handling, and avoiding impacts to the East Waterway. The general approach involved excavating to expose, breaching (cutting), and then filling with controlled density fill (CDF) the pipe adjacent to the bulkhead and also 75 feet inland, if present. In some cases, the entire pipe was removed to tens of feet inland instead of plugging it 75 feet inland. Segments of pipe left in place, within 75 feet of the bulkhead, were video surveyed using a downhole motorized camera, and then accessible accumulated solids removed by vacuum methods from the breach location(s). Solids removed from the interior of pipes and segments of pipe removed were disposed of at a Subtitle D landfill.

For excavations extending beneath groundwater, temporary dewatering was conducted using sumps, and temporary shoring was used in the excavation for Pipe K to safely conduct the work. Two sets of tie backs, oriented north-south and east-west, for the bulkhead were observed in the Pipe K excavation, but they were not damaged during the pipe excavation and plugging activities. All water extracted during dewatering was conveyed to the on-Site water treatment system for treatment and discharge to the City combined sewer in accordance with the City's discharge authorization (DA) issued to K-C for the project (discussed in Section 4.4). Throughout the upland excavations, erosion and spill prevention control BMPs were implemented to ensure no discharges to the East Waterway.

During excavation to expose pipes, field screening for evidence of contamination was conducted using visual/olfactory methods and a photoionization detector (PID). No evidence of contaminated soils was observed, except during removal of an abandoned fuel-oil pipe encountered adjacent to the one of the pipes being plugged, as described in Section 3.3. In addition, no coarse granular materials representing pipe bedding were observed in excavation of any of the pipes.

The specific pipe-plugging activities conducted for the individual shoreline pipes are described below. Figure 2 depicts the locations of the pipes. Photographs from the pipe-plugging activities are included in Appendix A.

3.2 Pipe A: Active Storm Drain

Pipe A is an active storm drain that drains the roof and the western side of the Warehouse structure in the southeastern corner of the Site, which drains to the East Waterway (Figure 2). At the time of the second IA, the storm drain is planned to remain operational when the Warehouse is repurposed, so the infrastructure was maintained and only cleaned, in accordance with the Work Plan.

Three catch basins (designated A, B, and C from south to north) and a manhole (designated D) north of the catch basins all connect to the common storm drain. Negligible solids were observed within the pipes, but the small volumes of solids accumulated in each catch basin were removed.

The pipe segment between manhole D and the catch basins was video surveyed from manhole D for a distance of approximately 82 feet south where an eastward bend in the pipe[1] prevented the video crawler from proceeding further. Minor accumulations of sediment were observed in the pipe at two pipe joints (at 55 and 63 feet south of manhole D). The pipe segment east of manhole D, extending under the Warehouse structure, was video surveyed for a distance of approximately 70 feet, with only minor sediment or encrustation observed on the pipe bottom. The pipe segment west of manhole D was also video-surveyed for a distance of approximately 155 feet, at which point, the video crawler could not proceed further west due to reported "encrustation blockage,"; although, the distance also approximately corresponds to a northward bend in the pipe.

3.3 Pipes B1, B2, B3: Catch Basins with 8-Inch Steel Pipes

Pipes B1, B2, and B3 were the eastern, central, and western steel catch basins, respectively, each draining to 8-inch steel pipes.

The pipe from B1 joined the pipe from B2, which runs west to join Pipe A. Both catch basins, the pipe joining B1 and B2, and approximately 6 feet of pipe downstream of the B2 catch basin were fully removed. The remaining downstream portion of the B2 pipe was then filled with CDF to approximately five times its diameter.

The pipe from B3 was not connected to B1 or B2. The B3 catch basin and its pipe were removed up to the ecology blocks located approximately 15 feet inland from shoreline. At that location, the remaining B3 pipe was plugged with CDF to approximately five times its diameter.

The excavated material during pipe removal included surficial CM around the B2 catch basin (stockpiled for later removal) underlain by dredge sand with no odor, staining, or PID readings.

A fuel-oil pipeline encountered during removal of the B1 catch basin was removed with sampling of residual soils, consistent with the Work Plan procedures and in consultation with Ecology, as detailed in Section 5.12.

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[1] Between catch basins A and B.

3.4 Pipe C: 36-Inch Wood Stave (Outfall 002)

The Contractor, ICI, excavated and exposed Pipe C at Stations 10+98 and downstream 11+31, as identified in Appendix C to the Work Plan. A manhole was present adjacent to Station 10+98, which allowed visual observation of the pipe interior. ICI breached the top of the 36-inch wood stave pipe upstream of Station 10+98 and downstream of Station 11+31 and constructed a sandbag berm at each location to contain CDF placed in the approximately 33-foot length of pipe between them. The pipe was video surveyed, and then accessible accumulated solids were removed by vactor. ICI then poured stiff CDF on the sandbag berms to seal the ends, and the next day poured a CDF plug to completely fill the pipe between the berms. CDF was also placed surrounding the two access points to create a seal around the pipe exterior, although no pipe bedding was observed. The soil excavated to accomplish the plugging was dredge sand with no odor, staining, or PID readings, and no CM was observed.

3.5 Pipe D: 4-Inch Steel beneath Pier

A trench was initially excavated to a depth of 5 feet below ground surface (bgs) along the east side of the ecology block wall adjacent to the bulkhead where Pipe D is present beneath the pier. No sign of pipe or bedding material was observed in the excavation. Inspection of the 4-inch steel Pipe D underneath the pier demonstrated it was plugged approximately 18 inches east of the bulkhead, at a depth of about 4 feet bgs. The water table is more than 8 feet bgs in this area; therefore, no further action was warranted for Pipe D. Soil excavated from the trench was dredge sand with no odors, staining, or PID readings, and no CM was observed.

3.6 Pipe E: 8-Inch Steel beneath Pier

A trench was initially excavated to a depth of 5 feet bgs along the east side of the ecology block wall adjacent to the bulkhead where Pipe E is present beneath the pier. In the trench, a block of CDF was present just below surface that extends 12 feet east, where the 8-inch pipe was again observed 3 feet bgs. The Contractor cut the pipe at 7 feet from bulkhead and placed a CDF plug to five times its diameter within the remaining downstream end of it. ICI exposed the eastern portion of the pipe to a point approximately 45 feet east of the bulkhead where it forms a "T," running both north and south (part of the mill's historical fire suppression system). The pipe was fully removed from the 12-foot edge of the preexisting CDF plug to points 6 feet north and 6 feet south of the T, where the north and south open pipe ends were plugged to five times their diameters with CDF. The steel water pipe removed contained negligible solids and was transported to a permitted metals recycling facility (Schnitzer Steel in Woodinville) for recycling. The excavated material at all locations was dredge sand with no odors, staining, or PID readings observed. No CM was observed.

3.7 Pipe F: 54-Inch Wood Stave beneath Pier (Outfall 003)

The 54-inch-diameter wood stave pipe was initially exposed at a depth of approximately 7 feet bgs at the bulkhead, where it was encased in concrete. No bedding material was visible surrounding pipe. A void was present around the pipe beneath the bulkhead wall. ICI placed a woven fabric and 2- to 4-inch crushed rock on the inland side of the fabric to stabilize the void area beneath the bulkhead. Subsequently, ICI excavated and exposed the pipe 75 feet east of bulkhead at a depth of about 8 feet bgs (ground surface approximately 1.5 feet higher than at bulkhead). The pipe at the 75-foot location was similarly encased in concrete, with no bedding material visible, as observed at the bulkhead. The soil excavated from both locations was dredge fill with no apparent odor, staining, or PID readings, and no CM was observed at either location.

Approximately 15 feet east of bulkhead, ICI cut through 16-inch-thick concrete to expose and breach the wood stave pipe. A pneumatic plug was installed and inflated at the bulkhead downstream of the breach. At the 75-foot inland location, ICI cut through 8 inches of concrete surrounding the wood pipe to expose and breach it. A sandbag wall was installed adjacent to the pneumatic plug (at bulkhead) and at the 75-feet breach location, and then CDF was placed over two days to completely fill the pipe from the bulkhead to 75 feet.

Following plugging, a trickle of water remained discharging from the pipe outfall structure under the pier. Given the robust plug installed, the discharge appears to be primarily if not entirely tide water entering the pipe downstream of the plug. Ecology concurred that the plugging of Pipe F was sufficient, and no further action was needed.

3.8 Pipe G: 4-Inch Steel beneath Pier

The 4-inch steel Pipe G was present approximately 5 feet bgs and was fully removed from the east side of the ecology block wall to where it ended, approximately 78 feet east of the bulkhead. No evidence of an eastern extension of the pipe was observed. The remaining segment of pipe west of the ecology block wall was plugged to five times its diameter with CDF at the ecology blocks. The soil excavated during pipe removal was dredge sand with no apparent odor, staining, or PID reading. No CM was observed.

3.9 Pipe H: 8-Inch PVC[2] beneath Pier

Immediately east of the ecology block wall, the former catch basin for Pipe H was excavated and exposed. The 8-inch PVC pipe extending west from the catch basin had been previously plugged with a thermos cap, and no other pipes were observed in the catch basin. The catch basin was completely removed, and the resulting void was filled with CDF to fully cover Pipe H’s eastern end (with thermos plug). The soil excavated during pipe removal was dredge sand with no apparent odor, staining, or PID reading. No CM was observed.

3.10 Pipe J: 4-Inch Steel beneath Pier

A trench was initially excavated to a depth of 5 feet bgs along the east side of the ecology block wall adjacent to the bulkhead where Pipe J is present beneath the pier. No sign of pipe or bedding material was observed in the excavation. Inspection of the 4-inch steel pipe underneath the pier demonstrated it was plugged approximately 16 inches east of the bulkhead, at a depth of about 4 feet bgs. The water table is more than 8 feet bgs in this area; therefore, no further action was warranted for Pipe J. Material excavated from the

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[2] PVC = Polyvinyl chloride.

trench was gravelly sand with a thin asphalt layer at 1 foot bgs and 1 foot of crushed rock, with no odors, staining, or PID readings. No CM was observed.

3.11 Pipe K: 15-Inch Concrete beneath Pier

Pipe K is a 15-inch concrete pipe, with a steel liner at its mouth, that is open beneath the pier. The Port requested that this pipe be plugged at the bulkhead using a removable rubber plug, not CDF, to make it available for their potential reuse in their future terminal redevelopment project.

While excavation was occurring east of the bulkhead, ICI installed a temporary pneumatic plug in the pipe end under the pier to prevent potential discharges to the Waterway. The 15-inch concrete pipe was exposed approximately 12 feet inland of the bulkhead at a depth of about 11 feet bgs. At that location, Pipe K was below groundwater that is tidally influenced, which limited the work window duration for plugging it. ICI used temporary shoring to allow work on the pipe and dewatering from a temporary sump to maintain a dry excavation for work at low tide stages. Even with dewatering, subgrade soils in the excavation adjacent to the bulkhead were quite soft. Two sets of bulkhead tie backs, one oriented east-west and another oriented north-south were encountered, but not damaged, while excavating and plugging the pipe.

Pipe K was cut cleanly in the excavation approximately 12 feet east of the bulkhead. The visible portion of the concrete pipe was observed to be in decent condition. Accumulated solids (including a piece of driftwood) were removed from the accessible segment of pipe by vactor. Given the rising tide, the removable plug (rubber and PVC) was attached to the cut end and then secured with an ecology block in the excavation to resist tidal pressure. David Evans and Associates' survey crew surveyed the cut pipe end, on behalf of the Port, for location in the future.

The Contractor then fully removed the pipe from the installed cap to a preexisting CDF mass present in the pipe path at approximately 70 feet inland from the bulkhead. The segment of removed pipe and solids within it were disposed of at a Subtitle D landfill. The excavation was backfilled and compacted, and a vertical-standing 2-by-4 board extending just above finish grade was placed in the backfill at the pipe end location. The material excavated to plug and remove Pipe K was dredge sand with no odor, staining, or PID readings. No CM was observed.

Video of the downstream segment of pipe revealed an apparent offset in the concrete pipe within or next to the bulkhead, and a small trickle of water draining out. There was no visible indication of water coming through top or sides of pipe, and it may have been infiltrating through the bottom of the pipe

Following the plugging, a small trickle of water (less than 1 gallon per minute [gpm]) remained discharging from the pipe under the pier at lower low tide stages. The discharge appeared to be primarily if not entirely tide water entering the pipe downstream of the plug. Ecology concurred that the pipe plugging was sufficient, and no further action was needed for Pipe K.

3.12 Pipe L: 8-Inch PVC beneath Pier

A trench was initially excavated to a depth of 5 feet bgs along the east side of the ecology block wall adjacent to the bulkhead where Pipe L is present beneath the pier. The excavation encountered a broken concrete catch basin and, immediately west of it, a broken 8-inch PVC pipe with preexisting thermos plug approximately 2 feet bgs. No pipe was observed east of the catch basin. The catch basin and pipe fragments were completely removed, and the resulting void was filled with CDF to fully cover Pipe L's eastern end (with thermos plug). The excavated material was dredge sand with fragments of the former concrete catch basin with no apparent odor, staining, or PID readings. No CM was observed.

3.13 Pipe M: 12-Inch PVC/18-Inch Wood Stave

Pipe M is a 12-inch PVC pipe that emerges from the rip rap shoreline north of the pier and is capped on the intertidal beach west of the rip rap. The Work Plan approach for Pipe M was to plug it with a removable rubber cap 75 feet inland from the bulkhead to leave the pipe available for potential reuse as part of redevelopment.

ICI initially excavated 75 feet east of the bulkhead with the intent to install a removable rubber cap, as per the Work Plan. At that location, Pipe M was an 18-inch-diameter wood stave pipe encased in concrete at approximately 6 feet bgs. When the pipe was breached at that location, it was observed to be largely filled with sediment. Approximately 10 feet inland from the bulkhead, exploratory excavation exposed a 9-foot deep concrete vault within which the wood stave pipe enters from the east and exits to the west. The junction of the PVC pipe on the beach to the wood pipe at the vault was not observed and is inferred to be within the shoreline rip rap.

ICI conducted a video survey and vacuumed accumulated solids from the accessible lengths of the wood pipe 5 to 6 feet upstream and downstream of the vault. The Contractor then constructed plugs in the wood pipe upstream and downstream of the vault using fast-setting ("jet set") concrete. Sandbags were then placed in the bottom of the vault to wall off the northern part of vault where the inlet/outlet pipe ends exist, thus allowing CDF placement there to cover the pipe ends without filling the entire bottom of the vault. CDF was then placed in the northern part of vault bottom to cover the inlet/outlet pipe ends. Once the CDF was set, the rest of vault was backfilled to grade with Parcel O dredge sand, instead of CDF, to allow the Port to access the pipe at the vault location for potential future rehabilitation and reuse, as agreed to with Ecology and the Port. Then, ICI fully removed the rest of Pipe M to 75 feet inland and plugged its upstream end to five times its diameter with CDF. The wood pipe, concrete, and associated sediment removed were disposed of at a Subtitle D landfill. In total, approximately 109 tons of material generated during removal of Pipes K and M were disposed of at the Subtitle D landfill. The capped PVC pipe on the beach was not touched during the plugging work.

Material excavated to expose and remove Pipe M was primarily dredge sand with no apparent odor, staining, or PID readings. A thin layer of apparent CM material was present adjacent to the vault, which was left for removal as part of the CM removal project.

3.14 Small-Diameter Pipes at Former Navy Wooden Bulkhead (N, P, and Q Series)

Eight pipes, constructed of both steel and PVC and ranging in diameter from 1 to 8 inches, protrude from the west side of the former Naval Reserve Area wooden bulkhead along the northern portion of the shoreline (Pipes N, P, Q, Q1, Q2, Q3, Q4, and Q5; Figure 2). A trench was excavated along the length of wooden bulkhead approximately 7 feet inland, due to structural stability/safety concerns of attempting to work closer to the bulkhead. The trench was excavated to a depth of 5 to 6 feet bgs, which was below the depths of all pipes visible extending from the bulkhead. No pipes were encountered. No visible odor, staining, or PID readings were noted in excavated material.

This area was excavated by the United States Navy (Navy) in 1998 for removal of two underground storage tanks (USTs) and associated infrastructure (Foster Wheeler, 1998), and again by Aspect in 2014 for removal of residual contaminated soil (NRU and NRS excavations described in Aspect, 2015). During Aspect's 2014 excavations, a 12-inch clay pipe was observed on east side of the southern (NRS) excavation, but no pipes were observed on the west sides of the two excavations or extending across them. The information indicates that the inland portions of the pipes visible on the west side of the wooden bulkhead were removed by the Navy at the time of their UST-system removal and decommissioning of the former Naval Reserve facility. Ecology concurred that no further action was warranted for these pipes.

4 General Approach for Soil Removal

This section describes the generalized activities involved with removal of contaminated soil, including erosion, sediment, and dust controls, dewatering and water management, materials excavation and handling, stockpile management, off-Site disposition of excavated materials, and excavation backfilling.

4.1 Interim Action Soil Cleanup Areas

The Work Plan described the planned removal of contaminated soil from nine areas listed alphabetically below (Figure 3):

1. BA-MW-7 area
2. Boiler/Baghouse (BBH) area
3. Central Maintenance Shop (CMS) area
4. Clark Nickerson (CN) area
5. Hydraulic Barker area
6. Log Pond Chip Conveyor area
7. Old Machine Shop (OMS) area
8. PM-B-6 area
9. REC5-MW-1 area

During completion of the concurrent second IA and CM removal projects, three additional areas were identified and addressed following the approach and methodology described in the Work Plan and in consultation with Ecology. The added areas are as follows (Figure 3):

1. Fuel-Oil Line west of the Warehouse
2. GFB12 area
3. Digesters Trench area

Each area has different contaminants of concern (COCs) and different dimensions as described in more detail in Section 5.

4.2 Soil Cleanup Levels for Interim Action

The soil cleanup levels for the second IA are consistent with soil preliminary cleanup levels (PCLs) developed in the draft RI for the Upland Area (Aspect, 2016a), but updated based on more recent changes to applicable regulatory criteria. The soil PCLs are protective of direct human contact under industrial use and leaching to groundwater, with adjustments for Puget Sound-region natural background concentrations and analytical practical quantitation limits (PQL) in accordance with MTCA. For the COCs targeted in the second IA, soil concentrations protective of leaching are more stringent than those based on industrial direct contact, and the PCLs are therefore based on the leaching pathway. In accordance with MTCA, the leaching-based soil PCLs are different for soils above the water table (unsaturated soil) versus those below the water table (saturated soil) except where they default to natural background or the PQL. Table 1 presents the soil PCLs for the COCs targeted for removal in the second IA. The PCLs are also included in the verification soil sample data tables for each excavation area.

4.3 Erosion, Sediment, and Dust Controls

ICI implemented construction stormwater BMPs described in the project-specific stormwater pollution prevention plan (SWPPP included as Appendix D to the Work Plan) during second IA earthwork activities, including soil excavation (for contaminated soil removal and exposing shoreline pipes to plug), stockpiling, loading, and transportation off-Site. This included installation and operation of a wheel wash for trucks leaving the Site and covering loads of contaminated material leaving the Site. Truck traffic for the project complied with ICI's traffic control plan that was approved by the City prior to the start of project earthwork. When contaminated materials were temporarily stockpiled on the Site pending loading, the stockpiles were underlain and covered with visqueen when not in use.

4.3.1 Dust Controls and Monitoring

ICI used water trucks on the Site, often continuously throughout the workday, for dust suppression, largely focused on the on-Site travel ways. The dust control measures were successful in preventing off-Site migration of visible fugitive dust.

From late May through late October 2020, Aspect conducted quantitative monitoring for airborne particulate (dust) of diameter 10 microns and smaller in size (PM_{10}) along the east side of the Site, in accordance with the March 2020 dust monitoring plan submitted to Ecology and Puget Sound Clean Air Agency (PSCAA; Aspect, 2020b). The dust monitoring was conducted[3] on days when dust control measures were conducted or it was otherwise not raining, foggy, or smoky due to wildfires. Table G-1 in Appendix G presents Aspect's daily dust monitoring data and, starting July 22, visual observations of dust and a brief description of ICI's dust-control measures implemented.

Although the dust monitor was intended to measure only dust generated by on-Site earthwork activities, the instrument recorded both high humidity[4] and smoke as particulate matter, which prevented accurate measurement of dust generated by Site activities on some days. As noted in Table G-1, for more than a week in mid-September, the Site was enveloped in smoke from regional wildfires that created an air quality index exceeding 200 ("very unhealthy") on several of those days. The smoke-derived particulate matter was evident by an order-of-magnitude increase in recorded daily-

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[3] Using a TSI Inc. Dusttrak™ II model 8530 desktop aerosol monitor with data logging capabilities and PM-10 inlet, mounted on a tripod roughly 4 feet above grade.

[4] High humidity and especially fog can cause high bias in the dust monitor's readings due to "water-uptake and resulting hygroscopic growth of the aerosol particles, causing them to scatter more light and generate higher apparent mass concentration readings by the photometric instrument " (TSI Inc., 2014).

average PM_{10} concentrations on September 8, 9, and 10. Because dust could not be distinguished from smoke in the readings, the dust monitoring was suspended for the rest of the wildfire smoke event (through September 18). High-biased readings were also recorded from October 1 through 6, when the Site was enveloped in fog for much or all of the workday. Figure G1 in Appendix G depicts the daily average PM_{10} concentrations measured inside the eastern Site boundary over the project duration. The effects of wildfire smoke, fog, and outside sources of airborne particulate (e.g., locomotive idling just outside the eastern fence line all day on July 27) are annotated for reference on the figure.

Over the 5-month period of monitoring, excluding days with substantial smoke or fog on the Site, the highest daily-average PM_{10} concentration was 0.029 milligrams per cubic meter (mg/m^3), less than one-fifth of the state Ambient Air Quality Standard of 0.15 mg/m^3 (WAC 173-476-100).[5] Consistent with the quantitative measurements, Aspect's visual observations confirmed a lack of visible dust along the eastern property boundary throughout the project (Table G-1).

4.4 Excavation Dewatering and Management of Water

Throughout the second IA, ICI conducted excavation dewatering using sumps adjacent to and/or within the excavation, as needed, to facilitate excavation/handling of soil and Aspect's excavation verification soil sampling (performance monitoring). In accordance with the Work Plan, water produced during dewatering was treated on the Site, using a temporary water treatment system, prior to discharge of the treated water to the City's combined sewer, in accordance with Discharge Authorization (DA) No. M-33-2020 dated February 5, 2020. The DA covered discharge of dewatering water generated during the second IA and the concurrent CM removal project, which occurred from early June through early December 2020. The water treatment system was staged on asphalt pavement by the Site's north gate. The water pretreated on the Site was conveyed via the combined sewer system to the City's publicly owned treatment works (POTW) for additional treatment and then discharge in accordance with the City's National Pollutant Discharge Elimination system (NPDES) permit for the POTW.

CWS' temporary water treatment system consisted of a 21,000-gallon chambered weir tank providing removal of floating free-phase petroleum product, if present, and settling of settleable solids. Water from the first weir tank was pumped to three additional 21,000-gallon chitosan-enhanced sand filter tanks providing additional removal of suspended solids and dissolved metals prior to discharge to an on-Site sewer manhole as specified by the City. The treatment system also included the ability to provide pH neutralization. Water discharged to sewer was further treated in the City's POTW.

In accordance with the DA, samples of treated water were collected monthly throughout the period of water discharge. The sampling data confirm that there were no exceedances of the DA effluent criteria over the 7 months of discharge. As required by the DA, K-C provided the City the quantity and analytical data for water discharged to sewer under the

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[5] The standard is based on a 24-hour average and occurring no more than one time per year on a 3-year average.

DA. Approximately 2.28 million gallons of water were treated and discharged to the City POTW over the duration of the second IA and CM removal projects, the vast majority of which was generated by dewatering of the second IA excavations.

4.4.1 Water Treatment System Overflow Event

On the morning of June 10, 2020, an estimated 400 to 500 gallons of untreated water overflowed from the treatment system's first weir tank as a result of a system programming error with respect to the weir tank's high tank alarm level. The untreated water was groundwater produced by dewatering of the Hydraulic Barker area soil excavation (described in Section 5.7). Dewatering was ceased and CWS was immediately notified. CWS promptly rectified their system and began discharging treated water to the sanitary sewer to create capacity in their system.

The water overflowed onto the surrounding asphalt pavement and went across the northern property line into a catch basin on the City's north-adjacent property. Water from the City's catch basin flowed to a pump vault several feet to the west, from where it was pumped to the eastern clarifier, all on City property. No water was discharged from the clarifier to sewer during the overflow event. Upon observing water entering the City system, K-C immediately notified City Public Works and a City technician came to the Site and turned off the pump in the vault.

At K-C direction, ICI pumped water from the vault and the clarifier back to CWS' weir tank. Prior to doing so, Aspect collected samples of water from the (1) north chamber of the weir tank from where the overflow occurred, (2) the vault into which the water drained, and (3) the eastern clarifier into which water was pumped from the vault. The water samples were analyzed for diesel- and oil-range total petroleum hydrocarbons (TPH), total metals (arsenic, copper, lead, mercury, nickel, zinc), polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs)—constituents potentially present in groundwater from the Hydraulic Barker excavation that was the source of the overflow water. Concentrations in each of the three water samples were less than the effluent standards in the City's DA for the project.

That same day, Aspect notified, via email, Ecology's Site manager regarding the overflow event and actions taken, who in turn notified Ecology's stormwater inspector/compliance specialist assigned to the Site. CWS provided K-C with an incident report providing their analysis for the cause of the overflow and actions they had undertaken to ensure it would not occur again. Subsequently, Aspect transmitted the incident report and water sample analytical results to Ecology on June 15, 2020. As requested by Ecology, on June 17, 2020, Aspect reported the overflow event to Ecology's online Environmental Report Tracking System, and it was assigned tracking number ERTS 698835.

The overflow water was contained within the City's combined sewer infrastructure, and the vast majority of it was ultimately recovered, treated, and discharged to the City combined sewer. The overflow did not discharge to the City's stormwater system, nor did it discharge to waters of the state.

4.5 Materials Excavation and Management

The second IA involved excavation and management of the following material types, listed from ground surface down:

- Surficial veneer of CM, which was removed from the Site as a separate non-MTCA project with the Snohomish Health District as the lead agency
- Imported aggregate that complied with PCLs when it was previously placed as excavation backfill during the 2013–2014 IA (termed overburden)
- Contaminated materials (soil mixed with debris)

Each material type did not occur in each excavation area. The following subsections describe the handling and disposition of each material type.

4.5.1 Crushed Material

Within each second IA excavation area where surficial CM was present (all except the OMS and BA-MW-7 areas), the CM was removed and temporarily stockpiled adjacent to the excavation for subsequent loading and transport to a preapproved recycling facility in accordance with the Plan of Operations for CM Removal (K-C, 2018) overseen by the Snohomish Health District. Once the bulk of CM was removed from an IA excavation area, the residual CM that could not be practically removed without mixing with underlying soil was excavated and disposed of as contaminated material.

4.5.2 Overburden (Backfill from Prior Excavation)

Overburden, consisting of clean sand and gravel aggregate, occurred in portions of the CMS, BBH, and CN excavation areas. The overburden sand was visually distinct from the darker-colored dredge fill soils and could generally be visually distinguished in the excavations. The overburden was previously determined to meet PCLs and be geotechnically suitable for use as backfill (Aspect, 2015). Therefore, the Work Plan intent was to excavate it to the extent it could be cleanly segregated from underlying contaminated soil, temporarily stockpile it for verification chemical testing, and, if meeting PCLs, reuse it as backfill in the new excavation.

Per the Work Plan, three discrete samples of soil were collected and analyzed for each 100 cubic yards of overburden that was removed and stockpiled for reuse.

Approximately 12 loose cubic yards of overburden were excavated, stockpiled, confirmed by sampling and analysis as acceptable for reuse[6], and then reused as backfill in the western CN excavation. Table 3 presents the analytical results for samples of the overburden reused in the CN excavation area.

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[6] One of three samples had a nickel concentration of 48.3 milligram per kilogram (mg/kg) relative to a 48 mg/kg PCL that is based on natural background soil quality. The nickel concentrations in the other two samples were very similar (46.5 and 47.3 mg/kg; Table 3) suggesting the concentrations are attributable to the sand's natural mineral content. Based on the collective data, the overburden was considered to be acceptable for reuse.

In the CMS and BBH excavations, the high water table and loose soil conditions greatly complicated segregation of overburden from adjacent and underlying contaminated soils; therefore, the overburden from both areas was removed and disposed of as contaminated material.

4.5.3 Contaminated Materials

The second IA cleanup involved conventional excavation and off-Site disposal of contaminated materials. The initial lateral and vertical extents of the excavation base (bottom) were defined in the Work Plan, based on the extents of contaminated soil estimated from prior data. Aspect staked in the field the predefined lateral extents of each excavation base, and ICI excavated to the predefined lateral and vertical limits prior to Aspect starting excavation performance monitoring. ICI sloped the excavation sidewalls to the minimum extent needed to accomplish excavation to the depths required. The dewatering was generally successful in allowing excavation of unsaturated materials. However, in some locations, saturated soil was temporarily placed within the confines of the excavation, on sloped plastic sheeting, to allow drainage of water back into the excavation prior to loading that material into trucks. To the extent practical, contaminated material that had been drained to an unsaturated condition was direct loaded into waiting intermodal containers or dump trucks for transport to the landfill, rather than stockpiled temporarily on-Site. When contaminated materials had to be temporarily stockpiled outside of the excavation footprint, the stockpiles were underlain and covered with visqueen when not in use, in accordance with the Work Plan.

At the predefined limits of each excavation, the Engineer made a determination of whether or not the soils being excavated were likely to meet PCLs, or not, based on field screening, including visual and olfactory observations, petroleum sheen tests, and use of a PID. However, field screening is not effective in determining low-level concentrations of metals, which were COCs targeted for removal in the majority of the excavation areas. Section 4.6 presents the protocols for performance monitoring (verification soil sampling) in the excavations and expansion of the excavation (overexcavation) based on the verification sample results.

4.6 Performance Monitoring and Overexcavation

Throughout the second IA, Aspect collected verification soil samples for chemical analysis from the sidewalls and base of each excavation to assess compliance with PCLs. Excavation bottom verification samples were collected, generally using the excavator bucket, on a systematic 20-foot grid (i.e., one sample per 20-foot by 20-foot square), with a minimum of three samples collected from the base of each excavation. However, in the very large CMS excavation area, Ecology agreed to a 25-foot square sample spacing on the excavation base. Excavation sidewall verification samples were collected at a horizontal spacing of approximately 20 feet and at approximately 3-foot depth intervals across the full depth of excavation (excluding surficial CM removed prior), with a minimum of two verification samples collected from each depth interval on each sidewall.

For each second-IA area, excavation verification soil samples were analyzed for the area-specific COCs listed in the Work Plan. In addition, for the Hydraulic Barker area, once soils at the excavation extents achieved PCLs for PCBs (COC targeted for removal) and did not have substantial petroleum contamination as indicated by field screening, the verification samples were analyzed for additional constituents[7] to document their residual concentrations (termed "record samples" in the Work Plan).

In locations where a verification soil sample did not comply with PCLs, the excavation was expanded to remove additional soil to meet PCLs, to the extent practicable, using the following decision process outlined in the Work Plan:

1. Where an excavation sidewall sample exceeded a soil PCL, the length of sidewall represented by that sample was overexcavated laterally approximately 1 foot, followed by collection of a new sidewall verification sample in that location.
2. Where an excavation base sample exceeded a soil PCL, the soil represented by the base sample was overexcavated approximately 1 foot deeper, followed by collection of a new base verification soil sample at that location.
3. If, after the first overexcavation, the new sidewall or base verification sample at that location still exceeded the soil PCL, overexcavation by 1 foot further and then resampling of that location was repeated. In some excavation areas, the first overexcavation included 2 feet of additional removal to get to this decision point, as discussed by area in Section 5.
4. After overexcavating 2 feet at a location, the excavation was stopped at that location if the verification sample contained concentrations not greater than two times the PCL in consultation with Ecology. When the verification sample exceeded a PCL by more than two-fold, Aspect consulted with Ecology regarding whether or not to continue excavation at that location, based on the collective sample data and information on subsurface conditions.

Aspect communicated verification sample results from each excavation area to Ecology for discussion and agreement prior to backfilling each excavation in accordance with the Work Plan. Specifics of the excavation efforts and data for each soil removal area are described in Section 5.

4.7 Archaeological Monitoring

In accordance with the Site-specific Cultural Resources Monitoring and Discovery Plan (SWCA, 2013), archaeological monitoring was conducted by an archaeologist from Perteet Inc., under subcontract to Aspect, in the two easternmost excavations—Hydraulic Barker and CMS areas. Given proximity to the historical (prefilling) shoreline, these two eastern excavations had the highest probability for encountering native soil beneath the fill unit. Perteet monitored the entire Hydraulic Barker excavation, to a depth of about 13 feet bgs. For the much-larger CMS area, their monitoring was discontinued after excavating roughly the southern half of the area and observing that the fill extended beyond the excavation base with no visual evidence of native soil. When Perteet was not on the Site, Aspect's geologist was watching for evidence of native soil, but it was not observed during excavation in any of the excavation areas. Perteet generated a report of their on-Site monitoring activities that concluded no historical artifacts were encountered.

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[7] Diesel-/oil-range TPH, copper, mercury, and zinc.

Perteet submitted the report to the state Department of Archaeological and Historical Preservation (DAHP), who reviewed it and provided a letter agreeing with Perteet's conclusions. Appendix D includes Perteet's report and DAHP's letter.

4.8 Off-Site Disposal of Excavated Material

ICI transported all contaminated material generated during the second IA to Republic Services' intermodal facility in northeast Everett, or to their Third and Lander facility in Seattle, where it was loaded for rail transport to Republic's Roosevelt Regional Subtitle D landfill in Roosevelt, Washington. Loads of contaminated material transported from the Site were covered from the time they left the Site until they off-loaded at the intermodal facility.

In total, approximately 17,610 tons of contaminated materials were removed from the Upland Area and properly disposed of off the Site during the second IA. This includes 17,501 tons of contaminated material excavated from twelve areas discussed in Section 5 plus 109 tons of material generated during removal of portions of Pipes K and M described in Section 2. In addition, 18 tons of inert debris (large concrete pieces without visible evidence of contamination) that were removed to access contaminated soil or accomplish pipe plugging were disposed of at the United Recycling and Container facility in Snohomish, Washington.

Quantities of contaminated material removed from each soil cleanup area are described in Section 5. Appendix H provides Republic Services' certificate of disposal for the contaminated materials landfilled.

4.9 Excavation Backfill

The completed second-IA excavations were backfilled with uncontaminated dredge sand made available to K-C by the Port. As outlined in "Analytical Data for Parcel O Dredge Sand as Backfill for Interim Action" (Aspect, 2020a), the U.S. Army Corps of Engineers (Corps) generated the sand from navigational dredging of the Snohomish River, and then stockpiled it on the City's Parcel O located on the Snohomish River, approximately 2 miles east of the Site, under agreement with the City. The dredged material is owned by the State of Washington. The Washington State Department of Natural Resources (DNR) gave permission to the Port to use the Parcel O dredge sand. As an element of the K-C and Port's purchase-and-sale agreement for the Upland Area property, the Port made available the Parcel O dredge sand for K-C's use as backfill for the Upland Area second IA and CM removal projects.

The Work Plan requires that ICI provide to K-C documentation of the land use and operational history of the property from which imported backfill material is sourced, as well as representative analytical testing data for the fill material, to demonstrate it is not contaminated. The representative analytical testing includes a sampling frequency of five samples for the first 1,000 cubic yards of material, and one additional sample for every additional 1,000 cubic yards of material, with analysis of the samples for the following constituents:

- Gasoline-range petroleum hydrocarbons
- Diesel-/oil-range petroleum hydrocarbons

- Six metals (arsenic, copper, lead, mercury, nickel, zinc)
- Polycyclic aromatic hydrocarbons (PAHs)
- Polychlorinated biphenyls (PCBs)

At the time of the Work Plan, roughly 10,000 cubic yards was the estimated quantity of backfill required for the second IA. Ecology also extended the sampling requirements to the estimated 55,000 cubic yards of backfill material planned for use for Site-wide grading following completion of the CM removal project. As described in Aspect's report (2020a), prior to starting their dredging of the Snohomish River, the Corps conducted composite chemical testing in defined Dredged Material Management Units (DMMUs) to determine suitability of the material to be dredged for unconfined open-water disposal. The sampling of the Parcel O sand documented its suitability for open-water disposal, and compliance with the second IA soil PCLs; however, the Corps collected a limited number of samples and they were not analyzed for TPH or nickel, as required by the Work Plan. Therefore, Ecology required supplemental testing of the first 20,000 cubic yards of Parcel O dredge sand to be placed on the Site, with analysis of the samples for the complete list of analytes required by the Work Plan.

In late February 2020, Aspect collected 24 samples representing approximately 20,000 cubic yards of the Parcel O sand, as shown on Figure 4. On that figure, the initial approximately 1,000 cubic yards of material is represented by the red stippled pattern and the remaining approximately 19,000 cubic yards is represented by the orange lined pattern. The sample locations are shown in yellow. The soils to be used as backfill were to be taken from the current working face of the stockpile in a radial pattern; the sample locations were spatially located to reflect this approach. At each sample location, the top 6 inches of soil was removed, and a sample of freshly exposed soil was collected directly into laboratory-prepared and -supplied sample jars.

All constituent concentrations in 24 of 24 samples of the Parcel O dredge sand were below soil PCLs, consistent with data from the Corps' prior sampling of the material. Table 4 presents the Parcel O sand analytical data collected by Aspect. Based on the testing data, Ecology concurred that the Parcel O dredge sand was acceptable for use as backfill on the Site.

Approximately 12,520 tons of Parcel O sand were used to backfill excavations during the second IA. In addition, approximately 12 cubic yards of uncontaminated overburden were reused as backfill in the CN-west excavation (see Section 4.4.2).

The backfill in each second-IA excavation was placed in lifts of approximately 1 foot and compacted. The upper surface of the compacted backfill in each excavation was tested by ICI's geotechnical testing consultant, MTC Incorporated. Subsequent testing at depth was conducted by excavating test pits within the interior of the backfilled excavations. The testing confirmed that the compaction achieved 92 percent of the modified-Proctor maximum dry density as required by the purchase-and-sale agreement between the Port and K-C.

At the close of the combined second IA and CM removal projects, ICI re-established the sand containment berm around the stockpiled dredge sand on Parcel O to the satisfaction of the Corps, Port, and City, as determined during a final inspection of Parcel O by those parties, ICI, and K-C on December 17, 2020.

4.9.1 Validation of Analytical Data from Interim Action

Laboratory Data Consultants, under subcontract to Aspect, completed independent Level 2b data quality validation of the analytical data generated during the second IA, following procedures specified in U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP) functional guidelines. Based on the validation, the data were of acceptable quality for their intended purposes. Data qualifiers after the validation are included in the data tables in this report. Appendix C provides the data validation reports for data collected during this second IA.

5 Soil Cleanup by Area

This section describes the interim action activities completed for each soil cleanup area. Appendix B includes photographs of the excavation activities in each soil cleanup area.

The table of soil analytical data for each cleanup area includes samples representing in-place soil, as well as overexcavated samples (at the end of the table) that represent soil removed from the Site. In each table, a sample with a designation of "SAT" in the header represents saturated soil; a sample without that designation in the header represents unsaturated soil. The PCLs for saturated and unsaturated soil are also presented in the tables. The segregation of soil samples into unsaturated soil (above water table) versus saturated soil (below water table) is based on seasonally high groundwater elevations measured in May 2014, consistent with the approach applied for the draft RI (Aspect, 2016).

It should be noted that all the excavation verification sample location names for the second IA have been modified to include an "X" to represent them as excavation samples. This modification was made because there were a number of duplicate sample locations, primarily for excavation verification sample locations from the 2013–2014 IA at the BBH area, but also for RI boring locations around the CMS area (CMS-B-01, for example). The data tables and figures included herein, as well as the project database, have been revised to include the X designation for the 2020 second-IA verification sample locations; however, the laboratory analytical reports for the 2020 data include the field-assigned sample location names, without the X.

The figure(s) for each IA area depict final excavation limits and the locations of all verification samples collected during the second IA, including those that were subsequently overexcavated. The confirmation soil sample data depicted on each are for the primary COCs that had PCL exceedances before excavation (metals, TPH, etc.). Sample locations representing in-place soil are colored either green or orange to indicate compliance with the soil PCL or an exceedance of the soil PCL, respectively. For sidewall samples, one symbol may represent two or more vertical intervals from where excavation verification samples were collected, and the data tables should be referenced for more information. The figures depict the sample data for all confirmation samples for each constituent with a symbol indicating whether the data are for an in-place sample (circle symbol) or an overexcavated sample (X symbol). In some cases, verification samples met the soil PCL for one constituent, but were overexcavated for another constituent. In those cases, the step-out samples after overexcavation were only analyzed for the constituent for which the overexcavation occurred. Where an overexcavated sample was used to determine compliance with the soil PCLs, the X symbol for that sample is shaded green.

All depths stated in this report are relative to the pre-IA/CM removal grade that existed since 2013—consistent with depth designations in the Work Plan (Aspect, 2019). Backfilling and grading to complete the CM removal project has established new grade elevations across the 32-acre CM removal area. Depths of samples representing in-place soil after the second IA will need to be adjusted for the new grade elevations as part of the subsequent revision to the Upland Area Remedial Investigation/Feasibility Study (RI/FS).

5.1 BA-MW-7 Area

The BA-MW-7 area was identified as an IA area because of concentrations of total carcinogenic PAHs (cPAH) (TEQ[8]) above the cleanup levels in groundwater at RI well BA-MW-7, located immediately adjacent to the bulkhead (Figure 5). Well BA-MW-7 is the single Upland Area shoreline well with cPAH exceedances in groundwater (up to 0.036 micrograms per liter [µg/L]). A cPAH exceedance (0.92 milligrams per kilogram [mg/kg]) was also detected in soil at a depth of 12.5 feet, within the well's screened interval, at this location. Based on the groundwater data, the COC targeted for removal in the BA-MW-7 Area was cPAH in soil.

The BA-MW-7 area was excavated to its initial lateral limits and a depth of 6 feet bgs (above the water table) on October 5, 2020. The excavation was bound to the north by shallow concrete and deeper wood pilings of the bulkhead and to the east by a concrete wall (see photolog for BA-MW-7 in Appendix B), so that sidewall verification samples were only collected from the west and south sidewalls (Figure 5). Concentrations of cPAHs were below the soil PCL in all the sidewall verification samples (Table 5).

The excavation was deepened to approximately 9 feet bgs on October 12, 2020. Quarry spalls, gravel, and a geogrid fabric were observed at depths below 7 feet bgs; these conditions are similar to those observed beneath the pier to the west of the excavation and are assumed to be part of the bulkhead (Figure 5). During this deeper excavation, a creosote-treated wood piling was observed to be next to, and in contact with, the well screen of decommissioned well BA-MW-7, as shown in the photolog in Appendix B. Because the source of cPAHs to groundwater at well BA-MW-7 was likely the creosote-treated wood piling, and further excavation could have compromised the integrity of the bulkhead, the BA-MW-7 Area excavation was stopped at these limits after consultation with Ecology. Base verification samples were not collected from within the quarry spalls.

The final lateral extent of the BA-MW-7 excavation is shown on Figure 5, which also shows the relative locations of the concrete wall and bulkhead. The excavation area reached final depths of approximately 9 feet bgs. A total of four sidewall samples are representative of the final limits of the excavation (Figure 5). Concentrations of cPAHs are below the soil PCL in all verification samples (Table 5).

The interim action for the BA-MW-7 area included excavation and proper off-Site disposal of approximately 59 tons of soil. The excavation was backfilled with Parcel O sand and compacted. The excavation has been completed to meet the objectives of the IA for the BA-MW-7 Area.

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[8] Total toxic equivalent concentration of benzo(a)pyrene calculated in accordance with MTCA (WAC 173-340-708[8][e]). **Hereafter in this report, any reference to cPAH concentrations refers to total cPAH (TEQ).**

5.2 Boiler/Baghouse Area

The BBH area was identified as an IA area because of concentrations of metals above the soil cleanup levels at the limits of the 2013–2014 IA, which removed approximately 2,380 tons of metals-contaminated soil, including lead concentrations exceeding 1,800 mg/kg (Aspect, 2015). At that time, mercury had not been identified as COC in groundwater; therefore, the first IA's soil cleanup level for mercury (24 mg/kg based on unrestricted direct contact) was much higher than the 0.1 mg/kg mercury PCL subsequently applied for the second IA. During compliance groundwater sampling at downgradient monitoring wells following the 2013–2014 IA, dissolved arsenic, copper, mercury, and zinc were reported above the groundwater cleanup levels (Aspect, 2019). Therefore, the second IA at the BBH area was designed to remove soil with metals exceedances that remain within and around the prior BBH excavation area. The COCs targeted for removal from the BBH area during the second IA were copper, mercury and zinc. The depth to water in the BBH area has been measured at depths of 5 to 9 feet bgs; therefore, verification soil samples collected above 5 feet bgs are compared to the soil PCLs for unsaturated soil and those collected deeper are compared to the soil PCLs for saturated soil.

Approximately 2 feet of CM was removed from the BBH area and stockpiled nearby prior to soil removal. During excavation, large-scale subsurface concrete structures were encountered throughout the BBH area, which prevented or limited the collection of verification sidewall soil samples. The approximate locations of these features are depicted on Figure 6. Photographs depicting the conditions of the sidewalls at the final limits of the BBH area excavation are included in Appendix B. A portion of the BBH area excavation was expanded to the south, where it eventually connected with the GFB12 area excavation (discussed in Section 5.6), to remove soil that contained abundant debris (primarily concrete rubble; Figure 6). This extension was bound by concrete structures on the east and west sidewalls and at the base; therefore, verification soil samples were not collected in those locations (Figure 6).

The results of field screening did not identify odors, staining, sheen, or elevated PID readings in any portion of the BBH area excavation. The final lateral extent of the BBH excavation is depicted on Figure 6. The excavation area reached final depths ranging from 10 to 12 feet bgs. A total of 68 sidewall and 35 base samples are representative of the final limits of the excavation (not including field duplicate results; Table 6). The results are as follows:

- Concentrations of copper are below the soil PCL of 36 mg/kg in all but 7 of the final verification samples, where concentrations range from 37.1 to 58.3 mg/kg. A statistical evaluation of the copper data from the final limits of the BBH area excavation was completed using ProUCL 5.1[9] to calculate the 95 percent upper confidence limit (UCL) on the arithmetic mean concentration (95UCL), which is a key parameter for evaluating compliance with cleanup levels under MTCA (WAC 173-340-740(7)(d)). The evaluation included 84 verification results, of

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[9] EPA's statistical software package for analysis of environmental data sets (https://www.epa.gov/land-research/proucl-software).

which 3 were nondetect. Based on the ProUCL output, the data do not follow a discernable statistical distribution; using normal critical values and other nonparametric UCLs with consideration of nondetect results (using Kaplan-Meier estimator), the 95UCL soil copper concentration is 19 mg/kg (ProUCL output in Appendix E).

- Concentrations of mercury are below the soil PCL of 0.1 mg/kg in all but 20 of the final verification samples, where concentrations range from 0.11 to 0.78 mg/kg (Table 6). Because the BBH area excavation merged in two locations with the GFB12 area excavation that also removed mercury-impacted soils, a statistical evaluation of the mercury data from the final limits of the combined excavations was completed using ProUCL 5.1 to calculate the 95UCL soil mercury concentration for the collective area. The evaluation included 113 verification results, of which 93 were nondetect at the reporting limit of 0.1 mg/kg. Based on the ProUCL output, the data do not follow a discernable distribution; using normal critical values and other nonparametric UCLs with consideration of nondetect results (using Kaplan-Meier estimator), the 95UCL soil mercury concentration is 0.19 mg/kg (ProUCL output in Appendix E).
- Concentrations of zinc are below the soil PCL of 85/100 mg/kg (for saturated/unsaturated soil) in all but one final verification sample, which contains zinc at 220 mg/kg. A statistical evaluation of the zinc data from the final limits of the BBH area excavation was completed using ProUCL 5.1 to calculate the 95UCL soil zinc concentration. The evaluation included 75 verification results, all of which were reported concentrations above the detection limits. Based on the ProUCL output, the data do not follow a discernable distribution. The 95UCL soil zinc concentration is 40 mg/kg assuming a normal distribution (ProUCL output in Appendix E).

Based on these data and results of the statistical evaluation, Ecology agreed that the interim action for the BBH area was complete. The second IA for the BBH area included excavation and proper off-Site disposal of approximately 7,533 tons of soil. The excavation was backfilled with Parcel O sand and compacted. The excavation has been completed to meet the objectives of the second IA for the BBH area.

5.3 Central Maintenance Shop Area

The CMS Area was identified as an IA area encompassing soils with elevated PCB concentrations, both where PCB-containing transformers were historically located and at the limits of a 2013–2014 IA excavation that removed petroleum-contaminated soil[10], and encompassing monitoring wells CMS-MW-1R and DAST-MW-101 where elevated PCB concentrations were detected in groundwater[11] (Aspect, 2019). In addition, groundwater concentrations of naphthalene at well CMS-MW-1, in this area, exceeded the PCL based on vapor intrusion when sampled in 2012 (Aspect, 2019). Therefore, the COCs targeted for removal in the CMS area were PCBs and naphthalene. The depth to

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[10] REC2-MW-5 area as described in Aspect (2015).

[11] PCBs were not a COC identified in groundwater until sampling conducted in March 2017; therefore, the 2013-14 IA soil cleanup level for PCBs was based on direct contact—less stringent than the current soil PCL based on leaching to groundwater.

water in the CMS area has been measured at depths of 1 to 3 feet bgs; therefore, all verification samples collected from this area are compared to the soil PCLs for saturated soil.

Approximately 2 feet of CM was removed from the CMS area and stockpiled nearby prior to soil removal. During excavation, considerable large-scale structure was observed in the southern portion of the CMS area excavation, including concrete foundation elements and piping. Bunker-oil fuel pipes encountered in the southern portion and northwest corner of the CMS area excavation are discussed in the following subsection. Concrete structures comprised much of the western sidewall of the CMS area excavation and prevented collection of verification sidewall samples in that location.

During excavation, field screening identified petroleum-like odors and elevated PID readings in soil, and a heavy sheen on groundwater, along the southern portion of the excavation’s western sidewall. Base verification samples collected from a depth of 6 feet bgs at the initial limits of excavation in these locations contained cPAH concentrations above the soil PCL (sample locations B-28, B-29, and B-30; Table 7). Overexcavation at these locations reached total depths ranging from 7 to 9 feet bgs, where cPAH concentrations were below the soil PCL (Table 7). The results of field screening did not identify odors, staining, sheen, or elevated PID readings in any other areas of the CMS excavation.

The final lateral extent of the CMS area excavation is depicted on Figure 7. The excavation area reached final depths ranging from 6 to 9 feet bgs. A total of 31 sidewall and 37 base samples are representative of the final limits of the excavation (Figure 7). Concentrations of naphthalene and cPAHs were below the soil PCL in all the final verification samples. Concentrations of total PCBs are below the soil PCL of 0.12 mg/kg in 66 of the 68 confirmation samples but remain above the soil PCL in two sidewall samples (0.2 and 0.3 mg/kg), following three overexcavations at each location (Table 7).

A statistical evaluation of the total PCB data from the final limits of the CMS area excavation was completed using ProUCL 5.1 to calculate the 95UCL. For PCBs, the evaluation included 68 verification results (not including field duplicate results), of which 59 were nondetect at the reporting limit of 0.02 mg/kg. Based on the ProUCL output, the data appear to best match a lognormal statistical distribution; with consideration of nondetect results (using the Kaplan-Meier estimator), the 95UCL soil PCB concentration is 0.029 mg/kg based on a gamma distribution (ProUCL output sheet provided in Appendix E).

Based on these data and results of the statistical evaluation, Ecology agreed that the interim action at the CMS area was complete. The excavation was backfilled with Parcel O sand and compacted. The interim action for the CMS area included excavation and proper off-Site disposal of 6,733 tons of soil. The excavation has been completed to meet the objectives of the second IA for the CMS Area.

5.3.1 Bunker-Fuel Pipes within CMS Area

During excavation of the CMS area, historical pipes that were used for distribution of fuel oil (probable Bunker C oil) were encountered in the southern portion and the northwest corner of the excavation (Figure 7).

The pipe encountered in the northwest corner of the CMS area excavation was a single, 5-inch-diameter steel pipe that was observed at a depth of approximately 4 feet bgs. It was observed next to a steel steam pipe. The pipes ran along the northwest sidewall of the CMS area excavation and extended approximately 5 feet beyond the northwest corner of the excavation where they had been previously cut. Both pipes contained a fibrous coating that was suspected to be asbestos-containing material (ACM). There was no field screening evidence of petroleum contamination along this pipe alignment. ICI subcontracted with Performance Abatement Services (PAS) of Woodinville, Washington, to abate and remove the ACM and pipes on August 19, 2020, for disposal at Wasco County landfill in The Dalles, Oregon. The entire observed lengths of both pipes were removed.

The pipes encountered in the south end of the CMS area excavation included two 5-inch-diameter steel fuel pipes and two 2-inch steam pipes, all of which were located within a degraded wooden conduit. The pipes ran beyond the south edge of the CMS area excavation for approximately 35 feet before they turned and ran another 20 feet to the east, where they had been previously cut (Figure 7). Heavy sheen and petroleum odors were apparent upon exposing the wooden conduit within the CMS excavation; those field screening indications diminished toward the south and were absent at the limits of the pipe excavation. The four pipes contained a fibrous coating that was suspected, tested, and confirmed to be ACM. PAS completed abatement and removal of the ACM and pipes on August 18 and 19, 2020. Copies of the record documenting disposal of the ACM are included in Appendix H.

The excavations beneath the pipes extended to a depth of 6 feet bgs or to a depth where field screening results no longer indicated the presence of petroleum contamination, whichever was deeper. The excavation in the northwest corner of the CMS area was completed to a depth of 7 to 7.5 feet bgs while the excavation in the south end of the CMS area was completed to a depth of 6 feet bgs (Table 8). Soil samples were collected from the base and sidewalls of the fuel pipe excavations. Samples of the in-place soil on the trench sidewalls and base were collected at 20-foot intervals for analysis of diesel- and oil-range TPH. The base samples were also analyzed for PAHs. Concentrations of TPH and PAHs were below the soil PCLs in all the verification samples collected from the sidewalls and base of both fuel pipe excavations (Table 8). The pipe excavations were backfilled concurrently with backfill of the CMS area. The quantity of contaminated material excavated from the two fuel line excavations was relatively small and not segregated from the larger CMS excavation quantity.

5.4 Clark Nickerson Area

The COC targeted for removal in the CN area (both excavations) is cPAH. A high cPAH concentration of 6.4 mg/kg was detected at two soil sample locations near the southeast corner of the CNB2 excavation from the 2013-2014 IA: the 5-foot sample at boring CN-B-4 and excavation verification sample CNB2-B27 at a depth of 4 feet bgs (Figure 8). cPAH was not detected in the 8-foot soil sample from boring CN-B-4, nor in excavation verification sample CNB2-S51 located between that boring and CNB2-B27. Because there is a clean sample between the two exceedance samples, the CN area was addressed through two discrete excavations, identified as CN West and CN East (Figure 8). The depth to water in the CN area has been measured at depths of approximately 2 and 5 feet bgs; therefore, all verification samples collected from this area are compared to PCLs for saturated soil.

In the CN East area, approximately 1.5 feet of CM was removed prior to soil removal. The CN East area was excavated to its initial limits, including a total depth of 6 feet bgs, on June 24, 2020. A total of eight sidewall samples and three base samples were collected as verification samples at the initial limits of the CN East area excavation and submitted for laboratory analysis of cPAH. The results for all CN East verification samples were below the saturated soil cPAH PCL of 0.16 mg/kg (Table 9).

In the CN West area, approximately 2 feet of CM and 1.5 feet of clean overburden was removed and stored in separate stockpiles for disposal and testing for potential reuse, respectively. The CN West area was excavated to its initial limits, including a total depth of 6 feet bgs, on June 23, 2020. A total of eight sidewall samples and three base samples were collected as verification samples at the initial limits of the CN West area excavation and submitted for laboratory analysis of cPAH. The results for all verification samples were below the saturated soil cPAH PCL of 0.16 mg/kg, except for a single base sample, which contained cPAH at a concentration of 0.292 mg/kg (Table 9). The soil represented by this sample was overexcavated and a deeper base sample, collected from 7 feet bgs, contained cPAH at 0.361 mg/kg (Table 9).

The CN area excavations filled quickly with groundwater once dewatering was turned off and the CN West area contained a large amount of timber fragments. During overexcavation of the deeper base sample described above, brick was encountered at the base of the excavation, suggesting the presence of a buried brick structure although its exact nature was obscured given the quantity of water entering the excavation at that depth.

Because the soil hotspot of cPAH that the IA was designed to address had been removed, the difficulty in further vertical excavation posed by buried debris, an apparent buried structure, and substantial dewatering requirements, and the single residual low-level exceedance of the cPAH PCL, Ecology agreed that additional excavation was not practicable or necessary in CN West to meet the objectives of the IA.

Chemical testing of the approximately 12 cubic yards of overburden removed from the CN West excavation confirmed that it met PCLs (Table 3) and was therefore suitable for reuse as backfill in the excavation in accordance with the Work Plan. The rest of the excavation was backfilled with Parcel O sand.

The interim action for the CN area included excavation and proper off-Site disposal of approximately 187 tons of contaminated material. The excavation has been completed to meet the objectives of the second IA for the CN area.

5.5 Digesters Trench Area

During CM removal, black, oily, sludge-like material was encountered in a long, narrow space located between two linear concrete structures, assumed to be foundations for the former Digesters Building and immediately adjacent Blow Pit Building (Figure 9). To characterize the oily material for disposal, a sample of it was collected and submitted for laboratory analysis of diesel- and oil-range TPH, PCBs, semivolatile organic compounds

(SVOCs), RCRA 8 metals plus copper and zinc, and sulfate (B2-01; Table 10). The results indicated that the oily material was predominantly oil-range TPH (29,900 mg/kg), but also contained elevated concentrations of copper, lead, and zinc (Table 10). Based on the presence and chemical composition of the oily material, the Digesters Trench area was identified as a new IA area, with the objective of removing the oily material from the length of the east-west-oriented “trench.” As approved by Ecology, verification samples from the Digesters Trench area were collected at 40-foot intervals along the length of the trench base and were analyzed for diesel-range TPH, copper, lead, mercury, and zinc (Table 10). The trench sidewalls were concrete structure so no verification soil samples could be collected.

Once the CM had been removed, the trench was approximately 2 feet wide at the surface and narrowed with depth to approximately 11 inches at the base. The oily material was observed to extend within the easternmost approximately 200 feet of the trench. Once the oily material was removed from the trench, samples of soil from the base of the trench were collected at a depth of approximately 8 feet bgs (Figure 9). The western end of the Digesters Trench Area was defined by the absence of oily material in the trench, where soil was observed, and a sample of soil from that western sidewall was collected at a depth of 4 feet bgs (sample DTX-S-01-4; Figure 9).

A total of six base and one sidewall verification soil samples were collected from the final limits of the Digesters Trench area (Figure 9). The results for TPH, lead, and zinc were below the soil PCLs in all verification samples, demonstrating effective removal of the oily material itself (Table 10). Concentrations of copper and mercury were reported slightly exceeding the soil PCLs in three of the base samples and in the single sidewall sample (Table 10). However, additional soil excavation would have required removal of massive amounts of underground concrete structure to allow for access to the soil, which was impracticable.

Monitoring well PM-MW-1 was located near the western (hydraulically downgradient) end of the Digesters Trench area (Figure 9). During groundwater sampling of well PM-MW-1 as part of the RI, the only exceedances of the groundwater PCLs were dissolved mercury, nickel, and zinc, and none of those exceedances were reproduced in both samples collected from the well (Aspect, 2016). Given the very high TPH concentration in the oily material, the lack of TPH detections or PAH exceedances in the groundwater samples from that immediately downgradient well demonstrates very limited leachability from the material.

Because the copper and mercury concentrations reported above the soil PCLs were all at or below two times the soil PCL, deeper excavation was not practicable, and groundwater data indicated that the oily materials and underlying soil had not leached to cause exceedances of the groundwater PCLs, Ecology agreed that additional excavation was not practicable or necessary to meet the source control objectives of the second IA.

The trench was backfilled with Parcel O sand and compacted. The interim action for the Digesters Trench area included excavation and proper off-Site disposal of 140 tons of oily material and associated soil. The excavation has been completed to meet the objectives of the second IA for the Digesters Trench area.

5.6 GFB12 Area

The Work Plan included a stipulation for soil sampling around the 2012 boring GF-B-12 to assess whether its low-level mercury exceedance (0.21 mg/kg) was an isolated occurrence (Aspect, 2019). On August 11, 2020, ICI excavated three test pits, each at distances of 10 feet from boring GF-B-12, to a total depth of 5 feet bgs (Figure 10). Soil samples were collected from each at a depth of approximately 4 feet bgs and analyzed for mercury; the results are summarized on Table 11. Mercury was detected in the three samples at concentrations ranging from 0.33 to 0.48 mg/kg, slightly higher than that reported in the soil sample collected from GF-B-12. Based on this data, removal of mercury-impacted soils from the GFB12 area was added to the second IA after consultation with Ecology. The soil PCL for mercury is the same for saturated and unsaturated soil (0.1 mg/kg).

The GFB12 area was excavated to its initial limits, which were established based on the data as 20 feet wide (east-west) by 20 feet long (north-south) and 6 feet deep, on October 15, 2020. A total of eight sidewall and two base samples were collected from the initial excavation limits and submitted for laboratory analysis of mercury. A large concrete structure was encountered at depth in the northern half of the GFB12 area and prevented the collection of base verification samples there. The results of field screening indicated no odors, no sheen, and no elevated PID measurements.

Concentrations of mercury were above the soil PCL in most of the initial verification samples.

The excavation was therefore expanded laterally and vertically by 2 feet to remove soil with mercury above the soil PCLs. The samples collected at the limits of the overexcavation contained mercury near/below 2 times the soil PCL except for a single eastern sidewall sample at 0.5 mg/kg. Because that portion of the eastern sidewall was observed to contain an abundance of debris intermixed with soil, it was expanded laterally roughly 15 feet to connect with the south leg of the BBH area to remove that material (Figure 10).

A total of eight sidewall and three base samples were collected as verification samples from the final limits of the GFB12 area (Figure 10). Mercury was detected above the soil PCL in 7 of the 11 verification samples, at concentrations ranging from 0.11 to 0.75 mg/kg, although all but one of the samples contained mercury at/near two times the soil PCL (Table 11).

Given that the BBH area and GFB12 area excavations became one, a statistical evaluation of the mercury data from the final limits of the combined excavations was completed using ProUCL 5.1 to calculate the 95UCL soil mercury concentration for the collective area. The evaluation included 113 verification results, of which 93 were nondetect at the reporting limit of 0.1 mg/kg. Based on the ProUCL output, the data do not follow a discernable distribution; using normal critical values and other nonparametric UCLs with consideration of nondetect results (using Kaplan-Meier estimator), the 95UCL soil mercury concentration is 0.19 mg/kg (ProUCL output in Appendix E).

Based on these data and results of the statistical evaluation, Ecology agreed that the interim action for the combined GFB12 and BBH areas was complete.

The GFB12 area excavation was backfilled with Parcel O sand and compacted. The interim action for the GFB12 area included excavation and proper off-Site disposal of approximately 433 tons of contaminated material. The excavation has been completed to meet the objectives of the IA for the GFB12 Area.

5.7 Hydraulic Barker Area

The COC targeted for removal in the Hydraulic Barker area was PCBs, based on the PCB concentration reported in groundwater from well HB-MW-1R, which was the highest detected in Upland Area groundwater. However, soil concentrations of diesel-range TPH, copper, mercury, and zinc also exceeded leaching-based soil cleanup levels in this area. Therefore, once PCBs met PCLs in the excavation, the final excavation verification soil samples were also analyzed for diesel-/oil-range TPH, copper, mercury, and zinc to document residual in-place soil concentrations of these constituents (record samples); although, the excavation would not be expanded based on those results, in accordance with the Work Plan. Unlike the PCB analyses that were analyzed with 24-hour laboratory turnaround time to guide excavation, the supplemental record sample analyses were run on normal turnaround time. The depth to water in the Hydraulic Barker area has been measured at depths ranging from 6 to 9 feet bgs; therefore, all verification samples from this area are compared to PCLs for saturated soil.

Approximately 6 feet of CM was removed from the Hydraulic Barker area and stockpiled nearby prior to soil removal. The Hydraulic Barker area was excavated to its initial limits, including a total depth of 13 feet bgs, between May 28 and June 4, 2020. Large concrete structures were encountered in the northwest corner of the excavation, extending from approximately 6 feet bgs to the total depth of the excavation, and on the east sidewall, extending from approximately 9.5 feet bgs to the total depth of the excavation.

A total of 15 sidewall and 3 base samples were collected from the initial excavation limits and submitted for laboratory analysis of PCBs (Figure 11). The results of field screening indicated no soil staining, a localized area with a slight petroleum-like odor, PID measurement of 1.1 parts per million (ppm; at base verification sample location HBX-B-02), and a slight sheen on water coming into a pit dug to 15 feet bgs in the southwest corner as a sump for dewatering the excavation. Record sample data discussed further in Section 5.71.

The laboratory results of the initial 18 verification samples indicated total PCB concentrations below the saturated soil PCL of 0.12 mg/kg, except for the two shallow sidewall samples collected from the north sidewall (samples HBX-S-01 and -05; Table 12). As a result, the shallow portion of the north sidewall was extended by 1 foot laterally to remove the two PCB exceedances, in accordance with the Work Plan methodology. On the eastern side of the north sidewall, the aforementioned concrete structure was encountered during this overexcavation. All soil was removed up to the structure.

The results for 14 sidewall and 3 base verification samples collected from the final limits of the Hydraulic Barker area indicate concentrations of total PCBs below the saturated soil PCL (Table 12). Based on the data, Ecology concurred to backfill the excavation, which was then backfilled with Parcel O sand and compacted.

The interim action for the Hydraulic Barker area included excavation and proper off-Site disposal of approximately 268 tons of soil. The excavation has been completed to meet the objectives of the second IA for the Hydraulic Barker area.

5.7.1 Record Sample Data for Hydraulic Barker Area

In accordance with the Work Plan, final excavation verification samples were analyzed to document residual concentrations of TPH and metals for purposes of the forthcoming RI/FS, but the IA excavation was not expanded based on the record sample results. The record sample data are described below.

5.7.1.1 TPH

The results for the 18 record samples included a total TPH (D+O) concentration exceeding the soil PCL in one base sample (HBX-B-02), corresponding to the area where field screening results identified a slight odor and slightly elevated PID measurement. None of the other samples contained TPH above the soil PCL (Table 12). The HBX-B-02 record sample contained a reported total TPH (D+O) concentration of 19,100 mg/kg (using the NWTPH-Dx analysis without silica gel cleanup[12]), which is well above the 2,000 mg/kg PCL that is based on accumulation of free-phase petroleum product on groundwater. Mild petroleum sheen was observed on water in the Hydraulic Barker excavation while it was being advanced and dewatered, but no sheen was observed in the HBX-B-02 sample location, and no free product accumulation was observed anywhere in the excavation.

Prior to the second IA, TPH (D+O) concentrations up to 7,710 mg/kg were detected in soil from the HB-MW-1R boring (located within 2 feet of the HBX-B-2 sample; Figure 11), using the NWTPH-Dx analysis with silica gel cleanup (Aspect, 2019). As described in Appendix B to the draft RI (Aspect, 2016), a more accurate and detailed measure of TPH in soil in this area was obtained by analyzing the maximum-TPH concentration soil sample[13] using the Extractable Petroleum Hydrocarbon (EPH) analytical method in accordance with MTCA. The TPH concentration detected by that method was 4,210 mg/kg, 54 percent of the 7,710 mg/kg TPH concentration measured by the NWTPH-Dx analysis. This discrepancy was typical of NWTPH vs EPH results collected elsewhere in the Upland Area, and indicates that the NWTPH analysis, even with silica gel cleanup, can substantially overstate actual petroleum hydrocarbon concentrations. The EPH analysis quantifies concentrations of aromatic and aliphatic hydrocarbons in specific carbon ranges covering the diesel and oil ranges. These fractional hydrocarbon data can then be used to calculate risk-based TPH soil cleanup levels based on both human direct contact and leachability to groundwater using Ecology's MTCATPH software, which was done for the Hydraulic Barker area in Aspect (2016). The analysis was updated in response to Ecology comments (Aspect, 2017), although the revision has not been further

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[12] Because the NWTPH-DX analytical method is not specific to petroleum hydrocarbons, the silica gel cleanup is an optional pretreatment step intended to remove polar nonhydrocarbon compounds (some naturally occurring) from being quantified in the TPH analysis.

[13] The 12-foot soil sample from the HB-MW-1R monitoring well boring.

discussed with Ecology. Based on the hydrocarbon composition ratios identified in the EPH sample at HB-MW-1R:

- The residual 19,000 mg/kg TPH detection by NWTPH-Dx analysis is an order of magnitude below a soil concentration protective of direct contact for the future industrial (marine terminal) land use, at a hazard index of 1.
- That concentration is also well below a concentration predicted by MTCATPH to leach hydrocarbons at concentrations exceeding groundwater PCLs[14]. Most importantly, the model prediction is consistent with the empirical data showing no exceedances of TPH or detections of PAHs in groundwater from wells HB-MW-1 and HB-MW-1R during sampling in 2012-2014 (Aspect, 2016). This is despite the fact that the soil containing 7,710 mg/kg TPH was located within the well-screen depth interval of the HB-MW-1R boring, and 19,000 mg/kg TPH was present in soil a couple feet from that well, and the TPH had been there for at least three decades prior to the groundwater sampling.[15] The data demonstrate that the TPH in this area is heavily weathered and thus no longer leaching petroleum hydrocarbons at concentrations of concern.
- After the very long period since the petroleum release(s) occurred, the lack of free product accumulation observed in the Hydraulic Barker area excavation, and in the HB-MW-1 and HB-MW-1R monitoring wells, provides a high level of confidence that the pre-IA and residual soil TPH concentrations in this area are below residual saturation concentrations in accordance with WAC 173-340-747(10)(c)), especially when coupled with the lack of dissolved-phase hydrocarbons in groundwater.[16]

In short, the residual soil TPH concentrations in the Hydraulic Barker area do not appear to pose a risk to human health or the environment by any exposure pathway.

5.7.1.2 Metals

Concentrations of copper, mercury, and/or zinc were detected above the soil PCLs for saturated soil in nine of the record samples (Table 12). A statistical evaluation of the metals data from the record samples was completed using ProUCL 5.1 to calculate the 95UCL for the Hydraulic Barker area excavation. The results are as follows:

- All 18 samples contained copper above the detection limit, ranging in concentration from 9.64 to 64.4 mg/kg, with seven exceeding the PCL. The copper data have a normal distribution and the 95UCL is 41 mg/kg, which is only slightly above the soil PCL of 36 mg/kg. In addition, no individual sample has a concentration of copper that is more than two times the soil PCL.
- The evaluation included 18 results for mercury, of which 10 were nondetect. Detected concentrations ranged from 0.076 mg/kg to 0.34 mg/kg, with five

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[14] Model-predicted concentration of 100 percent non-aqueous phase liquid, greater than 72,000 mg/kg.

[15] Operations of the Hydraulic Barker Building in this area ceased by 1982 when the log pond was filled and the mill transitioned from de-barking and chipping imported logs to importing wood chips (Aspect, 2016). Therefore, a petroleum release(s) in this area occurred prior to 1982.

[16] Lack of elevated dissolved-phase hydrocarbon concentrations is a very strong indicator that free product is not present on groundwater.

exceeding the PCL. The mercury data have a normal distribution; with consideration of nondetect results (using Kaplan-Meier), the 95UCL is 0.14 mg/kg, which is only slightly above the soil PCL of 0.1 mg/kg.

- All 18 samples contained zinc above the detection limit, ranging in concentration from 17.4 mg/kg to 145 mg/kg, with three exceeding the PCL. The zinc data have a normal distribution and the 95UCL is 76 mg/kg, which is below the soil PCL of 85 mg/kg. No individual sample has a concentration of zinc that is more than two times the soil PCL.

5.8 Log Pond Chip Conveyor Area

The Log Pond Chip Conveyor area was identified as an IA area because of concentrations of TPH, cPAHs, and mercury detected above their respective PCLs in soil samples collected from exploratory trenches excavated on the east side of the concrete foundation for the former chip reclaim conveyor (Aspect, 2019). The COCs targeted for removal in the Chip Conveyor area were gasoline-range TPH, diesel-/oil-range TPH, cPAHs, and mercury. The depth to water in the area has been measured at depths of 2 to 5 feet bgs; therefore, all verification samples collected from this area are compared to the soil PCLs for saturated soil.

Approximately 4 feet of CM was removed from the Chip Conveyor area and stockpiled nearby prior to soil removal. The chip conveyor foundation, a 1.5-foot-thick reinforced concrete slab, was encountered just below the CM and comprised the entire western sidewall of the excavation. In addition, a footing of the foundation extended across the southwestern corner of the excavation (see photographs in Appendix B).

The results for verification samples collected at the initial limits of the excavation did not contain TPH above the soil PCL; however, both cPAHs and mercury were detected above the soil PCLs in several of the initial verification samples. The excavation was expanded both laterally and vertically, as practicable given the limitations attributed to the concrete foundation, in accordance with the methodology described in the Work Plan. The overexcavation included removing soils from beneath the southern portion of the concrete foundation slab.

The final lateral extent of the excavation is depicted on Figure 12, which also shows the location of the concrete foundation. The excavation area reached final depths ranging from 8 to 10 feet bgs. A total of 10 sidewall samples and 3 base samples are representative of the final limits of the excavation (Figure 12). Following two overexcavations, concentrations of the COCs for the Chip Conveyor area were below the soil PCLs except for mercury in four locations and cPAHs in two locations, all of which are less than two times the PCL (Table 13). Based on the data, Ecology concurred to backfill the excavation, which was then backfilled with Parcel O sand and compacted.

The interim action for the Chip Conveyor area included excavation and proper off-Site disposal of approximately 403 tons of soil. The excavation has been completed to meet the objectives of the second IA for the Chip Conveyor area.

5.9 Old Machine Shop Area

The OMS area, located on the shoreline of the slip at the south end of the Upland Area (Figure 13), was identified as an IA area because of concentrations of copper, mercury, and PCBs detected above their respective PCLs in soil samples collected from three RI borings (Aspect, 2019). The depth to water in the OMS area has been measured at depths of 7 to 10 feet bgs and groundwater was not encountered in the excavation during the interim action. Verification samples from the OMS area were collected at depths of 2.5 to 5 feet bgs and are compared to the soil PCLs for unsaturated soil. No CM was observed to be present at the OMS area.

The results for verification samples collected at the initial limits of the excavation documented copper, mercury, and/or total PCBs concentrations above the soil PCLs at one west sidewall sample, one north sidewall sample, and all of the samples collected from the south sidewall. The excavation was expanded laterally at these locations, in accordance with the methodology described in the Work Plan. To the south, the extent of excavation was limited by the steep shoreline bank and the 36-inch-diameter wood stave Pipe C (described in Section 3.4) that is located within the upper portion of that bank.

The final lateral extent of the excavation is depicted on Figure 13. The excavation area reached a final depth of 5 feet bgs. A total of 12 sidewall samples and 9 base samples are representative of the final limits of the excavation (Figure 13). Concentrations of the COCs in the final verification samples were below the soil PCLs except at two locations along the south sidewall: OMSX-S-16 where the concentration of mercury (0.2 mg/kg) was equal to two times the PCL, and OMSX-S-20, in the southeasternmost portion of the excavation, where copper (52.6 mg/kg) slightly exceeded the PCL and total PCBs (24 mg/kg) greatly exceeded the PCL (Table 14).

At the southeasternmost OMSX-S-20 location, the OMS excavation was advanced in three overexcavation events to remove all soil up to Pipe C, which was inferred to help stabilize the adjacent shoreline bank. K-C proposed and Ecology agreed that further excavation—south of the pipe—at that location was not practicable without potentially compromising the stability of the bank and risking slope failure into the East Waterway, whether at the time of excavation or after it. The OMS photolog (in Appendix B) shows the steep shoreline bank along that southeasternmost portion of the excavation, along with the decrepit wooden structure that exists within the bank. The configuration and construction of that very old wooden structure is unknown, and its structural stability is questionable, particularly if the ground around it were subjected to substantial disturbance. Following considerable discussion with Ecology regarding the data and the physical constraints of the OMSX-S-20 location, Ecology concurred to backfill the OMS excavation, which was backfilled with Parcel O sand and compacted.

The interim action for the OMS area included excavation and proper off-Site disposal of approximately 1,079 tons of soil. The excavation has been completed to meet the objectives of the second IA for the OMS area.

5.10 PM-B-6 Area

Boring PM-B-6, advanced within the eastern end of the former pulp mill (Figure 3) during the RI, had a very high soil copper concentration (278 mg/kg) at a depth of 6 feet,[17] and was identified as a hot spot in Ecology's (2017) statistical analysis of Upland Area soil data. There were no other soil sample data within 100 feet of PM-B-6, so the extent of the elevated copper in soil surrounding the boring was poorly defined (Figure 14). PM-B-6 also had soils containing mercury concentrations exceeding two times the PCL. Therefore, the COCs targeted for removal in the PM-B-6 area were copper and mercury in soil. The historical depth to groundwater in the PM-B-6 area ranges from 6 to 9 feet bgs; however, for copper and mercury, the soil PCLs are the same for saturated and unsaturated soil, so the classification of sample saturation is irrelevant for the COCs in this area.

Approximately 3 feet of CM was removed from the PM-B-6 area prior to the soil removal. Excavation of the PM-B-6 area was complicated by significant subsurface structures and features. A 4-foot-diameter wood stave pipe[18] extended east-west along the north sidewall of the excavation, at a depth of approximately 7 feet bgs. A vertical concrete wall, also running east-west, split the excavation approximately in half. Vertical timbers and previously plugged and cut pipes were observed in the western sidewall to the north of the concrete wall. In addition, a concrete structure comprised the upper 7 feet of the south sidewall. These structures and features are depicted on Figure 14 and shown in the PM-B-6 photographs in Appendix B.

Overexcavation of the PM-B-6 area was completed up to three times vertically and laterally to the east and south and five times laterally to the west, removing the targeted copper hot spot plus significantly more soil than was planned in the Work Plan. The IA for this area included excavation and proper off-Site disposal of approximately 307 tons of soil. The final lateral extent of the excavation is depicted on Figure 14, which also shows the subsurface structures and features. The excavation reached final depths ranging from 10 to 12 feet bgs. A total of 15 excavation verification samples (12 sidewall and 3 base samples) represent the final limits of the PM-B-6 area excavation (Table 15).

Concentrations of copper are below the soil PCL in all final verification samples, except for a single location where copper was reported at 37.2 mg/kg, slightly above the soil PCL of 36 mg/kg.

Concentrations of mercury in final verification samples range from nondetect at the soil PCL of 0.1 mg/kg to 0.33 mg/kg (Table 15). The soil PCL for mercury is based on the protection of groundwater discharging to surface water, based on a conservative partitioning calculation for soil leaching to groundwater and the assumption that groundwater travels more than 600 feet from the PM-B-6 area and then discharges to surface water with no attenuation. Empirical groundwater data from monitoring wells located downgradient of the PM-B-6 area indicate that the soil mercury concentrations prior to the second IA were not a source of leachable mercury to groundwater. Prior to placement of the CM, which created elevated groundwater pH and resulted in the mobilization of certain metals including mercury, concentrations of mercury were not reported above the groundwater PCL in the two nearest downgradient wells to the PM-B-6 area (wells PM-MW-2 and PM-MW-5; see locator map at bottom of Figure 14), except

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[17] The boring hit refusal at that depth and no deeper soil sample could be collected.

[18] Upstream portion of Pipe F described in Section 3.7.

for a single, marginal exceedance in one well that was not reproduced in repeated sampling.

Based on the collective information for this area, Ecology concurred to backfill the PM-B-6 excavation, which was then backfilled with Parcel O sand and compacted. The interim action for the PM-B-6 area included excavation and proper off-Site disposal of approximately 308 tons of soil. The PM-B-6 excavation has been completed to meet the objectives of the second IA.

5.11 REC5-MW-1 Area

The REC5-MW-1 area was identified as a necessary part of the second IA to address high concentrations of metals—primarily arsenic—in groundwater at that location. No elevated soil metals concentrations were detected in the area around wells REC5-MW-1/-1R; however, based on the high metals concentrations in groundwater, it was inferred that highly localized metals source material existed in their vicinity (Aspect, 2019). Based on the groundwater data, the COCs targeted for removal in the REC5-MW-1 area were arsenic, copper, and lead. The historical depth to groundwater in the REC5-MW-1 area ranged from 7 to 9 feet bgs. Therefore, verification samples collected at 7 feet and above are compared to the unsaturated soil PCLs; deeper samples are compared to the saturated soil PCLs.

Approximately 2 feet of CM was removed from the REC5-MW-1 area prior to soil removal. The REC5-MW-1 area was excavated to its initial lateral limits, depicted on Figure 15, and a total depth of 12 feet bgs. A total of 21 verification samples (18 sidewall and 3 base samples) were collected from the initial excavation limits and submitted for laboratory analysis of arsenic, copper, and lead.

The reported concentrations of arsenic, copper, and lead were below the soil PCLs in all of the initial verification samples (Table 16). Based on the data, Ecology concurred that no further excavation was required, and the excavation was then backfilled with Parcel O sand and compacted. The interim action for the REC5-MW-1 area included excavation and proper off-Site disposal of approximately 368 tons of soil. The excavation has been completed to meet the objectives of the second IA for the REC5-MW-1 area.

5.12 Fuel-Oil Line West of Warehouse

As stated in Section 3.3, during excavation and removal of the B1 catch basin, Aspect observed a deeper 4-inch steel pipe approximately 4 feet bgs and aligned generally east-west. The pipe was capped beneath the B1 catch basin and it was determined to extend no farther west. Upon removing the cap to inspect the pipe, a petroleum odor was noted. It was determined that the pipe was an abandoned fuel-oil line that historically was connected to the former petroleum bulk storage area on the north side of the Warehouse (Bunker C aboveground storage tanks [ASTs] area that was remediated during the first IA; Aspect, 2015); the pipe was not observed during that 2014 soil excavation.

That same day, the entire approximately 60-foot length of fuel pipe was removed east of the B1 catch basin. The pipe was empty of product and was in poor condition (cracks/holes present). Approximately 2 cubic yards (3 tons) of soil were removed from the trench where water leaked from the pipe during its removal. The impacted soil was temporarily stockpiled and then transported off the Site for disposal at the Subtitle D landfill. Other water in the pipe was contained and conveyed to the on-Site water treatment system for treatment and disposal.

After removal of the pipe and impacted soil, there was no field screening evidence of petroleum in the remaining trench soil. Following discussion with Ecology, the in-place soil on the trench sidewalls and base was sampled at 20-foot intervals for analysis of diesel- and oil-range TPH (Figure 16). The base samples were also analyzed for PAHs. Each of the 12 samples contained concentrations below respective PCLs (Table 17) consistent with field screening indications. Based on the data, Ecology concurred that no further excavation was needed. The trench was backfilled with Parcel O dredge sand and compacted.

6 Conclusions

The second IA achieved permanent removal of approximately 17,610 tons of contaminated material from the Upland Area and, to the extent practicable, met industrial-based soil PCLs for the contaminants targeted for removal. The quantity removed includes 17,501 tons of material excavated from twelve areas discussed in Section 5 plus 109 tons of material generated during removal of Pipes K and M described in Section 2. In some excavation areas, Ecology concurred that further excavation to remove additional exceedances was not practicable, as described in the Section 5 area-specific discussions. In addition, approximately 2.28 million gallons of groundwater were removed from the collective excavation areas for treatment, providing additional removal of contamination (in dissolved phase) from within the source areas.

All of the second IA sampling data representing in-place soil (i.e., representing current conditions) will be incorporated into the forthcoming revised draft RI/FS for the Upland Area. Residual soils with exceedances of PCLs, both within and outside of the areas addressed in the first and second IAs, will be addressed as part of the RI/FS and Cleanup Action Plan for the Upland Area.

K-C completed the second IA in close consultation with Ecology and the action fulfilled the requirements of the Work Plan. Once this report is finalized and approved by Ecology, K-C requests from Ecology written confirmation that all requirements for the second IA have been fulfilled and completed.

7 References

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Limitations

Work for this project was performed for Kimberly-Clark Worldwide, Inc. (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.

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TABLES

Table 1. Interim Action Cleanup Levels for Soil

Project No. 110207, K-C Worldwide Site Upland Area, Everett, Washington

	Soil Preliminary Cleanup Level (mg/kg)	
Analyte (By Group)	**Unsaturated Soil**	**Saturated Soil**
Total Petroleum Hydrocarbons (TPH)		
Gasoline-Range Hydrocarbons	100	100
Diesel-Range Hydrocarbons	2,000	2,000
Oil-Range Hydrocarbons	2,000	2,000
Metals		
Arsenic	20	20
Copper	36	36
Lead	1,000	81
Mercury	0.1	0.1
Nickel	48	48
Zinc	100	85
Polycyclic Aromatic Hydrocarbons (PAHs)		
Acenaphthene	23	1.2
Acenaphthylene	210,000	210,000
Anthracene	1,100,000	1,100,000
Benzo(g,h,i)perylene	110,000	110,000
Fluoranthene	140,000	140,000
Fluorene	140,000	140,000
Phenanthrene	1,100,000	1,100,000
Pyrene	110,000	110,000
1-Methylnaphthalene	4,500	4,500
2-Methylnaphthalene	13	0.63
Naphthalene	17	0.86
Carcinogenic PAHs (cPAHs)		
Total cPAHs TEQ	3.2	0.16
Polychlorinated Biphenyls (PCBs)		
Total PCBs (sum of aroclors)	2.4	0.12

Notes:

Refer to Work Plan (Aspect, 2019) for derivation of soil Preliminary Cleanup Levels (PCLs).
The PCLs for total PCBs were incorrect in the Work Plan, but were corrected during implementaiton of the interim action and correct in this table.

Table 2. Data Table Footnotes and Abbreviations

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

Notes

"--" indicates data not available

Concentrations in shaded cells indicate value exceeds the Soil Preliminary Cleanup Level (PCL) - Saturated Soil.

Concentrations shown in bold indicate value exceeds the Soil PCL - Unsaturated Soil

Soil PCLs for the interim action are shown In Table 1. Development of the PCLs is provided in the Interim Action Work Plan (Aspect, 2019)

Total cPAH benzo(a)pyrene toxic equivalent (TEQ) calcualted using compound-specific potency factors using one-half the report limit for nondetects (U=1/2) when any individual constituent is detected.

Total PCBs is sum of detected concentrations of individual Aroclors.

Table 5: [a]See laboratory analytical report in Appendix C for complete sample results, including full list semivolatile organic compounds (SVOCs) and polychlorinated biphenyls (PCBs).

Data Qualifiers

J - Analyte was positiviely identified, but the reported concentration is an estimate.

U - Analyte was not detected at or above the reported concentration.

UJ - Analyte was not detected at or above the reported estiamted detection limit.

x - For TPH analysis, the sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Abbreviations

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

FD = field duplicate

ft = identifies depth of sample collected in feet (ft) below ground surface

mg/kg = milligram per kilogram

ND = indicates individual constituents not detected above reported concentration so total concentration not calculated

OverEx = overexcavated

PAHs = polycyclic aromatic hydrocarbons

PCBs = polychlorinated biphenyls

SAT = indicates saturated soil sample; samples without this designation are unsaturated soil.

TPH = total petroleum hydrocarbons

Table 3. Overburden Soil Quality Data for Clark Nickerson Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Confirmation Samples (In Place)		
		Overburden Samples		
		CNX-W-OB-01 6/23/20	CNX-W-OB-02 6/23/20	CNX-W-OB-03 6/23/20
Metals				
Arsenic in mg/kg	20	2.57	2.77	2.32
Copper in mg/kg	36	15.9	16	15.6
Lead in mg/kg	81	3.21	2.71	2.78
Mercury in mg/kg	0.1	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	46.5	48.3	47.3
Zinc in mg/kg	85	24.3	23.3	22.7
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthene in mg/kg	1.2	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg	210,000	0.01 U	0.01 U	0.01 U
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	0.019	0.01 U	0.011
Fluorene in mg/kg	140,000	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg	1,100,000	0.013	0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.028	0.012	0.016
Naphthalene in mg/kg	0.86	0.01 U	0.01 U	0.01 U
Carcinogenic PAHs (cPAHs)				
Benz(a)anthracene in mg/kg	--	0.016	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg	--	0.014	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg	--	0.015	0.01 U	0.01 U
Benzo(k)fluoranthene in mg/kg	--	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg	--	0.016	0.01 U	0.01 U
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.16	0.0188	ND	ND
Polychlorinated Biphenyls (PCBs)				
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	ND	ND	ND

Refer to Table 2 for notes and abbreviation definitions.

Table 4. Soil Quality Data for Parcel O Sand (Import Backfill)

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

Analyte (By Group)	Soil Preliminary Cleanup Level - Unsaturated Soil	Confirmation Samples (In Place)																							
		PO-01 2/20/20	PO-02 2/20/20	PO-03 2/20/20	PO-04 2/20/20	PO-05 2/20/20	PO-06 2/20/20	PO-07 2/20/20	PO-08 2/20/20	PO-09 2/20/20	PO-10 2/20/20	PO-11 2/20/20	PO-12 2/20/20	PO-13 2/20/20	PO-14 2/20/20	PO-15 2/20/20	PO-16 2/20/20	PO-17 2/20/20	PO-18 2/20/20	PO-19 2/20/20	PO-20 2/20/20	PO-21 2/20/20	PO-22 2/20/20	PO-23 2/20/20	PO-24 2/20/20
Total Petroleum Hydrocarbons (TPH)																									
Gasoline-Range Hydrocarbons in mg/kg	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Diesel-ange Hydrocarbons in mg/kg	2,000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Residual (Oil)-Range Hydrocarbons in mg/kg	2,000	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Total TPHs in mg/kg	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals																									
Arsenic in mg/kg	20	5.73	4.44	4.29	5.11	4.1	4.38	4.1	4.73	4.81	4.99	4.36	4.88	4.57	3.68	4.35	4	4.19	4.93	4.85	4.22	5.05	4.44	4.45	5.01
Copper in mg/kg	36	13.9	11.9	13.1	13.5	11.3	12.3	11.8	12.5	12.2	13.2	12.1	11.7	12	9.62	13.9	12.8	11.2	13.1	12.5	12.4	12.6	12.2	12.1	12.8
Lead in mg/kg	1,000	3.07	2.61	2.71	2.81	2.54	2.55	2.53	2.57	2.5	2.78	2.82	2.65	3.78	2.06	2.47	2.56	2.37	2.75	2.7	2.62	2.6	2.71	2.59	2.94
Mercury in mg/kg	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	17.2	15.2	16.2	18	14.5	15.1	15.1	17.3	15.2	16.2	14.4	15.5	16.5	12.6	16.3	16	14.4	16.4	15.2	16.3	16.3	15.6	14.5	15.6
Zinc in mg/kg	100	28.9	24.8	26.9	28.1	24.1	25.1	26.1	25	25.1	26.8	24.4	25.1	25.2	22	26.4	26.4	23	27.2	25.9	25.7	28	25.1	23.8	26.8
Polycyclic Aromatic Hydrocarbons (PAHs)																									
Acenaphthene in mg/kg	23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluorene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Naphthalene in mg/kg	17	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carcinogenic PAHs (cPAHs)																									
Benz(a)anthracene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	3.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (PCBs)																									
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Refer to Table 2 for notes and abbreviation definitions.

Table 5. Excavation Verification Soil Data for BA-MW-7 Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

Analyte (By Group)	Soil Preliminary Cleanup Level - Unsaturated Soil	Confirmation Samples (In Place)			
		Sidewall Samples			
		BA-MW7X-S-01 10/5/20 (3 ft)	BA-MW7X-S-01 10/5/20 (6 ft)	BA-MW7X-S-02 10/5/20 (3 ft)	BA-MW7X-S-02 10/5/20 (6 ft)
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene in mg/kg	23	0.01 U	0.01 U	0.01 U	0.05 U
Acenaphthylene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.05 U
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.05 U
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 U	0.01 U	0.01 U	0.05 U
Fluoranthene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.05 U
Fluorene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.05 U
Phenanthrene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.05 U
Pyrene in mg/kg	110,000	0.01 U	0.01 U	0.01 U	0.05 U
1-Methylnaphthalene in mg/kg	4,500	0.01 U	0.01 U	0.01 U	0.05 U
2-Methylnaphthalene in mg/kg	13	0.01 U	0.01 U	0.01 U	0.05 U
Naphthalene in mg/kg	17	0.01 U	0.01 U	0.01 U	0.05 U
Carcinogenic PAHs (cPAHs)					
Benz(a)anthracene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.05 U
Benzo(a)pyrene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.05 U
Benzo(b)fluoranthene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.05 U
Benzo(k)fluoranthene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.05 U
Chrysene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.05 U
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.05 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.05 U
Total cPAHs TEQ in mg/kg	3.2	ND	ND	ND	ND

Refer to Table 2 for notes and abbreviation definitions.

Table 6. Excavation Verification Soil Data for Boiler/Baghouse (BBH) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Confirmation Samples (In Place)												
			Base Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-B-1 10/6/20 (10 ft) SAT	BBHX-B-2 10/16/20 (11 ft) SAT	BBHX-B-3 10/9/20 (10 ft) SAT	BBHX-B-4 10/15/20 (11 ft) SAT	BBHX-B-5 10/16/20 (11 ft) SAT	BBHX-B-6 10/9/20 (10 ft) SAT	BBHX-B-7 10/6/20 (10 ft) SAT	BBHX-B-8 10/15/20 (11 ft) SAT	BBHX-B-9 10/8/20 (10 ft) SAT	BBHX-B-10 10/6/20 (10 ft) SAT	BBHX-B-11 10/8/20 (10 ft) SAT	BBHX-B-12 10/8/20 (10 ft) SAT	BBHX-B-13 9/30/20 (10 ft) SAT
Metals															
Copper in mg/kg	36	36	16.5 J		19.2 J			12.9 J	12.2 J	17.1 J	25 U	12.8 J	15.9	14.4	13.5 J
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Zinc in mg/kg	85	100	52.4		40.5 J			27.2 J	33.7		44	30.6	49.3	29.9	29.7 J

			Confirmation Samples (In Place)												
			Base Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-B-15 10/14/20 (12 ft) SAT	BBHX-B-16 9/18/20 (10 ft) SAT	BBHX-B-17 10/2/20 (10 ft) SAT	BBHX-B-18 10/9/20 (10 ft) SAT	BBHX-B-19 10/1/20 (10 ft) SAT	BBHX-B-20 10/15/20 (11 ft) SAT	BBHX-B-21 9/21/20 (10 ft) SAT	BBHX-B-22 9/17/20 (10 ft) SAT	BBHX-B-23 10/14/20 (11 ft) SAT	BBHX-B-24 10/2/20 (11 ft) SAT	BBHX-B-25a 9/16/20 (10 ft) SAT	BBHX-B-25a 9/17/20 (10 ft) FD SAT	BBHX-B-26 9/21/20 (10 ft) SAT
Metals															
Copper in mg/kg	36	36	51.2	9.35	11.7	13.4 J	11.8	13.7	11.3	43.6	19.9 J	11.9	9.12	12	12
Mercury in mg/kg	0.1	0.1	0.3	0.1 U	0.1 U	0.1 JJ	0.1 U	0.1 U	0.1 U	0.1 JJ	0.11		0.1 U	0.1 UJ	0.1 U
Zinc in mg/kg	85	100		22.6	25.3	27.6 J	23.9		33.9	74.5			43.6	51.2	25.9

			Confirmation Samples (In Place)												
			Base Samples											Sidewall Samples	
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-B-27 9/18/20 (10 ft) SAT	BBHX-B-28 10/15/20 (11 ft) SAT	BBHX-B-29 10/7/20 (10 ft) SAT	BBHX-B-30 9/10/20 (10 ft) SAT	BBHX-B-31 9/10/20 (10 ft) SAT	BBHX-B-32 10/6/20 (10 ft) SAT	BBHX-B-33 10/7/20 (10 ft) FD SAT	BBHX-B-33 10/7/20 (10 ft) SAT	BBHX-B-34 10/5/20 (10 ft) SAT	BBHX-B-35 10/8/20 (10 ft) SAT	BBHX-B-36 9/10/20 (10 ft) SAT	BBHX-S-4 9/1/20 (4 ft)	BBHX-S-4 9/21/20 (8 ft) SAT
Metals															
Copper in mg/kg	36	36	18.9		8.74	8.89	11.4 J	18 J	11.7	9.09	25 U	11.2	19.8	23.2 J	14
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Zinc in mg/kg	85	100	37.3		29.5	24.3	27.3 J	31.5	28.5	22.7	30.9	20.5	39.3	28.4	34.2

			Confirmation Samples (In Place)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-6 9/1/20 (4 ft)	BBHX-S-6 9/21/20 (8 ft) SAT	BBHX-S-13 9/2/20 (4 ft)	BBHX-S-13 9/17/20 (8 ft) SAT	BBHX-S-14 9/2/20 (4 ft)	BBHX-S-14 9/17/20 (8 ft) SAT	BBHX-S-15 9/2/20 (4 ft)	BBHX-S-15 9/17/20 (8 ft) SAT	BBHX-S-16 9/2/20 (4 ft)	BBHX-S-16 9/16/20 (8 ft) SAT	BBHX-S-17 9/17/20 (8 ft) SAT	BBHX-S-18 9/17/20 (8 ft) SAT	BBHX-S-20 9/17/20 (8 ft) SAT
Metals															
Copper in mg/kg	36	36	15.2 J	37.1	15.2	20.1	12.8	10.7	13.7	35.6	13 J	10.1	10.6	8.37	11.8
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 U	0.1 U	0.1 JJ	0.1 U	0.1 UJ	0.1 U	0.1 JJ	0.1 U	0.1 U	0.1 UJ	0.1 UJ	0.1 JJ
Zinc in mg/kg	85	100	34.3	62.8	19.9	38.6	21.4	32.3	19.5	59.1	22.4 J	29.9	23.4	19.2	50.9

			Confirmation Samples (In Place)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-21 9/8/20 (4 ft)	BBHX-S-21 9/17/20 (8 ft) SAT	BBHX-S-22 9/8/20 (4 ft)	BBHX-S-22 9/17/20 (8 ft) SAT	BBHX-S-23 9/9/20 (4 ft)	BBHX-S-23 9/18/20 (8 ft) SAT	BBHX-S-24 9/9/20 (4 ft)	BBHX-S-24 9/18/20 (8 ft) SAT	BBHX-S-26 9/9/20 (4 ft)	BBHX-S-27 9/10/20 (8 ft) SAT	BBHX-S-28 9/10/20 (8 ft) SAT	BBHX-S-30 9/10/20 (8 ft) SAT	BBHX-S-31 9/10/20 (8 ft) SAT
Metals															
Copper in mg/kg	36	36	6.87	17.1	7.97	10.9	22.8	14.3	13.4	21.2	12.2	21.1	12	8.71	16.5
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 JJ	0.1 U	0.1 JJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Zinc in mg/kg	85	100	21.8	46.1	18.1	41.5	29.5	31.4	23.8	59.8	24.5	25.6	38.9	17	18.2

Refer to Table 2 for notes and abbreviation definitions.

Table 6. Excavation Verification Soil Data for Boiler/Baghouse (BBH) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Confirmation Samples (In Place)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-35 9/14/20 (4 ft)	BBHX-S-38 9/14/20 (4 ft)	BBHX-S-41 10/13/20 (8 ft) SAT	BBHX-S-44 9/16/20 (4 ft)	BBHX-S-46 9/16/20 (4 ft)	BBHX-S-47 9/21/20 (4 ft)	BBHX-S-48 9/21/20 (4 ft)	BBHX-S-49 9/21/20 (8 ft) SAT	BBHX-S-52 9/21/20 (8 ft) SAT	BBHX-S-53 9/21/20 (4 ft)	BBHX-S-54 9/21/20 (4 ft)	BBHX-S-55 9/21/20 (4 ft)	BBHX-S-56 9/21/20 (4 ft)
Metals															
Copper in mg/kg	36	36	21.7					6.81	7.87	20.5	9.89	12.1	17.8	24	37.8
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.15
Zinc in mg/kg	85	100			66.3			19.3	20	43	71.3	32.2	21	29.9	34.4

			Confirmation Samples (In Place)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-57 9/22/20 (4 ft)	BBHX-S-57 10/13/20 (8 ft) SAT	BBHX-S-65 10/13/20 (8 ft) SAT	BBHX-S-73 10/8/20 (4 ft)	BBHX-S-73 10/8/20 (8 ft) SAT	BBHX-S-74 10/8/20 (4 ft)	BBHX-S-74 10/8/20 (8 ft) SAT	BBHX-S-77 10/9/20 (8 ft) SAT	BBHX-S-78 10/9/20 (8 ft) SAT	BBHX-S-79 10/9/20 (8 ft) SAT	BBHX-S-80 10/9/20 (4 ft)	BBHX-S-80 10/9/20 (8 ft) SAT	BBHX-S-81 10/12/20 (4 ft)
Metals															
Copper in mg/kg	36	36	58.3		19.2 J	5 U	16	12.6	16.2		17.8 J	11.8 J	20.1 J	12.6 J	5 UJ
Mercury in mg/kg	0.1	0.1	0.15 J	0.17	0.14	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.21
Zinc in mg/kg	85	100	13.5			12.2	53.8	19.7	41.2		26 J	19.6 J	17.4 J	33.3 J	

			Confirmation Samples (In Place)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-83 10/13/20 (4 ft)	BBHX-S-84 10/13/20 (4 ft)	BBHX-S-85 10/13/20 (4 ft)	BBHX-S-85 10/13/20 (8 ft) SAT	BBHX-S-88 10/14/20 (8 ft) SAT	BBHX-S-89 10/15/20 (4 ft)	BBHX-S-90 10/15/20 (8 ft) SAT	BBHX-S-93 10/16/20 (8 ft) SAT	BBHX-S-100 10/20/20 (4 ft)	BBHX-S-101 10/21/20 (4 ft)	BBHX-S-104 10/22/20 (4 ft)	BBHX-S-105 10/22/20 (8 ft) SAT	BBHX-S-106 10/27/20 (4 ft)
Metals															
Copper in mg/kg	36	36	51.3 J		34.9 J		45.4								
Mercury in mg/kg	0.1	0.1	0.49	0.76	0.59	0.1 U		0.1 U	0.78	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.19 J
Zinc in mg/kg	85	100	220												

			Confirmation Samples (In Place)								Compliance Samples (Overexcavated)				
			Sidewall Samples	Base Samples											Sidewall Samples
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-107 10/27/20 (4 ft)	BBHX-B-2 10/7/20 (10 ft) OverEx SAT	BBHX-B-4 10/1/20 (10 ft) OverEx SAT	BBHX-B-5 10/7/20 (10 ft) OverEx SAT	BBHX-B-8 10/7/20 (10 ft) OverEx SAT	BBHX-B-15 9/23/20 (10 ft) OverEx SAT	BBHX-B-15 10/6/20 (11 ft) OverEx SAT	BBHX-B-20 10/1/20 (10 ft) OverEx SAT	BBHX-B-23 9/17/20 (10 ft) FD OverEx SAT	BBHX-B-23 9/17/20 (10 ft) OverEx SAT	BBHX-B-24 9/22/20 (10 ft) OverEx SAT	BBHX-B-28 10/6/20 (10 ft) OverEx SAT	BBHX-S-1 9/1/20 (4 ft) OverEx
Metals															
Copper in mg/kg	36	36		15.8	15.9	19	36.2	127	262 J	144	32.5	49.2	291	27.5 J	82.4 J
Mercury in mg/kg	0.1	0.1	0.44 J	0.11	0.16	0.14	0.21	0.47 J	0.72	0.65	0.1 UJ	0.13 J	0.1 U	0.12	0.36 J
Zinc in mg/kg	85	100		22.3	5 U	36.8	42.6	5 U	5 U	5 U	60.2	86.3	29.8	22.3	42.5

			Compliance Samples (Overexcavated)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-2 9/1/20 (4 ft) OverEx	BBHX-S-3 9/1/20 (4 ft) OverEx	BBHX-S-5 9/1/20 (4 ft) OverEx	BBHX-S-5 9/21/20 (8 ft) OverEx SAT	BBHX-S-7 9/1/20 (4 ft) OverEx	BBHX-S-7 9/22/20 (8 ft) OverEx SAT	BBHX-S-8 9/1/20 (4 ft) OverEx	BBHX-S-8 9/21/20 (8 ft) OverEx SAT	BBHX-S-9 9/2/20 (4 ft) OverEx	BBHX-S-9 9/23/20 (8 ft) OverEx SAT	BBHX-S-10 9/2/20 (4 ft) OverEx	BBHX-S-10 9/23/20 (8 ft) OverEx SAT	BBHX-S-11 9/2/20 (4 ft) OverEx
Metals															
Copper in mg/kg	36	36	52 J	50.3 J	22 J	656	7.27 J	428	45.6 J	29.7	28.9	5 U	31.4	24.7	12.9
Mercury in mg/kg	0.1	0.1	0.35 J	0.19 J	0.13 J	0.23	0.1 U	0.2 J	0.25 J	0.1 U	0.48	0.67 J	0.34	0.11 J	1.3
Zinc in mg/kg	85	100	58.1	31.3	26.8	68.6	5 U	22.6	61.2	144	5.31	5 U	7.25	56.5	5 U

Refer to Table 2 for notes and abbreviation definitions.

Table 6. Excavation Verification Soil Data for Boiler/Baghouse (BBH) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Compliance Samples (Overexcavated)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-12 9/2/20 (4 ft) OverEx	BBHX-S-12 9/30/20 (8 ft) OverEx SAT	BBHX-S-17 9/8/20 (4 ft) OverEx	BBHX-S-18 9/8/20 (4 ft) OverEx	BBHX-S-19 9/8/20 (4 ft) OverEx	BBHX-S-19 9/17/20 (8 ft) OverEx SAT	BBHX-S-20 9/8/20 (4 ft) FD OverEx	BBHX-S-20 9/8/20 (4 ft) OverEx	BBHX-S-25 9/9/20 (4 ft) OverEx	BBHX-S-27 9/9/20 (4 ft) OverEx	BBHX-S-28 9/9/20 (4 ft) OverEx	BBHX-S-29 9/10/20 (4 ft) OverEx	BBHX-S-29 9/10/20 (8 ft) OverEx SAT
Metals															
Copper in mg/kg	36	36	10.5	96.9 J	20.6 J	19.7	17.8 J	48.9	23.4	28.7	53	21.6	38.3	64.8	81.4
Mercury in mg/kg	0.1	0.1	2.5	1.3	0.18	0.11	0.1 U	0.1 JJ	0.37	0.3	0.19	0.36	0.19	0.42	0.3
Zinc in mg/kg	85	100	5 U	34.4 J	50.1	59.8	32.3	73.5	44.5	50.6	51.6	26.2	133	123	31.8

			Compliance Samples (Overexcavated)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-30 9/10/20 (4 ft) OverEx	BBHX-S-31 9/10/20 (4 ft) OverEx	BBHX-S-32 9/10/20 (4 ft) OverEx	BBHX-S-32 9/10/20 (8 ft) FD OverEx SAT	BBHX-S-32 9/10/20 (8 ft) OverEx SAT	BBHX-S-33 9/10/20 (4 ft) OverEx	BBHX-S-33 9/16/20 (8 ft) OverEx SAT	BBHX-S-34 9/10/20 (4 ft) OverEx	BBHX-S-34 9/10/20 (8 ft) OverEx SAT	BBHX-S-36 9/14/20 (4 ft) OverEx	BBHX-S-37 9/14/20 (4 ft) OverEx	BBHX-S-39 9/14/20 (4 ft) OverEx	BBHX-S-39 10/12/20 (8 ft) FD OverEx SAT
Metals															
Copper in mg/kg	36	36	25.6	27.7	6.66	44.6	32	15.3 J	20.5	69.1	78.8 J	25.9	46.4		
Mercury in mg/kg	0.1	0.1	0.5	0.47	0.1 U	0.1 U	0.1 U	0.86 J	0.57	1.3	0.1 U	0.11	0.14	6.6	1.1
Zinc in mg/kg	85	100	69.4	110	12.5	75.2	101	34.9 J	54.3	189	74.4 J				

			Compliance Samples (Overexcavated)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-39 10/12/20 (8 ft) OverEx SAT	BBHX-S-40 9/14/20 (4 ft) OverEx	BBHX-S-41 9/14/20 (4 ft) OverEx	BBHX-S-42 9/14/20 (4 ft) OverEx	BBHX-S-42 10/1/20 (8 ft) OverEx SAT	BBHX-S-43 9/16/20 (4 ft) OverEx	BBHX-S-45 9/16/20 (4 ft) OverEx	BBHX-S-49 9/21/20 (4 ft) OverEx	BBHX-S-49 9/21/20 (8 ft) FD OverEx SAT	BBHX-S-50 9/21/20 (4 ft) OverEx	BBHX-S-51 9/21/20 (4 ft) OverEx	BBHX-S-51 9/21/20 (8 ft) OverEx SAT	BBHX-S-58 9/23/20 (4 ft) OverEx
Metals															
Copper in mg/kg	36	36			25.3			45.7		51.6	18.7	20.4	40.1	5.96	158
Mercury in mg/kg	0.1	0.1	0.94	2.2	0.13	0.24	0.11	0.58	0.5	0.18	0.1 U	0.66	0.58	0.14	9 J
Zinc in mg/kg	85	100								114	42.4	21.3	103	12.2	120

			Compliance Samples (Overexcavated)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-59 9/23/20 (4 ft) OverEx	BBHX-S-60 9/30/20 (4 ft) FD OverEx	BBHX-S-60 9/30/20 (4 ft) OverEx	BBHX-S-60 9/30/20 (8 ft) OverEx SAT	BBHX-S-61 9/30/20 (4 ft) OverEx	BBHX-S-61 9/30/20 (8 ft) OverEx SAT	BBHX-S-62 9/30/20 (4 ft) OverEx	BBHX-S-63 9/30/20 (4 ft) OverEx	BBHX-S-64 9/30/20 (4 ft) OverEx	BBHX-S-65 10/1/20 (4 ft) OverEx	BBHX-S-66 10/1/20 (4 ft) OverEx	BBHX-S-67 10/1/20 (8 ft) OverEx SAT	BBHX-S-68 10/2/20 (8 ft) OverEx SAT
Metals															
Copper in mg/kg	36	36	89.5				42.5 J			38.5 J	52.7 J		10.6	11.5	214
Mercury in mg/kg	0.1	0.1	0.61 J	1.5	1.9	1	0.3	2	0.44	1.2	0.83	0.69	8.5	1.7	2
Zinc in mg/kg	85	100	59.1				77.7 J			112 J			5 U	5.02	

			Compliance Samples (Overexcavated)												
			Sidewall Samples												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-69 10/2/20 (4 ft) OverEx	BBHX-S-70 10/7/20 (4 ft) OverEx	BBHX-S-70 10/7/20 (8 ft) OverEx SAT	BBHX-S-71 10/7/20 (4 ft) OverEx	BBHX-S-71 10/7/20 (8 ft) OverEx SAT	BBHX-S-72 10/7/20 (4 ft) OverEx	BBHX-S-72 10/7/20 (8 ft) OverEx SAT	BBHX-S-75 10/8/20 (4 ft) OverEx	BBHX-S-75 10/9/20 (8 ft) OverEx SAT	BBHX-S-76 10/9/20 (4 ft) OverEx	BBHX-S-76 10/9/20 (8 ft) OverEx SAT	BBHX-S-78 10/9/20 (4 ft) OverEx	BBHX-S-79 10/9/20 (4 ft) OverEx
Metals															
Copper in mg/kg	36	36	26.3	33.2	25.5	82.3	17.7	45	10.1	26.5	52.4 J	29.6 J	38.5 J	24.9 J	25.1 J
Mercury in mg/kg	0.1	0.1	0.1 U	0.13	0.14	0.22	0.11	0.19	0.15	0.1 U	0.2 J	1.3 J	0.32 J	1.5 J	0.64 J
Zinc in mg/kg	85	100	27.3	62.9	53.8	35.2	124	148	10.3	34.7	86.9 J	58.3 J	68.7 J	54.2 J	53.8 J

Refer to Table 2 for notes and abbreviation definitions.

Table 6. Excavation Verification Soil Data for Boiler/Baghouse (BBH) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Compliance Samples (Overexcavated)												
			Sidewall												
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-82 10/12/20 (4 ft) OverEx	BBHX-S-86 10/13/20 (4 ft) OverEx	BBHX-S-87 10/14/20 (4 ft) OverEx	BBHX-S-91 10/16/20 (4 ft) OverEx	BBHX-S-91 10/16/20 (8 ft) OverEx SAT	BBHX-S-92 10/16/20 (4 ft) OverEx	BBHX-S-92 10/16/20 (8 ft) OverEx SAT	BBHX-S-94 10/16/20 (4 ft) OverEx	BBHX-S-94 10/16/20 (8 ft) FD OverEx SAT	BBHX-S-94 10/16/20 (8 ft) OverEx SAT	BBHX-S-95 10/16/20 (4 ft) OverEx	BBHX-S-96 10/16/20 (4 ft) OverEx	BBHX-S-97 10/16/20 (8 ft) OverEx SAT
Metals															
Copper in mg/kg	36	36	109 J			107 J					19.8 J	18.4 J			88.8 J
Mercury in mg/kg	0.1	0.1	1.7	1.7	1.1	0.64	0.13	0.42	0.2	2	0.83	0.78	2.6	0.64	0.27
Zinc in mg/kg	85	100					83.6								81.8

			Compliance Samples (Overexcavated)						
			Sidewall Samples						
Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	BBHX-S-98 10/20/20 (4 ft) OverEx	BBHX-S-99 10/20/20 (8 ft) OverEx SAT	BBHX-S-102 10/22/20 (4 ft) OverEx	BBHX-S-102 10/22/20 (8 ft) OverEx SAT	BBHX-S-103 10/22/20 (4 ft) OverEx	BBHX-S-108 10/27/20 (4 ft) OverEx	BBHX-S-109 10/28/20 (4 ft) OverEx
Metals									
Copper in mg/kg	36	36	12.5						
Mercury in mg/kg	0.1	0.1	1.3	0.4	2.1	0.1 U	0.61	12 J	5.3
Zinc in mg/kg	85	100							

Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil
Metals		
Copper in mg/kg	36	36
Mercury in mg/kg	0.1	0.1
Zinc in mg/kg	85	100

Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil
Metals		
Copper in mg/kg	36	36
Mercury in mg/kg	0.1	0.1
Zinc in mg/kg	85	100

Analyte	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil
Metals		
Copper in mg/kg	36	36
Mercury in mg/kg	0.1	0.1
Zinc in mg/kg	85	100

Refer to Table 2 for notes and abbreviation definitions.

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Confirmation Samples (In Place)										
		Base Samples										
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	CMSX-B-01 8/3/20 (6 ft) SAT	CMSX-B-02 7/30/20 (6 ft) SAT	CMSX-B-03 8/14/20 (7 ft) SAT	CMSX-B-04 7/29/20 (6 ft) SAT	CMSX-B-05 8/14/20 (7 ft) SAT	CMSX-B-06 7/28/20 (6 ft) SAT	CMSX-B-07 8/4/20 (6 ft) SAT	CMSX-B-08 8/3/20 (6 ft) SAT	CMSX-B-09 7/28/20 (6 ft) SAT	CMSX-B-10 7/28/20 (6 ft) SAT	CMSX-B-11 7/28/20 (6 ft) SAT
Polycyclic Aromatic Hydrocarbons (PAHs)												
Acenaphthene in mg/kg	1.2	0.011	0.01 U	--	0.01 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg	210,000	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 U	0.01 U	--	0.01 U	--	0.017	0.01 U	0.01 U	0.012	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	0.01 U	0.01 U	--	0.01 U	--	0.047	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluorene in mg/kg	140,000	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg	1,100,000	0.01 U	0.01 U	--	0.01 U	--	0.026	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.01 U	0.01	--	0.01 U	--	0.049	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Naphthalene in mg/kg	0.86	0.01 U	0.01 U	--	0.01 U	--	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carcinogenic PAHs (cPAHs)												
Benz(a)anthracene in mg/kg	--	0.01 U	0.01 U	--	0.01 U	--	0.026	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg	--	0.01 U	0.01 U	--	0.01 U	--	0.024	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg	--	0.01 U	0.01 U	--	0.01 U	--	0.029	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene in mg/kg	--	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg	--	0.01 U	0.01 U	--	0.01 U	--	0.035	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	0.01 U	--	0.01 U	--	0.015	0.01 U	0.01 U	0.01	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.16	ND	ND	--	ND	--	0.0324	ND	ND	0.00805	ND	ND
Polychlorinated Biphenyls (PCBs)												
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.027	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	ND	ND	ND	0.027	ND	ND	ND	ND	ND	ND	ND

Refer to Table 2 for notes and abbreviation definitions

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Confirmation Samples (In Place)											
		Base Samples											
		CMSX-B-12 7/27/20 (6 ft) SAT	CMSX-B-13 7/28/20 (6 ft) SAT	CMSX-B-14 8/12/20 (7 ft) SAT	CMSX-B-15 7/28/20 (6 ft) SAT	CMSX-B-16 8/12/20 (7 ft) SAT	CMSX-B-17 7/27/20 (6 ft) SAT	CMSX-B-18 7/17/20 (6 ft) SAT	CMSX-B-19 8/12/20 (7 ft) SAT	CMSX-B-20 8/12/20 (7 ft) SAT	CMSX-B-21 7/17/20 (6 ft) SAT	CMSX-B-22 7/17/20 (6 ft) SAT	CMSX-B-23 8/11/20 (6 ft) SAT
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	1.2	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg	210,000	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 U	0.01 U	--	0.011	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	0.01 U	0.01 U	--	0.026	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.014
Fluorene in mg/kg	140,000	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg	1,100,000	0.01 U	0.01 U	--	0.013	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.01 U	0.01 U	--	0.023	--	0.016	0.01 U	--	--	0.01 U	0.01 U	0.017
Naphthalene in mg/kg	0.86	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Carcinogenic PAHs (cPAHs)													
Benz(a)anthracene in mg/kg	--	0.01 U	0.01 U	--	0.013	--	0.011	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg	--	0.01 U	0.01 U	--	0.016	--	0.012	0.01 U	--	--	0.01 U	0.01 U	0.012
Benzo(b)fluoranthene in mg/kg	--	0.01 U	0.01 U	--	0.02	--	0.012	0.01 U	--	--	0.01 U	0.01 U	0.013
Benzo(k)fluoranthene in mg/kg	--	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg	--	0.01 U	0.01 U	--	0.019	--	0.015	0.01 U	--	--	0.01 U	0.01 U	0.012
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	0.01 U	--	0.01 U	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	0.01 U	--	0.011	--	0.01 U	0.01 U	--	--	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.16	ND	ND	--	0.0216	--	0.016	ND	--	--	ND	ND	0.0154
Polychlorinated Biphenyls (PCBs)													
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Refer to Table 2 for notes and abbreviation definitions

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Confirmation Samples (In Place)											
		Base Samples											
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	CMSX-B-24 8/13/20 (7 ft) SAT	CMSX-B-25 7/16/20 (6 ft) SAT	CMSX-B-26 7/13/20 (6 ft) SAT	CMSX-B-27 8/25/20 (8 ft) SAT	CMSX-B-28 8/25/20 (9 ft) SAT	CMSX-B-29 8/13/20 (7 ft) SAT	CMSX-B-30 8/25/20 (8 ft) SAT	CMSX-B-31 8/4/20 (7 ft) SAT	CMSX-B-32 7/14/20 (6 ft) SAT	CMSX-B-33 8/13/20 (7 ft) SAT	CMSX-B-34 7/10/20 (6 ft) SAT	CMSX-B-35 7/9/20 (6 ft) SAT
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	1.2	--	0.01 U	0.01	--	0.053	0.12	0.01 U	--	0.01 U	--	0.01 U	0.41
Acenaphthylene in mg/kg	210,000	--	0.01 U	0.01	--	0.01 U	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Anthracene in mg/kg	1,100,000	--	0.01 U	0.01	--	0.044	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Benzo(g,h,i)perylene in mg/kg	110,000	--	0.01 U	0.01	--	0.01 U	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Fluoranthene in mg/kg	140,000	--	0.01 U	0.01	--	0.016	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.074
Fluorene in mg/kg	140,000	--	0.01 U	0.01	--	0.04	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.077
Phenanthrene in mg/kg	1,100,000	--	0.01 U	0.01	--	0.045	0.055	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Pyrene in mg/kg	110,000	--	0.01 U	0.01	--	0.073	0.14	0.01 U	--	0.01 U	--	0.01 U	0.07
Naphthalene in mg/kg	0.86	--	0.01 U	0.01	--	0.01 U	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Carcinogenic PAHs (cPAHs)													
Benz(a)anthracene in mg/kg	--	--	0.01 U	0.01	--	0.01 U	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Benzo(a)pyrene in mg/kg	--	--	0.01 U	0.01	--	0.01 U	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Benzo(b)fluoranthene in mg/kg	--	--	0.01 U	0.01	--	0.01 U	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Benzo(k)fluoranthene in mg/kg	--	--	0.01 U	0.01	--	0.01 U	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Chrysene in mg/kg	--	--	0.01 U	0.01	--	0.01 U	0.051	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Dibenzo(a,h)anthracene in mg/kg	--	--	0.01 U	0.01	--	0.01 U	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	--	0.01 U	0.01	--	0.01 U	0.05 U	0.01 U	--	0.01 U	--	0.01 U	0.05 U
Total cPAHs TEQ in mg/kg	0.16	--	ND	0.0151	--	ND	0.038	ND	--	ND	--	ND	ND
Polychlorinated Biphenyls (PCBs)													
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.024	0.02 U	0.02 U	0.02 U	0.035	0.02 U	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.028	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	ND	ND	ND	ND	ND	0.024	ND	ND	ND	0.063	ND	ND

Refer to Table 2 for notes and abbreviation definitions

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Confirmation Samples (In Place)											
		Base Samples		Sidewall Samples									
		CMSX-B-37 7/10/20 (6 ft) SAT	CMSX-B-38 8/25/20 (7 ft) SAT	CMSX-S-02 7/9/20 (4 ft) SAT	CMSX-S-03 7/9/20 (4 ft) SAT	CMSX-S-05 7/9/20 (4 ft) SAT	CMSX-S-06 7/10/20 (4 ft) SAT	CMSX-S-07 7/10/20 (4 ft) FD SAT	CMSX-S-07 7/10/20 (4 ft) SAT	CMSX-S-12 7/17/20 (4 ft) SAT	CMSX-S-13 7/27/20 (4 ft) SAT	CMSX-S-14 7/27/20 (4 ft) SAT	CMSX-S-15 7/27/20 (4 ft) SAT
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	1.2	0.01 U	--	0.02	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg	210,000	0.01 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene in mg/kg	1,100,000	0.01 U	--	0.01 U	0.01 U	0.026	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 U	--	0.016	0.01 U	0.029	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	0.01 U	--	0.025	0.01 U	0.13	0.014	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U
Fluorene in mg/kg	140,000	0.01 U	--	0.01 U	0.01 U	0.01	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg	1,100,000	0.01 U	--	0.014	0.01 U	0.1	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.01 U	--	0.022	0.01 U	0.13	0.011	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.01 U
Naphthalene in mg/kg	0.86	0.01 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carcinogenic PAHs (cPAHs)													
Benz(a)anthracene in mg/kg	--	0.01 U	--	0.01 U	0.01 U	0.056	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg	--	0.01 U	--	0.011	0.01 U	0.053	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg	--	0.01 U	--	0.019	0.01 U	0.064	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene in mg/kg	--	0.01 U	--	0.01 U	0.01 U	0.026	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg	--	0.01 U	--	0.013	0.01 U	0.062	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	--	0.014	0.01 U	0.033	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.16	ND	--	0.0159	ND	0.072	ND	ND	ND	0.0181	ND	ND	ND
Polychlorinated Biphenyls (PCBs)													
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Refer to Table 2 for notes and abbreviation definitions

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Confirmation Samples (In Place)											
		Sidewall Samples											
Analyte (By Group)	**Soil Preliminary Cleanup Level - Saturated Soil**	**CMSX-S-16 7/27/20 (4 ft) FD SAT**	**CMSX-S-16 7/27/20 (4 ft) SAT**	**CMSX-S-17 7/27/20 (4 ft) SAT**	**CMSX-S-18 7/27/20 (4 ft) SAT**	**CMSX-S-19 7/27/20 (4 ft) SAT**	**CMSX-S-20 7/27/20 (4 ft) SAT**	**CMSX-S-21 7/28/20 (4 ft) SAT**	**CMSX-S-22 7/28/20 (4 ft) SAT**	**CMSX-S-23 7/28/20 (4 ft) SAT**	**CMSX-S-24 7/29/20 (4 ft) SAT**	**CMSX-S-25 7/30/20 (4 ft) SAT**	**CMSX-S-26 8/3/20 (4 ft) SAT**
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	1.2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluorene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Naphthalene in mg/kg	0.86	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carcinogenic PAHs (cPAHs)													
Benz(a)anthracene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (PCBs)													
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.033	0.028	0.03	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021	0.02 U	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	ND	ND	ND	ND	ND	ND	ND	ND	0.054	0.028	0.03	ND

Refer to Table 2 for notes and abbreviation definitions

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Confirmation Samples (In Place)											
		Sidewall Samples											
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	CMSX-S-27 8/3/20 (4 ft) SAT	CMSX-S-32 8/11/20 (4 ft) SAT	CMSX-S-35 8/11/20 (4 ft) SAT	CMSX-S-36 8/19/20 (4 ft) SAT	CMSX-S-43 8/25/20 (4 ft) SAT	CMSX-S-44 8/25/20 (4 ft) SAT	CMSX-S-46 8/26/20 (4 ft) SAT	CMSX-S-47 8/26/20 (4 ft) SAT	CMSX-S-48 8/31/20 (4 ft) SAT	CMSX-S-49 8/31/20 (4 ft) SAT	CMSX-S-50 8/31/20 (4 ft) FD SAT	CMSX-S-50 8/31/20 (4 ft) SAT
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	1.2	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene in mg/kg	210,000	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Anthracene in mg/kg	1,100,000	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene in mg/kg	110,000	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene in mg/kg	140,000	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Fluorene in mg/kg	140,000	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene in mg/kg	1,100,000	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Pyrene in mg/kg	110,000	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Naphthalene in mg/kg	0.86	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Carcinogenic PAHs (cPAHs)													
Benz(a)anthracene in mg/kg	--	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene in mg/kg	--	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene in mg/kg	--	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene in mg/kg	--	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Chrysene in mg/kg	--	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene in mg/kg	--	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Total cPAHs TEQ in mg/kg	0.16	ND	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs)													
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.043	0.02 U	0.02 U	0.2	0.14	0.02 U	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.026	0.02 U	0.02 U	0.02 U	0.16	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	ND	ND	ND	ND	ND	0.069	ND	ND	0.2	0.3	ND	ND

Refer to Table 2 for notes and abbreviation definitions

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Compliance Samples (Overexcavated)											
		Base Samples											
Analyte (By Group)	**Soil Preliminary Cleanup Level - Saturated Soil**	**CMSX-B-03 7/29/20 (6 ft) OverEx SAT**	**CMSX-B-05 7/28/20 (6 ft) OverEx SAT**	**CMSX-B-14 7/28/20 (6 ft) OverEx SAT**	**CMSX-B-16 7/27/20 (6 ft) OverEx SAT**	**CMSX-B-19 7/17/20 (6 ft) OverEx SAT**	**CMSX-B-20 7/17/20 (6 ft) OverEx SAT**	**CMSX-B-23 8/11/20 (6 ft) FD OverEx SAT**	**CMSX-B-24 7/16/20 (6 ft) OverEx SAT**	**CMSX-B-27 7/13/20 (6 ft) OverEx SAT**	**CMSX-B-27 8/11/20 OverEx (7 ft) SAT**	**CMSX-B-28 7/14/20 (6 ft) OverEx SAT**	**CMSX-B-29 7/14/20 (6 ft) OverEx SAT**
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	1.2	0.05 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01	--	5.7	0.28
Acenaphthylene in mg/kg	210,000	0.05 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01	--	1 U	0.05 U
Anthracene in mg/kg	1,100,000	0.05 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01	--	12	0.43
Benzo(g,h,i)perylene in mg/kg	110,000	0.05 U	0.025	0.01 U	0.05 U	0.01 U	0.015	0.01 U	0.05 U	0.01	--	2	0.13
Fluoranthene in mg/kg	140,000	0.076	0.059	0.023	0.05 U	0.01 U	0.013	0.01 U	0.14	0.01	--	3.6	0.3
Fluorene in mg/kg	140,000	0.05 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01	--	8.9	0.36
Phenanthrene in mg/kg	1,100,000	0.05 U	0.029	0.017	0.05 U	0.01 U	0.01 U	0.01 U	0.12	0.01	--	41	1.5
Pyrene in mg/kg	110,000	0.078	0.071	0.021	0.05 U	0.01 U	0.021	0.01 U	0.19	0.01	--	29	1.4
Naphthalene in mg/kg	0.86	0.05 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01	--	1.4	0.05 U
Carcinogenic PAHs (cPAHs)													
Benz(a)anthracene in mg/kg	--	0.05 U	0.035	0.01 U	0.05 U	0.01 U	0.017	0.01 U	0.091	0.01	--	8.1	0.41
Benzo(a)pyrene in mg/kg	--	0.05 U	0.038	0.011	0.05 U	0.01 U	0.023	0.01 U	0.08	0.01	--	5.1	0.28
Benzo(b)fluoranthene in mg/kg	--	0.05 U	0.047	0.016	0.05 U	0.01 U	0.026	0.01 U	0.081	0.01	--	1.8	0.15
Benzo(k)fluoranthene in mg/kg	--	0.05 U	0.015	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01	--	1 U	0.05 U
Chrysene in mg/kg	--	0.05 U	0.04	0.013	0.05 U	0.01 U	0.023	0.01 U	0.11	0.01	--	11	0.56
Dibenzo(a,h)anthracene in mg/kg	--	0.05 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01	--	1 U	0.05 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.05 U	0.025	0.01 U	0.05 U	0.01 U	0.014	0.01 U	0.05 U	0.01	--	1 U	0.053
Total cPAHs TEQ in mg/kg	0.16	ND	0.0511	0.0147	ND	ND	0.0299	ND	0.106	0.0151	--	6.35	0.352
Polychlorinated Biphenyls (PCBs)													
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.38	0.16	0.51	0.18	0.19	0.13	0.02 U	0.33	0.25	0.18	0.53	0.069
Aroclor 1260 in mg/kg	--	0.22	0.061	0.32	0.11	0.19	0.13	0.02 U	0.25 J	0.27	0.13	0.31	0.039
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	0.6	0.221	0.83	0.29	0.38	0.26	ND	0.58	0.66	0.31	0.84	0.108

Refer to Table 2 for notes and abbreviation definitions

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Compliance Samples (Overexcavated)											
		Base Samples							Sidewall Samples				
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	CMSX-B-30 7/14/20 (6 ft) OverEx SAT	CMSX-B-30 8/4/20 (7 ft) OverEx FD SAT	CMSX-B-30 8/4/20 OverEx (7 ft) SAT	CMSX-B-31 7/13/20 (6 ft) OverEx SAT	CMSX-B-33 7/14/20 (6 ft) OverEx SAT	CMSX-B-36 7/9/20 (6 ft) OverEx SAT	CMSX-B-38 7/9/20 (6 ft) OverEx SAT	CMSX-S-01 7/9/20 (4 ft) OverEx SAT	CMSX-S-04 7/9/20 (4 ft) OverEx SAT	CMSX-S-08 7/10/20 (4 ft) OverEx SAT	CMSX-S-09 7/13/20 (4 ft) OverEx SAT	CMSX-S-10 7/13/20 (4 ft) OverEx SAT
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	1.2	0.077	0.12	0.028	0.05	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01	0.01
Acenaphthylene in mg/kg	210,000	0.05 U	0.01 U	0.01 U	0.05	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01	0.01
Anthracene in mg/kg	1,100,000	0.15	1.6	0.042	0.05	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01	0.01
Benzo(g,h,i)perylene in mg/kg	110,000	0.21	0.17	0.05	0.05	0.073	0.05 U	0.021	0.05 U	0.05 U	0.011	0.023	0.012
Fluoranthene in mg/kg	140,000	0.68	0.83	0.26	0.05	0.21	0.061	0.044	0.077	0.098	0.022	0.061	0.014
Fluorene in mg/kg	140,000	0.097	0.6	0.027	0.05	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01	0.01
Phenanthrene in mg/kg	1,100,000	0.61	1.5	0.12	0.05	0.16	0.05 U	0.035	0.05 U	0.05 U	0.01 U	0.038	0.01
Pyrene in mg/kg	110,000	0.73	0.84	0.24	0.05	0.17	0.064	0.055	0.073	0.091	0.025	0.054	0.017
Naphthalene in mg/kg	0.86	0.11	0.13	0.021	0.05	0.05 U	0.05 U	0.011	0.05 U	0.05 U	0.01 U	0.012	0.01
Carcinogenic PAHs (cPAHs)													
Benz(a)anthracene in mg/kg	--	0.39	0.52	0.1	0.05	0.091	0.05 U	0.019	0.05 U	0.057	0.017	0.028	0.012
Benzo(a)pyrene in mg/kg	--	0.37	0.45	0.096	0.05	0.071	0.05 U	0.018	0.05 U	0.052	0.017	0.03	0.014
Benzo(b)fluoranthene in mg/kg	--	0.39	0.48	0.11	0.05	0.11	0.055	0.036	0.061	0.095	0.02	0.043	0.018
Benzo(k)fluoranthene in mg/kg	--	0.13	0.17	0.044	0.05	0.05 U	0.05 U	0.013	0.05 U	0.05 U	0.01 U	0.014	0.01
Chrysene in mg/kg	--	0.47	0.81	0.12	0.05	0.11	0.05 U	0.031	0.05 U	0.071	0.018	0.037	0.014
Dibenzo(a,h)anthracene in mg/kg	--	0.061	0.06	0.013	0.05	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01	0.01
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.22	0.2	0.051	0.05	0.058	0.05 U	0.02	0.05 U	0.05 U	0.011	0.022	0.011
Total cPAHs TEQ in mg/kg	0.16	0.494	0.601	0.129	0.0755	0.103	0.0408	0.0276	0.0414	0.0754	0.023	0.0421	0.0202
Polychlorinated Biphenyls (PCBs)													
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02
Aroclor 1254 in mg/kg	--	0.03	0.12	0.042	0.61	0.49	9	0.44	0.08	0.16	0.25	2	0.11
Aroclor 1260 in mg/kg	--	0.02 U	0.12	0.025	0.59	0.28	6	0.24	0.053 J	0.069	0.17	1.8	0.11
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02
Total PCBs (Sum of Aroclors) in mg/kg	0.12	0.03	0.24	0.067	1.34	0.77	15.0	0.68	0.133	0.229	0.42	3.94	0.36

Refer to Table 2 for notes and abbreviation definitions

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Compliance Samples (Overexcavated)											
		Sidewall Samples											
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	CMSX-S-11 7/17/20 (4 ft) OverEx SAT	CMSX-S-28 8/3/20 (4 ft) OverEx SAT	CMSX-S-29 8/4/20 (4 ft) OverEx SAT	CMSX-S-30 8/5/20 (4 ft) OverEx SAT	CMSX-S-31 8/5/20 (4 ft) OverEx SAT	CMSX-S-33 8/11/20 (4 ft) OverEx SAT	CMSX-S-34 8/11/20 (4 ft) OverEx SAT	CMSX-S-37 8/19/20 (4 ft) OverEx SAT	CMSX-S-38 8/19/20 (4 ft) OverEx SAT	CMSX-S-39 8/19/20 (4 ft) OverEx SAT	CMSX-S-40 8/20/20 (4 ft) OverEx SAT	CMSX-S-41 8/25/20 (4 ft) FD OverEx SAT
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	1.2	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Acenaphthylene in mg/kg	210,000	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Anthracene in mg/kg	1,100,000	0.01 U	0.05 U	0.05 U	0.01 U	0.013	--	--	--	--	--	--	--
Benzo(g,h,i)perylene in mg/kg	110,000	0.012	0.05 U	0.05 U	0.012	0.026	--	--	--	--	--	--	--
Fluoranthene in mg/kg	140,000	0.023	0.05 U	0.096	0.022	0.088	--	--	--	--	--	--	--
Fluorene in mg/kg	140,000	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Phenanthrene in mg/kg	1,100,000	0.016	0.05 U	0.05 U	0.028	0.05	--	--	--	--	--	--	--
Pyrene in mg/kg	110,000	0.026	0.061	0.09	0.031	0.1	--	--	--	--	--	--	--
Naphthalene in mg/kg	0.86	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Carcinogenic PAHs (cPAHs)													
Benz(a)anthracene in mg/kg	--	0.017	0.05 U	0.051	0.015	0.052	--	--	--	--	--	--	--
Benzo(a)pyrene in mg/kg	--	0.017	0.05	0.053	0.02	0.055	--	--	--	--	--	--	--
Benzo(b)fluoranthene in mg/kg	--	0.022	0.058	0.077	0.022	0.064	--	--	--	--	--	--	--
Benzo(k)fluoranthene in mg/kg	--	0.01 U	0.05 U	0.05 U	0.01 U	0.022	--	--	--	--	--	--	--
Chrysene in mg/kg	--	0.025	0.066	0.073	0.025	0.062	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.011	0.05 U	0.05 U	0.012	0.029	--	--	--	--	--	--	--
Total cPAHs TEQ in mg/kg	0.16	0.0233	0.0665	0.074	0.0262	0.0728	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs)													
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.086	0.2	0.43	0.13	0.078	0.087	0.38	0.29	0.13	0.098	0.17	0.17
Aroclor 1260 in mg/kg	--	0.09	0.17	0.29	0.1	0.077	0.069	0.33	0.26	0.081	0.075	0.14	0.18
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	0.176	0.37	0.72	0.23	0.155	0.156	0.71	0.55	0.211	0.173	0.31	0.35

Refer to Table 2 for notes and abbreviation definitions

Table 7. Excavation Verification Soil Data for Central Maintenance Shop (CMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Compliance Samples (Overexcavated)		
		Sidewall Samples		
		CMSX-S-41 8/25/20 (4 ft) OverEx SAT	CMSX-S-42 8/25/20 (4 ft) OverEx SAT	CMSX-S-45 8/26/20 (4 ft) OverEx SAT
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthene in mg/kg	1.2	--	--	--
Acenaphthylene in mg/kg	210,000	--	--	--
Anthracene in mg/kg	1,100,000	--	--	--
Benzo(g,h,i)perylene in mg/kg	110,000	--	--	--
Fluoranthene in mg/kg	140,000	--	--	--
Fluorene in mg/kg	140,000	--	--	--
Phenanthrene in mg/kg	1,100,000	--	--	--
Pyrene in mg/kg	110,000	--	--	--
Naphthalene in mg/kg	0.86	--	--	--
Carcinogenic PAHs (cPAHs)				
Benz(a)anthracene in mg/kg	--	--	--	--
Benzo(a)pyrene in mg/kg	--	--	--	--
Benzo(b)fluoranthene in mg/kg	--	--	--	--
Benzo(k)fluoranthene in mg/kg	--	--	--	--
Chrysene in mg/kg	--	--	--	--
Dibenzo(a,h)anthracene in mg/kg	--	--	--	--
Indeno(1,2,3-cd)pyrene in mg/kg	--	--	--	--
Total cPAHs TEQ in mg/kg	0.16	--	--	--
Polychlorinated Biphenyls (PCBs)				
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.21	4.7	0.64
Aroclor 1260 in mg/kg	--	0.23	5.3	0.66
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	0.12	0.44	10.0	1.3

Refer to Table 2 for notes and abbreviation definitions

Table 8. Excavation Verification Soil Data for Bunker Oil Fuel Pipes Removal in CMS Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Confirmation Samples (In Place)											
			Base Samples					Sidewall Samples						
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	CMSB1X-B-01 8/26/20 (6 ft) SAT	CMSB1X-B-02 8/27/20 (6 ft) SAT	CMSB1X-B-03 8/27/20 (6 ft) SAT	CMSB2X-B-01 8/20/20 (7 ft) SAT	CMSB2X-B-02 8/20/20 (7.5 ft) SAT	CMSB1X-S-01 8/26/20 (4 ft) SAT	CMSB1X-S-02 8/26/20 (4 ft) SAT	CMSB1X-S-03 8/27/20 (4 ft) SAT	CMSB1X-S-04 8/27/20 (4 ft) SAT	CMSB1X-S-05 8/27/20 (4 ft) SAT	CMSB2X-S-01 8/19/20 (4 ft) SAT	CMSB2X-S-02 8/19/20 (4 ft) SAT
Total Petroleum Hydrocarbons (TPH)														
Diesel-Range Hydrocarbons in mg/kg	2,000	2,000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Residual (Oil)-Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Total TPH in mg/kg	2,000	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polycyclic Aromatic Hydrocarbons (PAHs)														
Acenaphthene in mg/kg	1.2	23	0.017	0.084	0.01 U	0.011	0.03	--	--	--	--	--	--	--
Acenaphthylene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Anthracene in mg/kg	1,100,000	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Benzo(g,h,i)perylene in mg/kg	110,000	110,000	0.01 U	0.011	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Fluoranthene in mg/kg	140,000	140,000	0.017	0.042	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Fluorene in mg/kg	140,000	140,000	0.01 U	0.014	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Phenanthrene in mg/kg	1,100,000	1,100,000	0.01 U	0.019	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Pyrene in mg/kg	110,000	110,000	0.014	0.044	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Naphthalene in mg/kg	0.86	17	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Carcinogenic PAHs (cPAHs)														
Benz(a)anthracene in mg/kg	--	--	0.01 U	0.015	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Benzo(a)pyrene in mg/kg	--	--	0.01 U	0.016	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Benzo(b)fluoranthene in mg/kg	--	--	0.01 U	0.02	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Benzo(k)fluoranthene in mg/kg	--	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Chrysene in mg/kg	--	--	0.01 U	0.014	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene in mg/kg	--	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene in mg/kg	--	--	0.01 U	0.011	0.01 U	0.01 U	0.01 U	--	--	--	--	--	--	--
Total cPAHs TEQ in mg/kg	0.16	3.2	ND	0.0217	ND	ND	ND	--	--	--	--	--	--	--

Refer to Table 2 for notes and abbreviation definitions.

Table 9. Excavation Verification Soil Data for Clark Nickerson Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

Clark Nickerson Area: East

		Confirmation Samples (In Place)										
		Base Samples			Sidewall Samples							
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	CNX-E-B-01 6/24/20 (6 ft) SAT	CNX-E-B-02 6/24/20 (6 ft) SAT	CNX-E-B-03 6/24/20 (6 ft) SAT	CNX-E-S-01 6/24/20 (3 ft) SAT	CNX-E-S-02 6/24/20 (3 ft) SAT	CNX-E-S-03 6/24/20 (3 ft) SAT	CNX-E-S-04 6/24/20 (3 ft) SAT	CNX-E-S-05 6/24/20 (3 ft) SAT	CNX-E-S-06 6/24/20 (3 ft) SAT	CNX-E-S-07 6/24/20 (3 ft) SAT	CNX-E-S-08 6/24/20 (3 ft) SAT
Polycyclic Aromatic Hydrocarbons (PAHs)												
Acenaphthene in mg/kg	1.2	0.28	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene in mg/kg	1,100,000	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 U	0.01 U	0.01 U	0.01 U	0.036	0.015	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	0.07	0.019	0.016	0.012	0.12	0.055	0.01 U	0.011	0.01 U	0.01 U	0.028
Fluorene in mg/kg	140,000	0.14	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg	1,100,000	0.072	0.011	0.01 U	0.01 U	0.044	0.019	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.059	0.018	0.013	0.011	0.12	0.051	0.01 U	0.011	0.01 U	0.01 U	0.026
Naphthalene in mg/kg	0.86	0.27	0.022	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carcinogenic PAHs (cPAHs)												
Benz(a)anthracene in mg/kg	--	0.012	0.01 U	0.01 U	0.01 U	0.057	0.029	0.01 U	0.01 U	0.01 U	0.01 U	0.014
Benzo(a)pyrene in mg/kg	--	0.011	0.01 U	0.01 U	0.01 U	0.065	0.032	0.01 U	0.01 U	0.01 U	0.01 U	0.011
Benzo(b)fluoranthene in mg/kg	--	0.012	0.01 U	0.01 U	0.01 U	0.081	0.037	0.01 U	0.01 U	0.01 U	0.01 U	0.011
Benzo(k)fluoranthene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.026	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg	--	0.012	0.01 U	0.01 U	0.01 U	0.069	0.031	0.01 U	0.01 U	0.01 U	0.01 U	0.013
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	0.01 U	0.01 U	0.01 U	0.042	0.019	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.16	0.015	ND	ND	ND	0.0868	0.0425	ND	ND	ND	ND	0.0151

Clark Nickerson Area: West

		Confirmation Samples (In Place)												Confirmation Sample (Overexcavated)
		Base Samples			Sidewall Samples									Base Sample
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	CNX-W-B-01 6/23/20 (6 ft) SAT	CNX-W-B-02 6/23/20 (6 ft) SAT	CNX-W-B-03 6/29/20 (7 ft) SAT	CNX-W-S-01 6/23/20 (5 ft) SAT	CNX-W-S-02 6/23/20 (5 ft) SAT	CNX-W-S-03 6/23/20 (5 ft) FD SAT	CNX-W-S-03 6/23/20 (5 ft) SAT	CNX-W-S-04 6/23/20 (5 ft) SAT	CNX-W-S-05 6/23/20 (5 ft) SAT	CNX-W-S-06 6/23/20 (5 ft) SAT	CNX-W-S-07 6/23/20 (5 ft) SAT	CNX-W-S-08 6/23/20 (5 ft) SAT	CNX-W-B-03 6/23/20 (6 ft) OverEx SAT
Polycyclic Aromatic Hydrocarbons (PAHs)														
Acenaphthene in mg/kg	1.2	0.01 U	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	0.027	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.026
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 U	0.01 U	0.12	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.15
Fluoranthene in mg/kg	140,000	0.019	0.01 U	0.32	0.01 U	0.01 U	0.022	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.35
Fluorene in mg/kg	140,000	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01
Phenanthrene in mg/kg	1,100,000	0.01 U	0.01 U	0.13	0.01 U	0.01 U	0.019	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.16
Pyrene in mg/kg	110,000	0.022	0.011	0.32	0.01 U	0.01 U	0.025	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.38
Naphthalene in mg/kg	0.86	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carcinogenic PAHs (cPAHs)														
Benz(a)anthracene in mg/kg	--	0.01	0.01 U	0.17	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.16
Benzo(a)pyrene in mg/kg	--	0.012	0.01 U	0.28	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.22
Benzo(b)fluoranthene in mg/kg	--	0.013	0.01 U	0.34	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.27
Benzo(k)fluoranthene in mg/kg	--	0.01 U	0.01 U	0.098	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.076
Chrysene in mg/kg	--	0.012	0.01 U	0.2	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.19
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	0.01 U	0.027	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.03
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	0.01 U	0.15	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.16
Total cPAHs TEQ in mg/kg	0.16	0.0159	ND	0.361	ND	ND	0.0176	ND	ND	ND	ND	ND	ND	0.292

Refer to Table 2 for notes and abbreviation definitions.

Table 10. Excavation Verification Soil Quality Data for Digester Trench Excavation

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

				Confirmation Samples (In Place)							
			Excavated Oily Material	Base Samples							Sidewall Sample
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	B2-01[a] 9/1/20 (N/A) SAT	DTX-B-02 10/2/20 (8 ft) SAT	DTX-B-03 10/2/20 (8 ft) SAT	DTX-B-04 10/2/20 (8 ft) SAT	DTX-B-05 10/2/20 (8 ft) FD SAT	DTX-B-05 10/2/20 (8 ft) SAT	DTX-B-06 10/28/20 (8 ft)	DTX-B2-Trench-01 9/25/20 (8 ft) SAT	DTX-S-01 10/28/20 (4 ft)
Total Petroleum Hydrocarbons (TPH)											
Diesel-Range Hydrocarbons in mg/kg	2,000	2,000	5,900 x	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Residual (Oil)-Range Hydrocarbons in mg/kg	2,000	2,000	24,000	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Total TPHs in mg/kg	2,000	2,000	29,900	ND	ND	ND	ND	ND	--	ND	--
Metals											
Arsenic in mg/kg	20	20	4.64	--	--	--	--	--	--	--	--
Barium in mg/kg	--	--	59.3	--	--	--	--	--	--	--	--
Cadmium in mg/kg	--	--	2.33	--	--	--	--	--	--	--	--
Copper in mg/kg	36	36	267	25 U	39.6	26.8	51	45.2	25 U	40.1	48.2
Lead in mg/kg	1,000	1,000	304	7.47	11.4	31.2	13.7	12.7	5.66	19.4	8.6
TCLP Lead in mg/L	--	--	1 U	--	--	--	--	--	--	--	--
Mercury in mg/kg	0.1	0.1	3.9	0.1 U	0.16	0.1 U	0.2	0.14	0.1 U	0.12	0.15
Selenium in mg/kg	--	--	2 U	--	--	--	--	--	--	--	--
Silver in mg/kg	--	--	2 U	--	--	--	--	--	--	--	--
Zinc in mg/kg	100	100	317	44.4	52.9	46.7	65.5	55.4	43.2	61.8	25 U

Refer to Table 2 for notes and abbreviation definitions.

Table 11. Excavation Verification Soil Data for GFB12 Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Confirmation Samples (In Place)										
			Base Samples			Sidewall Samples							
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	GFB12X-B-01 10/20/20 (8 ft) SAT	GFB12X-B-02 10/21/20 (8 ft) SAT	GFB12X-B-03 10/21/20 (8 ft) SAT	GFB12X-S-03 10/15/20 (4 ft)	GFB12X-S-09 10/20/20 (4 ft)	GFB12X-S-10 10/20/20 (4 ft)	GFB12X-S-11 10/20/20 (4 ft)	GFB12X-S-12 10/20/20 (4 ft)	GFB12X-S-13 10/21/20 (4 ft)	GFB12X-S-14 10/21/20 (4 ft)	GFB12X-S-18 11/4/20 (4 ft)
Metals													
Mercury in mg/kg	0.1	0.1	0.1 U	0.12	0.2	0.1 U	**0.19**	0.1 U	0.1 U	**0.11**	**0.19**	**0.22**	**0.75**

			Compliance Samples (Overexcavated)													Compliance Samples (Overexcavated)		
			Base Samples		Sidewall Samples											Precharacterization Test Pit Samples		
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	GFB12X-B-01 10/15/20 (6 ft) OverEx	GFB12X-B-02 10/15/20 (6 ft) OverEx	GFB12X-S-01 10/15/20 (4 ft) OverEx	GFB12X-S-02 10/15/20 (4 ft) OverEx	GFB12X-S-04 10/15/20 (4 ft) OverEx	GFB12X-S-05 10/15/20 (4 ft) OverEx	GFB12X-S-06 10/15/20 (4 ft) FD OverEx	GFB12X-S-06 10/15/20 (4 ft) OverEx	GFB12X-S-07 10/15/20 (4 ft) OverEx	GFB12X-S-08 10/15/20 (4 ft) OverEx	GFB12X-S-15 10/21/20 (4 ft) OverEx	GFB12X-S-16 10/29/20 (4 ft) OverEx	GFB12X-S-17 11/3/20 (4 ft) OverEx	GFB12X-TP-01 8/11/20 (5 ft) OverEx	GFB12X-TP-02 8/11/20 (5 ft) OverEx	GFB12X-TP-03 8/11/20 (5 ft) OverEx
Metals																		
Mercury in mg/kg	0.1	0.1	**0.26**	**1.5**	**6.1**	**1.2**	**0.28**	**0.27**	**1.3**	**1.2**	**0.35**	**0.2**	**0.5**	**1.2**	**1.1**	**0.33** J	**0.43** J	**0.48** J

Refer to Table 2 for notes and abbreviation definitions.

Table 12. Excavation Verification Soil Data for Hydraulic Barker Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Confirmation Samples (In Place)																		Compliance Samples (Overexcavation)	
		Base Samples			Sidewall Samples															Sidewall Samples	
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	HBX-B-01 5/29/20 (13 ft) SAT	HBX-B-02 5/29/20 (13 ft) SAT	HBX-B-03 5/29/20 (13 ft) SAT	HBX-S-02 5/28/20 (9 ft) SAT	HBX-S-02 5/29/20 (12 ft) SAT	HBX-S-03 5/28/20 (9 ft) FD SAT	HBX-S-03 5/28/20 (9 ft) SAT	HBX-S-03 5/29/20 (12 ft) SAT	HBX-S-04 5/28/20 (9 ft) SAT	HBX-S-04 5/29/20 (12 ft) SAT	HBX-S-05 5/29/20 (12 ft) SAT	HBX-S-06 6/4/20 (9 ft) SAT	HBX-S-06 5/29/20 (12 ft) SAT	HBX-S-07 6/4/20 (9 ft) SAT	HBX-S-07 5/29/20 (12 ft) SAT	HBX-S-08 6/4/20 (9 ft) SAT	HBX-S-08 5/29/20 (12 ft) SAT	HBX-S-09 6/4/20 (9 ft) SAT	HBX-S-01 5/28/20 (9 ft) OverEx SAT	HBX-S-05 6/4/20 (9 ft) OverEx SAT
Total Petroleum Hydrocarbons (TPH)																					
Diesel-Range Hydrocarbons in mg/kg	2,000	50 U	18,000	1,600	50 U	50 U	50 U	50 U	520 x	50 U	50 U	50 U	50 U	50 U	50 U	50 U	400 x	50 U	50 U	--	--
Residual (Oil)-Range Hydrocarbons in mg/kg	2,000	250 U	1,100 x	250 U	250 U	250 U	250 U	250 U	810	250 U	250 U	250 U	250 U	250 U	250 U	250 U	360	250 U	250 U	--	--
Total TPHs in mg/kg	2,000	ND	19,100 x	1,720	ND	ND	ND	ND	1,330	ND	ND	ND	ND	ND	ND	ND	760	ND	ND	--	--
Metals																					
Copper in mg/kg	36	26.5	47.4	64.4	29.3	35.7	28.8	45.2	10.8	29.9	11 J	52.2	19.4	39.6	63.8	9.64	57.4	9.89	24.1	--	--
Mercury in mg/kg	0.1	0.2	0.34	0.15	0.07 U	0.07 U	0.07 U	0.076	0.07 U	0.086	0.07 U	0.07 U	0.07 U	0.08	0.19	0.07 U	0.2	0.07 U	0.07 U	--	--
Zinc in mg/kg	85	70.9 J	145 J	48.4 J	62.1	60.8 J	43.4	49.1	18.3 J	72.8	19.4 J	65.4 J	48.2	75.9 J	94.5	17.6 J	62.4	17.4 J	130	--	--
Polychlorinated Biphenyls (PCBs)																					
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.054	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.023	0.036
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.12	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.057	0.04	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.51	0.59
Total PCBs (Sum of Aroclors) in mg/kg	0.12	ND	ND	ND	0.054	ND	0.057	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12	0.533	0.626

Refer to Table 2 for notes and abbreviation definitions.

Table 13. Excavation Verification Soil Data for Log Pond Chip Conveyor Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Confirmation Samples (In Place)												
			Base Samples			Sidewall Samples									
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	LPX-B-01 6/17/20 (8 ft) SAT	LPX-B-02 6/18/20 (8 ft) SAT	LPX-B-03 6/29/20 (10 ft) SAT	LPX-S-01 6/17/20 (6.5 ft) SAT	LPX-S-02 6/17/20 (6.5 ft) SAT	LPX-S-03 6/17/20 (6.5 ft) SAT	LPX-S-04 6/18/20 (6.5 ft) SAT	LPX-S-14 6/23/20 (6.5 ft) SAT	LPX-S-15 6/23/20 (6.5 ft) SAT	LPX-S-18 6/29/20 (6.5 ft) SAT	LPX-S-19 6/29/20 (6.5 ft) SAT	LPX-S-20 6/29/20 (6.5 ft) SAT	LPX-S-21 6/29/20 (6.5 ft) SAT
Total Petroleum Hydrocarbons (TPH)															
Gasoline-Range Hydrocarbons in mg/kg	100	100	5 U	5 U	--	5 U	5 U	9.8	5 U	--	--	--	--	--	--
Diesel-Range Hydrocarbons in mg/kg	2,000	2,000	50 U	50 U	--	50 U	50 U	50 U	66	--	--	--	--	--	--
Residual (Oil)-Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U	--	250 U	250 U	250 U	250 U	--	--	--	--	--	--
Total TPHs in mg/kg	2,000	2,000	ND	ND	--	ND	ND	ND	191	--	--	--	--	--	--
Metals															
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 U	0.14	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11	0.17	0.1 U	0.13
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)															
Benz(a)anthracene in mg/kg	--	--	0.087	0.022	0.064	0.043	0.01 U	0.01 U	0.053	0.087	0.051	0.13	0.013	0.11	0.045
Benzo(a)pyrene in mg/kg	--	--	0.11	0.023	0.095	0.043	0.01 U	0.01 U	0.063	0.088	0.042	0.13	0.019	0.14	0.043
Benzo(b)fluoranthene in mg/kg	--	--	0.12	0.024	0.11	0.049	0.01 U	0.012	0.062	0.1	0.054	0.12	0.023	0.15	0.064
Benzo(k)fluoranthene in mg/kg	--	--	0.045	0.01	0.036	0.016	0.01 U	0.01 U	0.05 U	0.038	0.015	0.041	0.01 U	0.049	0.015
Chrysene in mg/kg	--	--	0.098	0.023	0.082	0.034	0.01 U	0.012	0.062	0.09	0.052	0.12	0.017	0.14	0.05
Dibenzo(a,h)anthracene in mg/kg	--	--	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.011	0.01 U	0.012	0.01 U	0.014	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg	--	--	0.053	0.013	0.036	0.022	0.01 U	0.01 U	0.05 U	0.051	0.023	0.054	0.014	0.084	0.018
Total cPAHs TEQ in mg/kg	0.16	3.2	0.143	0.0306	0.121	0.0568	ND	0.0083	0.0826	0.118	0.0573	0.167	0.0252	0.182	0.0582

Refer to Table 2 for notes and abbreviation definitions.

Table 13. Excavation Verification Soil Data for Log Pond Chip Conveyor Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Compliance Samples (Overexcavated)												
			Base Samples			Sidewall Samples									
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	LPX-B-01 6/17/20 (8 ft) FD OverEx SAT	LPX-B-03 6/18/20 (8 ft) OverEx SAT	LPX-B-03 6/23/20 (9 ft) OverEx SAT	LPX-S-05 6/18/20 (6.5 ft) OverEx SAT	LPX-S-06 6/18/20 (6.5 ft) OverEx SAT	LPX-S-07 6/18/20 (6.5 ft) OverEx SAT	LPX-S-08 6/18/20 (6.5 ft) OverEx SAT	LPX-S-09 6/18/20 (6.5 ft) OverEx SAT	LPX-S-10 6/17/20 (6.5 ft) OverEx SAT	LPX-S-11 6/23/20 (6.5 ft) OverEx SAT	LPX-S-12 6/23/20 (6.5 ft) OverEx SAT	LPX-S-13 6/23/20 (6.5 ft) OverEx SAT	LPX-S-17 6/23/20 (6.5 ft) OverEx SAT
Total Petroleum Hydrocarbons (TPH)															
Gasoline-Range Hydrocarbons in mg/kg	100	100	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--
Diesel-Range Hydrocarbons in mg/kg	2,000	2,000	50 U	50 U		50 U	50 U	50 U	50 U	50 U	50 U	--	--	--	--
Residual (Oil)-Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U		250 U	250 U	250 U	250 U	250 U	250 U	--	--	--	--
Total TPHs in mg/kg	2,000	2,000	ND	ND		ND	ND	ND	ND	ND	ND	--	--	--	--
Metals															
Mercury in mg/kg	0.1	0.1	0.1 U	0.24	0.14	0.21	0.21	0.31	0.34	0.1 U	0.1 U	0.27	0.13	0.16	0.14
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)															
Benz(a)anthracene in mg/kg	--	--	0.064	0.019	0.064	0.16	0.05 U	0.01 U	0.72	0.14 J	0.3	0.05 U	0.041	0.18	1
Benzo(a)pyrene in mg/kg	--	--	0.08	0.026	0.081	0.18	0.05 U	0.01 U	0.56	0.15 J	0.25	0.05 U	0.034	0.16	0.63
Benzo(b)fluoranthene in mg/kg	--	--	0.086	0.034	0.085	0.21	0.05 U	0.01 U	0.75	0.2 J	0.25	0.05 U	0.038	0.19	0.98
Benzo(k)fluoranthene in mg/kg	--	--	0.034	0.01 U	0.05 U	0.078	0.05 U	0.01 U	0.25	0.058 J	0.098	0.05 U	0.014	0.056	0.34
Chrysene in mg/kg	--	--	0.079	0.027	0.07	0.18	0.05 U	0.01 U	0.76	0.15 J	0.28	0.05 U	0.04	0.19	1.2
Dibenzo(a,h)anthracene in mg/kg	--	--	0.01 U	0.01 U	0.05 U	0.05 U	0.05 U	0.01 U	0.058	0.01 J	0.05 U	0.05 U	0.01 U	0.018	0.064
Indeno(1,2,3-cd)pyrene in mg/kg	--	--	0.04	0.014	0.053 ca	0.066	0.05 U	0.01 U	0.17	0.047 J	0.1	0.05 U	0.019	0.091	0.23
Total cPAHs TEQ in mg/kg	0.16	3.2	0.104	0.034	0.107	0.236	ND	ND	0.762	0.197 J	0.33	ND	0.0461	0.215	0.903

Refer to Table 2 for notes and abbreviation definitions.

Table 14. Excavation Verification Soil Data for Old Machine Shop (OMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Confirmation Samples (In Place)													
		Base Samples										Sidewall Samples			
Analyte (By Group)	**Soil Preliminary Cleanup Level - Unsaturated Soil**	**OMSX-B-01 6/26/20 (5 ft)**	**OMSX-B-02 6/26/20 (5 ft)**	**OMSX-B-03 6/26/20 (5 ft)**	**OMSX-B-04 6/26/20 (5 ft)**	**OMSX-B-04 6/26/20 (5 ft) FD**	**OMSX-B-05 6/26/20 (5 ft)**	**OMSX-B-06 6/26/20 (5 ft)**	**OMSX-B-07 6/29/20 (5 ft)**	**OMSX-B-08 6/29/20 (5 ft)**	**OMSX-B-09 6/29/20 (5 ft)**	**OMSX-S-06 6/26/20 (2.5 ft)**	**OMSX-S-07 6/26/20 (2.5 ft)**	**OMSX-S-08 6/29/20 (2.5 ft)**	**OMSX-S-09 6/29/20 (2.5 ft)**
Metals															
Copper in mg/kg	36	6.41 J	6.71 J	5 JJ	5 JJ	5.11 J	17.4 J	6.81 J	28.3	7.26	5.14	5.78 J	8.45 J	16.6	15.3
Mercury in mg/kg	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Polychlorinated Biphenyls (PCBs)															
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.03	0.02 U	0.13	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	2.4	ND	ND	ND	ND	ND	0.03	ND	0.13	ND	ND	ND	ND	ND	ND

Refer to Table 2 for notes and abbreviation definitions.

Table 14. Excavation Verification Soil Data for Old Machine Shop (OMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Confirmation Samples (In Place)								Compliance Samples (Overexcavated)				
		Sidewall Samples								Sidewall Samples				
Analyte (By Group)	**Soil Preliminary Cleanup Level - Unsaturated Soil**	**OMSX-S-11 6/26/20 (2.5 ft)**	**OMSX-S-12 6/26/20 (2.5 ft)**	**OMSX-S-16 7/6/20 (2.5 ft)**	**OMSX-S-17a 7/6/20 (2.5 ft)**	**OMSX-S-18a 7/6/20 (2.5 ft)**	**OMSX-S-18b 7/15/20 (2.5 ft)**	**OMSX-S-19 7/15/20 (2.5 ft)**	**OMSX-S-20 8/27/20 (2.5 ft)**	**OMSX-S-01 6/26/20 (2.5 ft) OverEx**	**OMSX-S-02 6/26/20 (2.5 ft) OverEx**	**OMSX-S-03 6/26/20 (2.5 ft) OverEx**	**OMSX-S-04 6/26/20 (2.5 ft) OverEx**	**OMSX-S-05 6/26/20 (2.5 ft) OverEx**
Metals														
Copper in mg/kg	36	7.22 J	11.6 J	21.6 J	8.22 J	20.8 J	20.1 J	12.4 J	**52.6**	**54.4 J**	**159 J**	**116 J**	**162 J**	20.1 J
Mercury in mg/kg	0.1	0.1 U	0.1 U	**0.2 J**	0.1 JJ	0.1 JJ	0.1 U	0.1 U	0.1 U	**0.13**	**0.55**	**0.19**	**0.73**	**0.64**
Polychlorinated Biphenyls (PCBs)														
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.025	0.035	0.02 U	24	0.062	1.5	0.44	0.39	0.02 U
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.026	0.62	0.12	0.11	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	2.4	ND	ND	ND	ND	0.025	0.035	ND	**24**	0.088	2.12	0.56	0.5	ND

Refer to Table 2 for notes and abbreviation definitions.

Table 14. Excavation Verification Soil Data for Old Machine Shop (OMS) Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Compliance Samples (Overexcavated)					
		Sidewall Samples					
Analyte (By Group)	**Soil Preliminary Cleanup Level - Unsaturated Soil**	**OMSX-S-10 6/29/20 (2.5 ft) OverEx**	**OMSX-S-13 7/6/20 (2.5 ft) OverEx**	**OMSX-S-14 7/6/20 (2.5 ft) OverEx**	**OMSX-S-15 7/6/20 (2.5 ft) OverEx**	**OMSX-S-17b 7/15/20 (2.5 ft) FD OverEx**	**OMSX-S-17b 7/15/20 (2.5 ft) OverEx**
Metals							
Copper in mg/kg	36	**46.4**	**639 J**	**91.5 J**	**79.8 J**	**81.9 J**	**66.2 J**
Mercury in mg/kg	0.1	0.1 U	**2.4 J**	**7.1 J**	**0.43 J**	**0.13 J**	**0.12 J**
Polychlorinated Biphenyls (PCBs)							
Aroclor 1016 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1221 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1232 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1242 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1248 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1254 in mg/kg	--	0.81	12	8.6	0.65	8	20
Aroclor 1260 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1262 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1268 in mg/kg	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	2.4	0.81	**12**	**8.6**	0.65	**8**	**20**

Refer to Table 2 for notes and abbreviation definitions.

Table 15. Excavation Verification Soil Data for PM-B-6 Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Confirmation Samples (In Place)											
			Base Samples			Sidewall Samples								
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	PM-B6X-B-01 6/16/20 (10 ft) SAT	PM-B6X-B-02 6/24/20 (12 ft) SAT	PM-B6X-B-03 6/22/20 (11 ft) SAT	PM-B6X-S-07 6/16/20 (9 ft) SAT	PM-B6X-S-08 6/16/20 (6 ft) SAT	PM-B6X-S-11 6/22/20 (9 ft) SAT	PM-B6X-S-19 6/24/20 (6 ft) SAT	PM-B6X-S-19 6/24/20 (9 ft) SAT	PM-B6X-S-20 6/24/20 (9 ft) SAT	PM-B6X-S-21 6/24/20 (9 ft) SAT	PM-B6X-S-23 7/6/20 (6 ft) SAT	PM-B6X-S-24 7/6/20 (4 ft)
Metals														
Copper in mg/kg	36	36	9.59	24.9	24	25.3	37.2	24.2	23.8	25.1	34.5	25.9	--	--
Mercury in mg/kg	0.1	0.1	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.19 J	0.1 UJ	0.21 J	0.1 UJ	0.33 J	0.23 J	0.2 J	**0.2 J**

			Confirmation Samples (In Place)				Compliance Samples (Overexcavated)							
			Sidewall Samples				Base Samples			Sidewall Samples				
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	PM-B6X-S-24 7/6/20 (4 ft) FD	PM-B6X-S-24 7/6/20 (6 ft) SAT	PM-B6X-S-25 7/6/20 (6 ft) SAT	PM-B6X-S-28 7/22/20 (6 ft) SAT	PM-B6X-B-02 6/16/20 (10 ft) OverEx SAT	PM-B6X-B-02 6/22/20 (11 ft) OverEx SAT	PM-B6X-B-03 6/16/20 (10 ft) OverEx SAT	PM-B6X-S-01 6/16/20 (4 ft) OverEx	PM-B6X-S-01 6/16/20 (6 ft) OverEx SAT	PM-B6X-S-02 6/16/20 (4 ft) OverEx	PM-B6X-S-02 6/16/20 (6 ft) OverEx SAT	PM-B6X-S-03 6/16/20 (6 ft) OverEx SAT
Metals														
Copper in mg/kg	36	36	--	--	--	--	28.1	49.2	41.3	**44**	53.9	**50.9**	41.1	39.7
Mercury in mg/kg	0.1	0.1	**0.28 J**	0.2 J	0.22 J	0.16	0.92 J	0.1 UJ	0.1 UJ	**0.26 J**	0.4 J	**0.22 J**	0.25 J	0.32 J

			Compliance Samples (Overexcavated)											
			Sidewall Samples											
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	PM-B6X-S-03 6/16/20 (9 ft) OverEx SAT	PM-B6X-S-04 6/16/20 (6 ft) OverEx SAT	PM-B6X-S-04 6/16/20 (9 ft) OverEx SAT	PM-B6X-S-05 6/16/20 (6 ft) OverEx SAT	PM-B6X-S-05 6/16/20 (9 ft) OverEx SAT	PM-B6X-S-06 6/16/20 (6 ft) FD OverEx SAT	PM-B6X-S-06 6/16/20 (6 ft) OverEx SAT	PM-B6X-S-06 6/16/20 (9 ft) OverEx SAT	PM-B6X-S-07 6/16/20 (6 ft) OverEx SAT	PM-B6X-S-09 6/22/20 (4 ft) OverEx	PM-B6X-S-09 6/22/20 (6 ft) OverEx SAT	PM-B6X-S-10 6/22/20 (4 ft) OverEx
Metals														
Copper in mg/kg	36	36	33.1	43.9	27	23.7	24.7	33.6	39.9	36.7	45.4	**37.6**	56.7	35.7
Mercury in mg/kg	0.1	0.1	0.14 J	0.51 J	0.93 J	1.1 J	0.14 J	2.5 J	4.4 J	0.1 UJ	1.4 J	**0.27 J**	0.35 J	**0.26 J**

			Compliance Samples (Overexcavated)											
			Sidewall Samples											
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	PM-B6X-S-10 6/22/20 (6 ft) OverEx SAT	PM-B6X-S-11 6/22/20 (6 ft) OverEx SAT	PM-B6X-S-12 6/22/20 (6 ft) OverEx SAT	PM-B6X-S-12 6/22/20 (9 ft) OverEx SAT	PM-B6X-S-13 6/22/20 (6 ft) OverEx SAT	PM-B6X-S-13 6/22/20 (9 ft) OverEx SAT	PM-B6X-S-14 6/22/20 (6 ft) FD OverEx SAT	PM-B6X-S-14 6/22/20 (6 ft) OverEx SAT	PM-B6X-S-14 6/22/20 (9 ft) OverEx SAT	PM-B6X-S-15 6/22/20 (6 ft) OverEx SAT	PM-B6X-S-16 6/24/20 (4 ft) FD OverEx	PM-B6X-S-16 6/24/20 (4 ft) OverEx
Metals														
Copper in mg/kg	36	36	63.2	27.4	32.8	34.6	29.5	109	42.7	31.7	40.4	37.9	33.7	43.5
Mercury in mg/kg	0.1	0.1	0.4 J	0.22 J	0.76 J	0.85 J	3.7 J	0.72 J	7.2 J	3.1 J	0.75 J	1.3 J	**0.24 J**	0.31 J

			Compliance Samples (Overexcavated)						
			Sidewall Samples						
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	PM-B6X-S-16 6/24/20 (6 ft) OverEx SAT	PM-B6X-S-17 6/24/20 (4 ft) OverEx	PM-B6X-S-17 6/24/20 (6 ft) OverEx SAT	PM-B6X-S-18 6/24/20 (6 ft) OverEx SAT	PM-B6X-S-22 6/24/20 (6 ft) OverEx SAT	PM-B6X-S-26 7/6/20 (6 ft) OverEx SAT	PM-B6X-S-27 7/15/20 (6 ft) OverEx SAT
Metals									
Copper in mg/kg	36	36	30.5	11.1	50.6	65.5	38.2	--	--
Mercury in mg/kg	0.1	0.1	0.36 J	0.1 UJ	0.57 J	0.66 J	20 J	1.1 J	12 J

Refer to Table 2 for notes and abbreviation definitions.

Table 16. Excavation Verification Soil Data for REC5-MW-1 Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Confirmation Samples (In Place)												
			Base Samples				Sidewall Samples								
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	REC5X-B-01 8/28/20 (12 ft) FD SAT	REC5X-B-01 8/28/20 (12 ft) SAT	REC5X-B-02 8/28/20 (12 ft) SAT	REC5X-B-03 8/28/20 (12 ft) SAT	REC5X-S-01 8/28/20 (4 ft)	REC5X-S-01 8/28/20 (7 ft)	REC5X-S-01 8/28/20 (10 ft) SAT	REC5X-S-02 8/28/20 (4 ft)	REC5X-S-02 8/28/20 (7 ft)	REC5X-S-02 8/28/20 (10 ft) SAT	REC5X-S-03 8/28/20 (4 ft)	REC5X-S-03 8/28/20 (7 ft)	REC5X-S-03 8/28/20 (10 ft) SAT
Metals															
Arsenic in mg/kg	20	20	6.51	4.75	7.23	7.67	2.1	2.43	1.45	2.32	1 U	1.58	3.55	2.42	1.81
Copper in mg/kg	36	36	19.9 J	17.7	27.6 J	29.8 J	12.9	6.08	5.7	17.2	5 U	6.6	16.3	7.54	5.21
Lead in mg/kg	81	1000	3.17	2.59	10.9	7.69	3.74	2.11	1.79	10.4	1.28	2.05	13.2	4.25	1.52

Refer to Table 2 for notes and abbreviation definitions.

Table 16. Excavation Verification Soil Data for REC5-MW-1 Area

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

			Confirmation Samples (In Place)								
			Sidewall Samples								
Analyte (By Group)	Soil Preliminary Cleanup Level - Saturated Soil	Soil Preliminary Cleanup Level - Unsaturated Soil	REC5X-S-04 8/28/20 (4 ft)	REC5X-S-04 8/28/20 (7 ft)	REC5X-S-04 8/28/20 (10 ft) SAT	REC5X-S-05 8/28/20 (4 ft)	REC5X-S-05 8/28/20 (7 ft)	REC5X-S-05 8/28/20 (10 ft) SAT	REC5X-S-06 8/28/20 (4 ft)	REC5X-S-06 8/28/20 (7 ft)	REC5X-S-06 8/28/20 (10 ft) SAT
Metals											
Arsenic in mg/kg	20	20	1 U	3.66 J	5.03 J	2.71	2.54	9.09	1 U	1.47	6
Copper in mg/kg	36	36	7.91	25.4 J	17	13.2	12.9	28.9 J	10.5	8.96	20.2 J
Lead in mg/kg	81	1000	1.88	4.59	2.38	2.04	4.26	7.69	3.35	2.17	4.65

Refer to Table 2 for notes and abbreviation definitions.

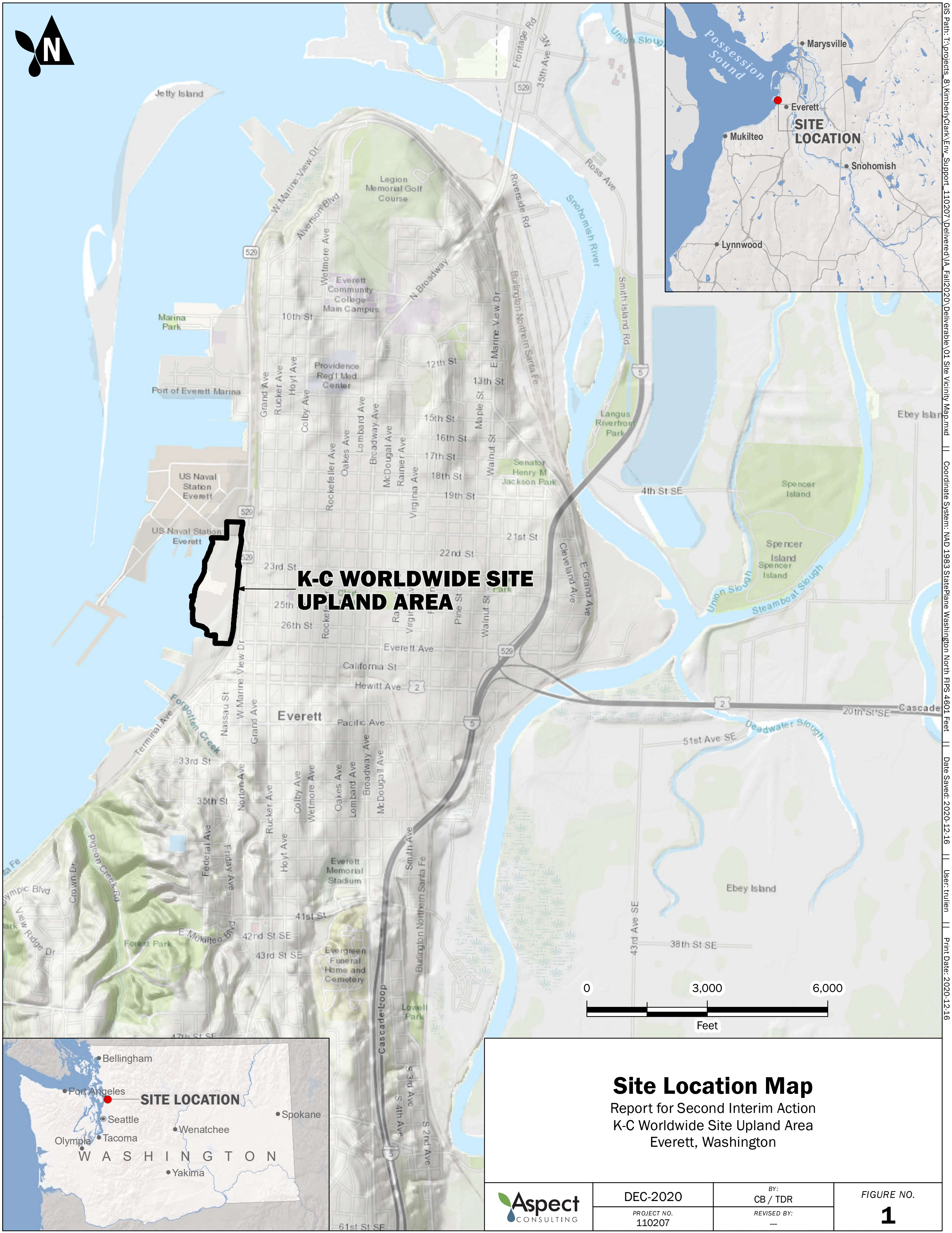
Table 17. Excavation Verification Soil Data for Fuel Line West of Warehouse

Project No. 110207, K-C Worldwide Site Upland Area, Everett, WA

		Confirmation Samples (In Place)											
		Bottom Sample	Sidewall Samples		Bottom Sample	Sidewall Samples		Bottom Sample	Sidewall Samples		Bottom Sample	Sidewall Samples	
Analyte (By Group)	Soil Preliminary Cleanup Level - Unsaturated Soil	BP-1-Bottom 5/15/20 (4 ft)	BP-1-NSW 5/15/20 (4 ft)	BP-1-SSW 5/15/20 (4 ft)	BP-2-Bottom 5/15/20 (4.5 ft)	BP-2-NSW 5/15/20 (4.5 ft)	BP-2-SSW 5/15/20 (4.5 ft)	BP-3-Bottom 5/15/20 (5 ft)	BP-3-NSW 5/15/20 (5 ft)	BP-3-SSW 5/15/20 (5 ft)	BP-4-Bottom 5/15/20 (4.5 ft)	BP-4-NSW 5/15/20 (4.5 ft)	BP-4-SSW 5/15/20 (4.5 ft)
Total Petroleum Hydrocarbons (TPH)													
Diesel-Range Hydrocarbons in mg/kg	2,000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Residual (Oil)-Range Hydrocarbons in mg/kg	2,000	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Total TPHs in mg/kg	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	23	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.063	--	--
Acenaphthylene in mg/kg	210,000	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.05 U	--	--
Anthracene in mg/kg	1,100,000	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.15	--	--
Benzo(g,h,i)perylene in mg/kg	110,000	0.01 JJ	--	--	0.01 JJ	--	--	0.01 JJ	--	--	0.088	--	--
Fluoranthene in mg/kg	140,000	0.013	--	--	0.01 U	--	--	0.01 U	--	--	0.69	--	--
Fluorene in mg/kg	140,000	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.053	--	--
Phenanthrene in mg/kg	1,100,000	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.65	--	--
Pyrene in mg/kg	110,000	0.016	--	--	0.01 U	--	--	0.01 U	--	--	0.82	--	--
Naphthalene in mg/kg	17	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.05 U	--	--
Carcinogenic PAHs (cPAHs)													
Benz(a)anthracene in mg/kg	--	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.41	--	--
Benzo(a)pyrene in mg/kg	--	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.36	--	--
Benzo(b)fluoranthene in mg/kg	--	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.41	--	--
Benzo(k)fluoranthene in mg/kg	--	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.15	--	--
Chrysene in mg/kg	--	0.011	--	--	0.01 U	--	--	0.01 U	--	--	0.48	--	--
Dibenzo(a,h)anthracene in mg/kg	--	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.05 U	--	--
Indeno(1,2,3-cd)pyrene in mg/kg	--	0.01 U	--	--	0.01 U	--	--	0.01 U	--	--	0.12	--	--
Total cPAHs TEQ in mg/kg	3.2	0.00761	--	--	ND	--	--	ND	--	--	0.476	--	--

Refer to Table 2 for notes and abbreviation definitions.

FIGURES



Site Location Map

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	DEC-2020	BY: CB / TDR	FIGURE NO.
	PROJECT NO. 110207	REVISED BY: ---	1

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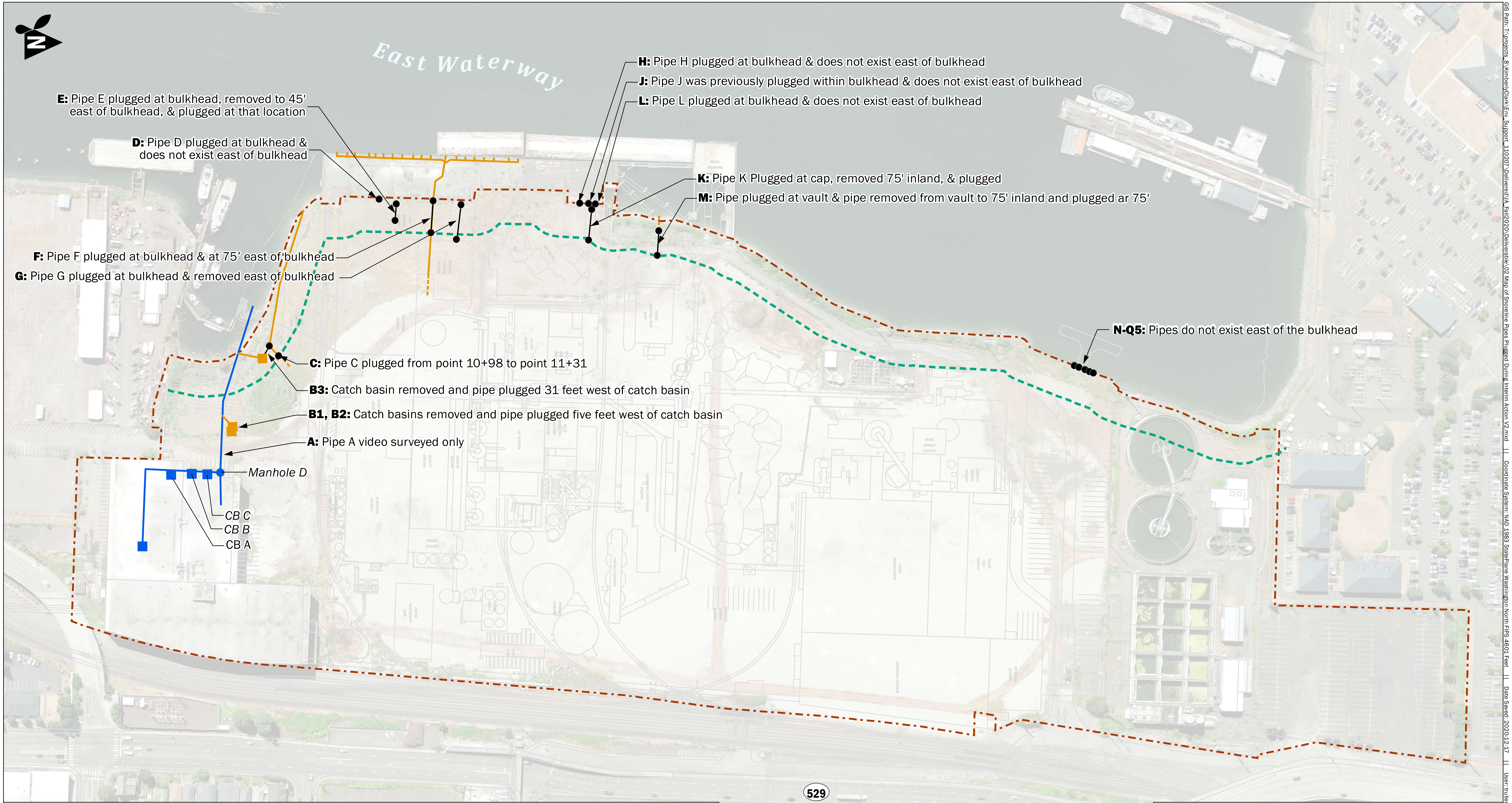
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\A_Fall2020\Deliverable\01 Site Vicinity Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-12-16 || User: trulien || Print Date: 2020-12-16



■ Storm Catch Basin

● Storm Manhole

■ Inactive Catch Basin

— Active Stormwater Line

— Historical Sewer or Stormwater Line

▢ Upland Area Boundary

Notes:
1) Information from Layout Plan, Underground Utilities (K-C dwg. no. C277-L-8), communications with K-C, and site reconnaissance beneath the pier.
2) Inland portions of lines are not shown except for the active stormwater lines.

0 200 400
Feet

Map of Shoreline Pipes Plugged during Interim Action

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING

DEC-2020

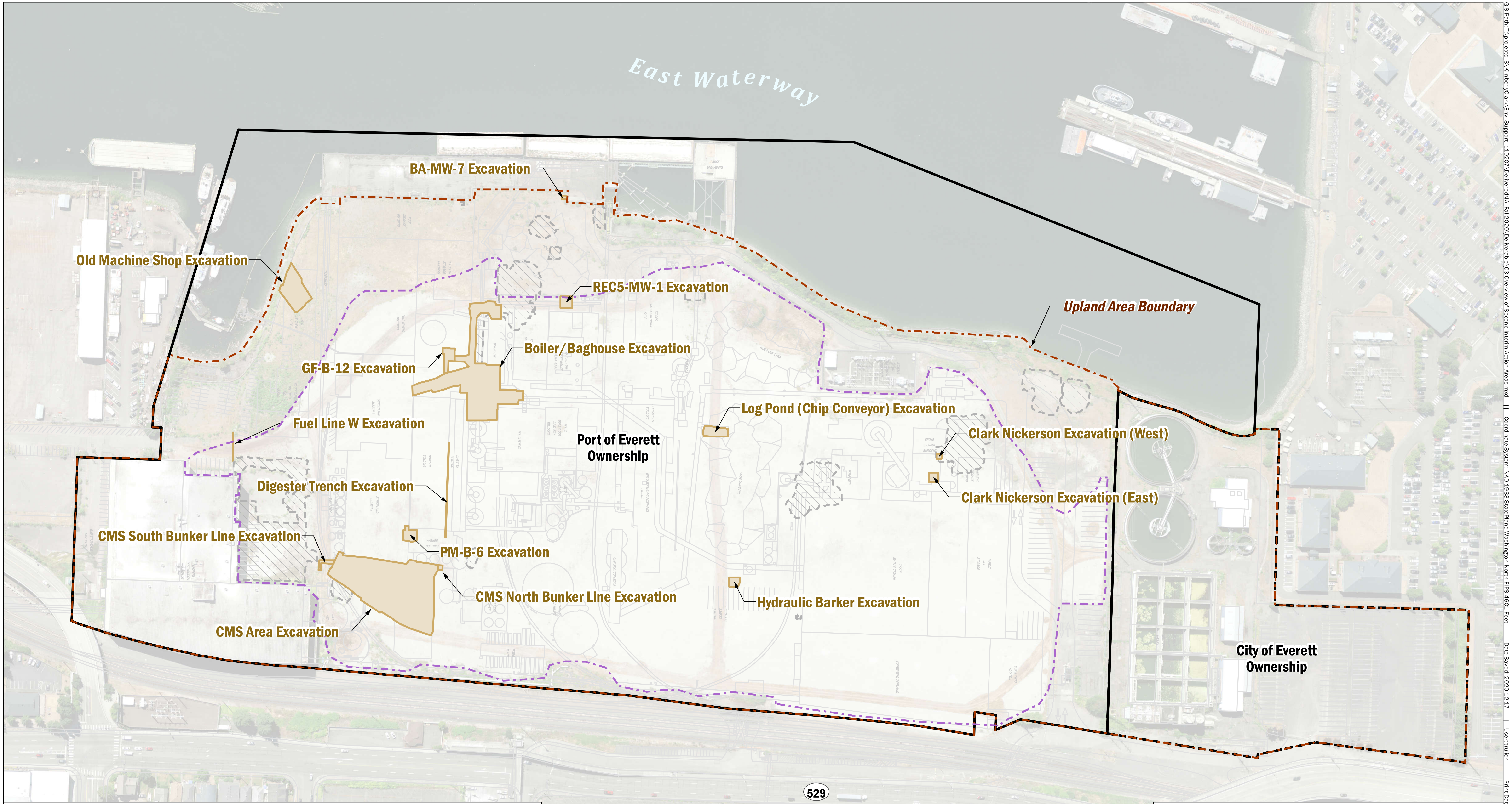
PROJECT NO.
110207-004-06

BY:
SJG / HRL

REV BY:
- - -

FIGURE NO.
2

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\02 Map of Shoreline Pipes Plugged During Interim Action V2.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-12-17 || User: trulien || Print Date: 2020-12-17



▭ Upland Area Boundary
▨ 2nd Interim Action Excavation Extents
▨ Previous Interim Action Excavation Extents
▭ Former Crushed Material Boundary

0 200
Feet

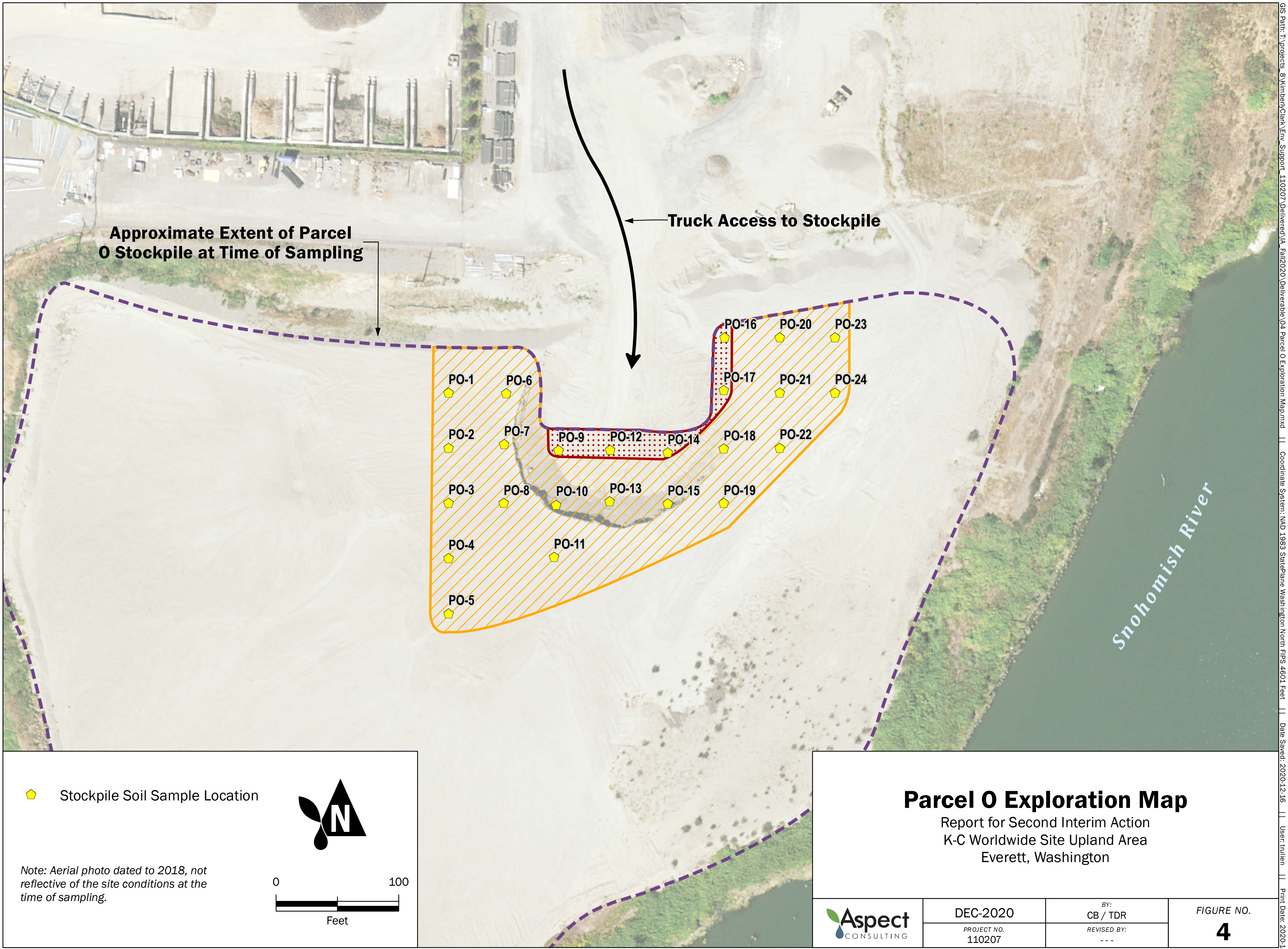
Note: Property boundaries from David Evans and Assoc. survey.

Overview of Second Interim Action Soil Excavation Areas

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	DEC-2020	BY: SJG / HRL	FIGURE NO. 3
	PROJECT NO. 110207-004-06	REV BY: - - -	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\03 Overview of Second Interim Action Areas.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-12-17 || User: trulien || Print Date: 2020-12-17



⬠ Stockpile Soil Sample Location

Note: Aerial photo dated to 2018, not reflective of the site conditions at the time of sampling.

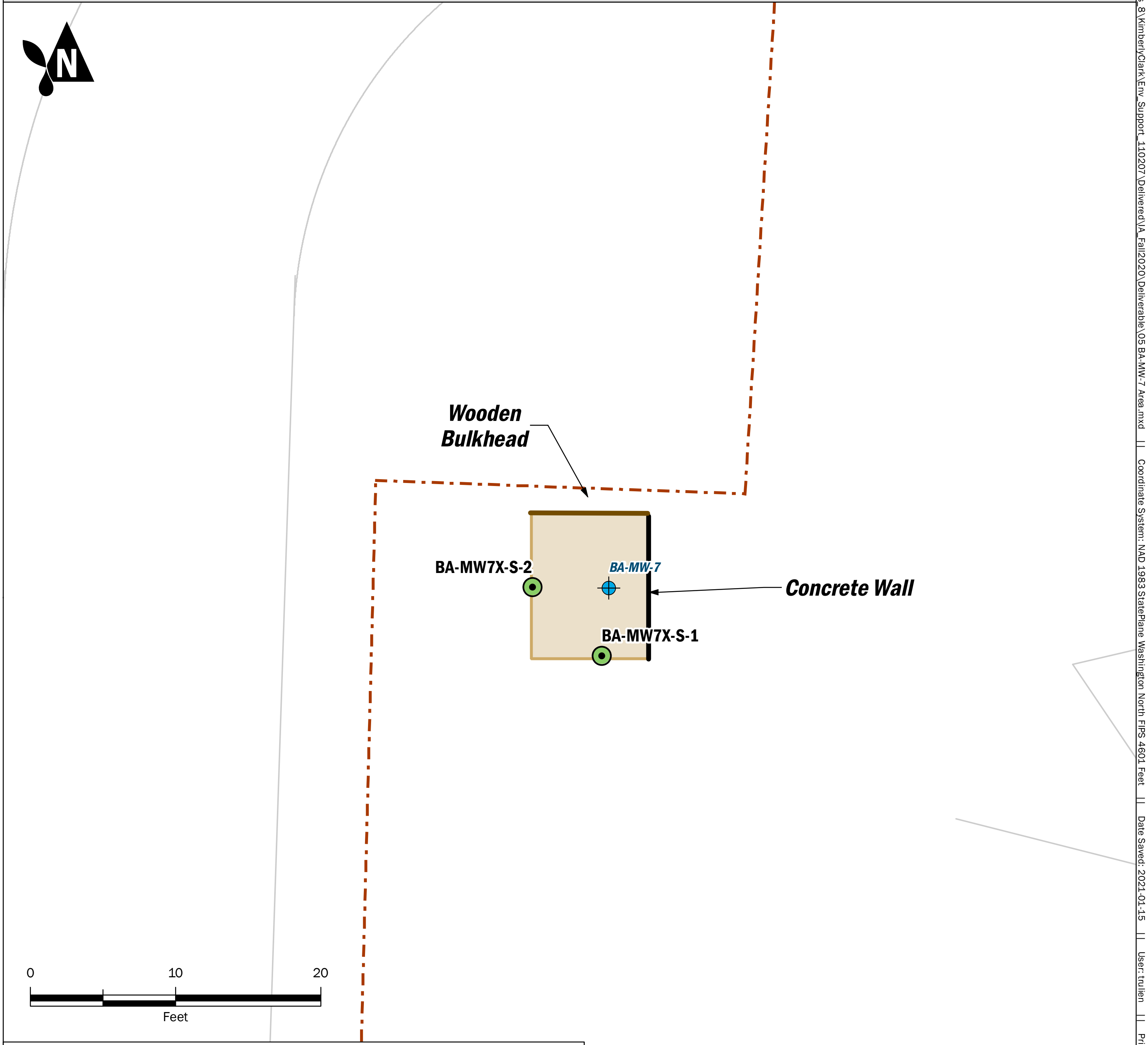
Parcel O Exploration Map

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	DEC-2020	BY: CB / TDR	FIGURE NO. 4
	PROJECT NO. 110207	REVISED BY: - - -	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\04 Parcel O Exploration Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-12-16 || User: trullen || Print Date: 2020-12-16

cPAH



Verification Sample Data

- ● Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- ● Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location

⌖ Former Monitoring Well

▨ BA-MW-7 Excavation Extent

⬚ Upland Area Boundary

Note: Historical site feature locations are approximate.

COC = contaminant of concern

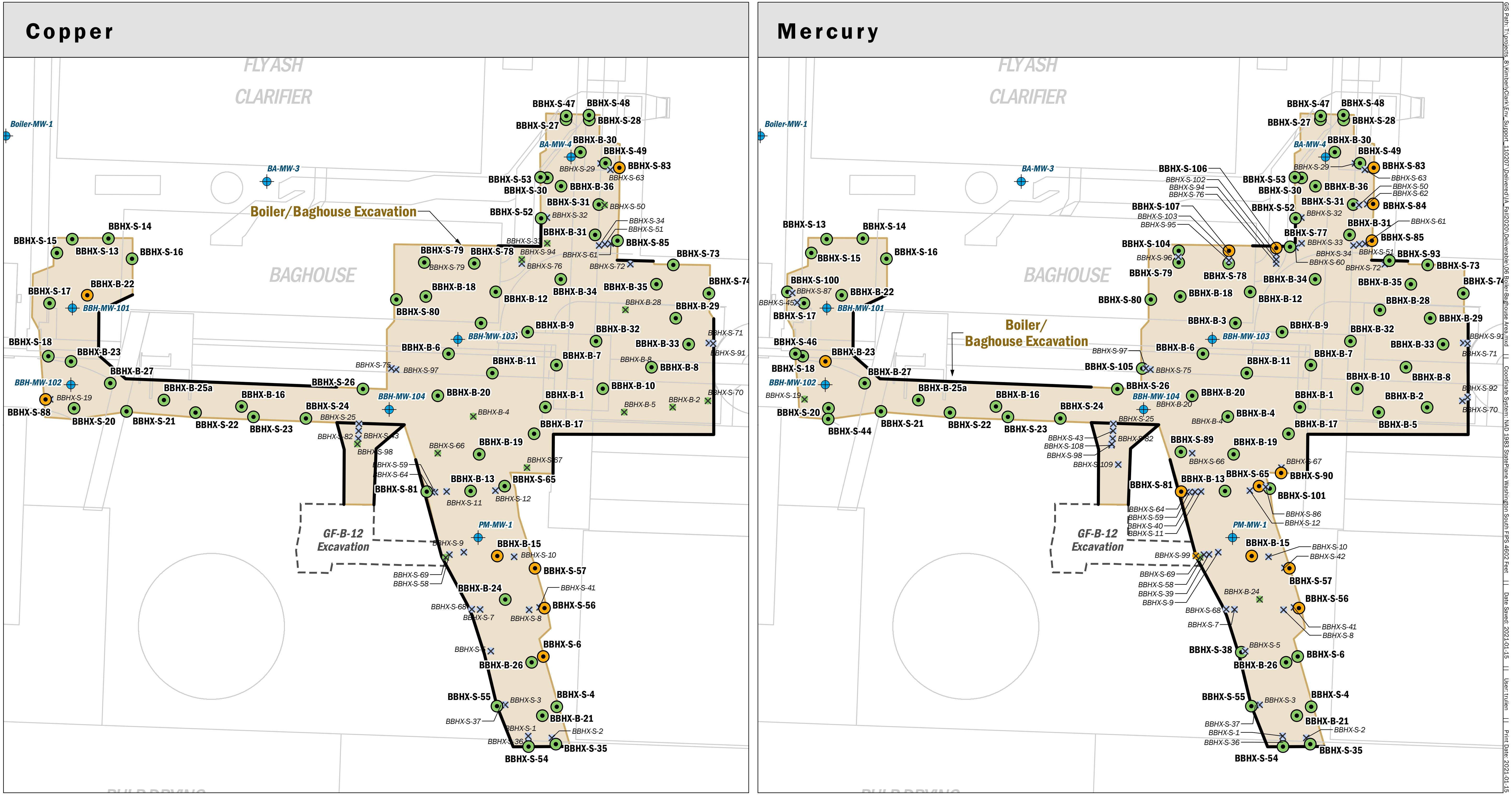
Soil Cleanup Results for BA-MW-7 Area

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING

JAN-2021	BY: SJG / HRL	FIGURE NO. 5
PROJECT NO. 110207	REVISED BY: - - -	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\05 BA-MW-7 Area.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2021-01-15 || User: trulien || Print Date: 2021-01-15



Verification Sample Data

- 🟢 Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- 🟠 Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ✖ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- × Identifies overexcavated soil sample location

⊕ Former Monitoring Well

▨ Boiler/Baghouse Excavation Extents

☐ Other Interim Action Excavation Extents

COC = contaminant of concern

— Indicates the presence of concrete structure that limited or prevented verification soil sample collection from excavation sidewalls.

Note: Historical site feature locations are approximate.

0 35 70
Feet

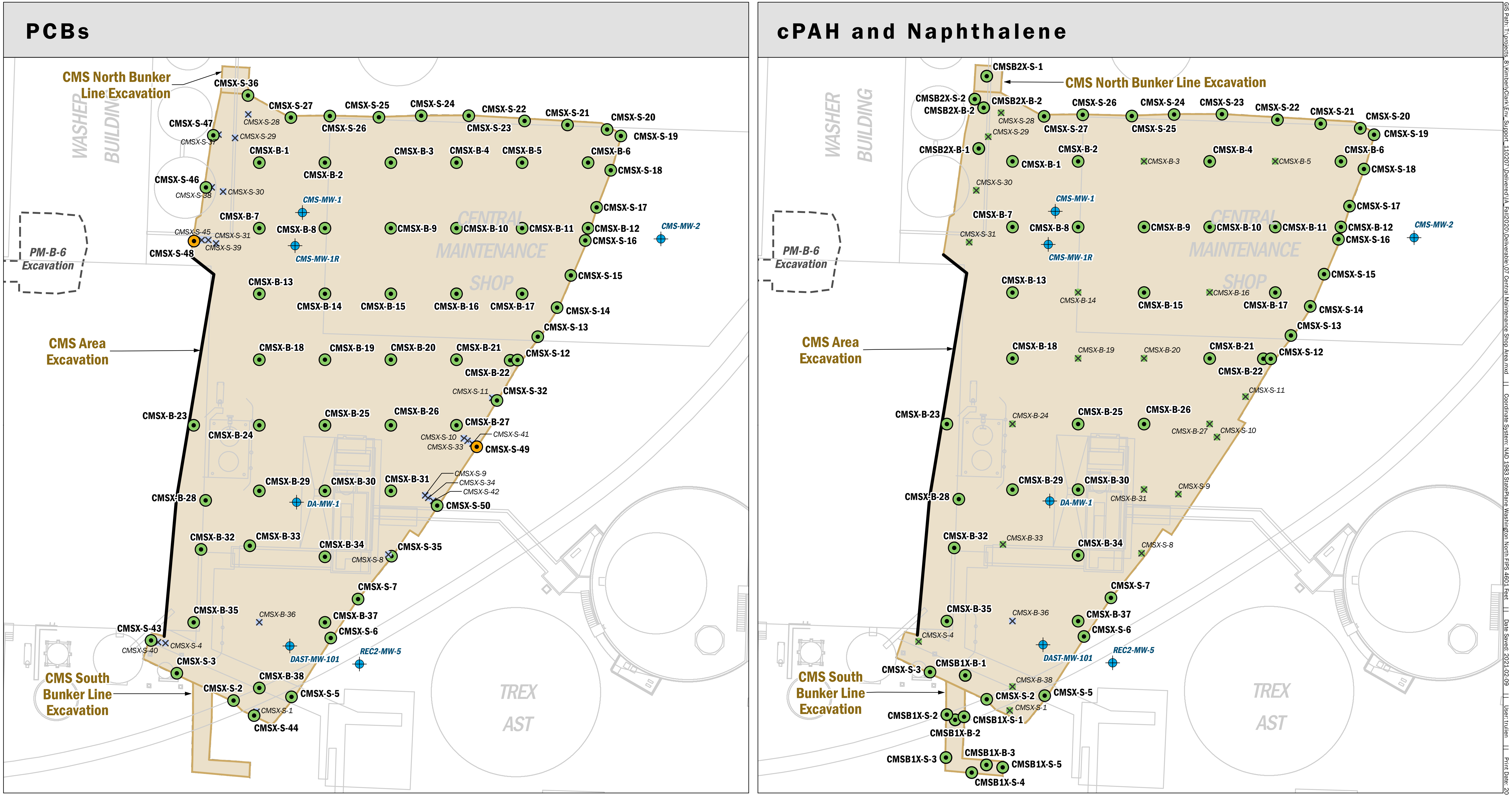
Soil Cleanup Results for Boiler/Baghouse Area

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING

JAN-2021	BY: CB / TDR	FIGURE NO. 6
PROJECT NO. 110207	REVISED BY: RAP	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Deliverables\IA_Fall2020\Deliverable\06 Boiler-Baghouse Area.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 2021-01-15 || User: trullen || Print Date: 2021-01-15



Verification Sample Data

- ● Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- ● Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location

⊕ Former Monitoring Well

▨ Central Maintenance Shop Excavation Extents

⬚ Other Interim Action Excavation Extents

COC = contaminant of concern

— Indicates the presence of concrete structure that limited or prevented verification soil sample collection from excavation sidewalls.

Note: Historical site feature locations are approximate.

N

0 35 70
Feet

Soil Cleanup Results for Central Maintenance Shop Area

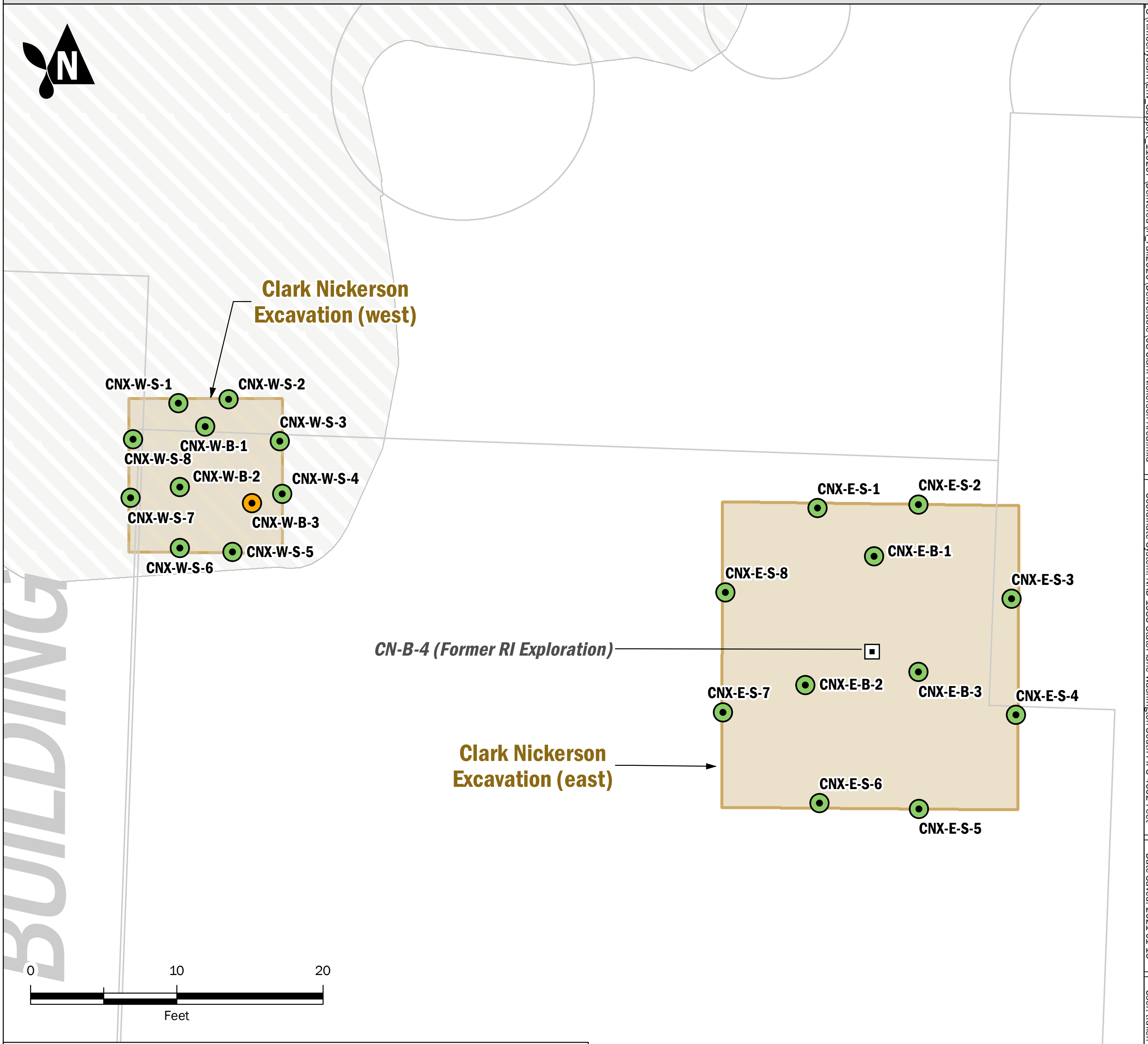
Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING

FEB-2021	BY: CB / TDR	FIGURE NO. 7
PROJECT NO. 110207	REVISED BY: RAP	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\07 Central Maintenance Shop Area.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2021-02-09 || User: trulien || Print Date: 2021-02-09

cPAH



Verification Sample Data

- ● Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- ● Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ☒ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- ☒ Identifies overexcavated soil sample location

⌖ Former Monitoring Well

▨ Clark Nickerson Excavation Extent

▨ 2013 CN-B-2 Interim Action Excavation Limits

Note: Historical site feature locations are approximate.

COC = contaminant of concern

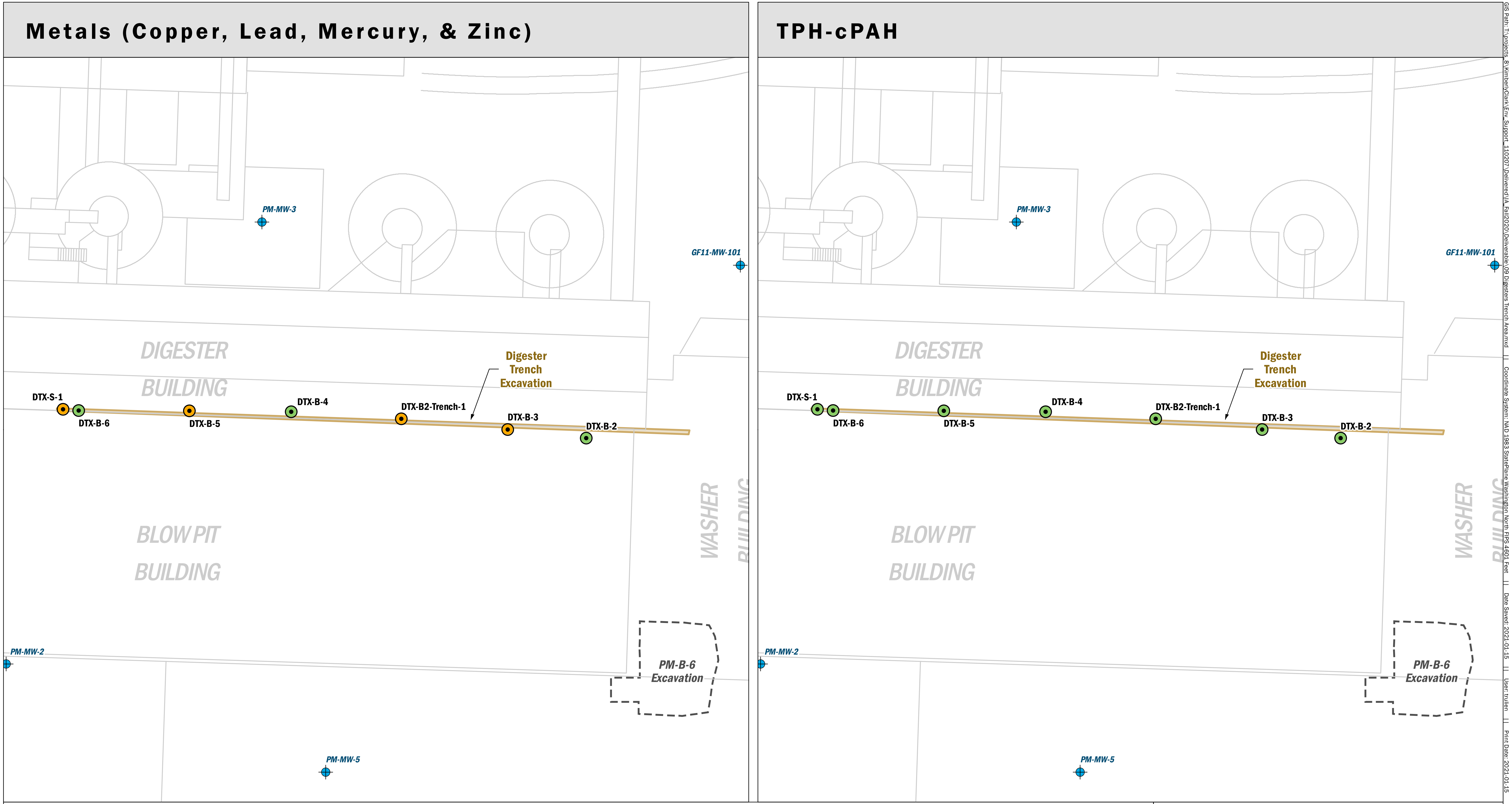
Soil Cleanup Results for Clark Nickerson Area

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING

JAN-2021	BY: SJG / HRL	FIGURE NO. 8
PROJECT NO. 110207	REVISED BY: - - -	

8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\08 Clark Nickerson Area.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 2021-01-15 || User: trullen || Print Date: 2021-01-15



Verification Sample Data

- 🟢 Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- 🟠 Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ✖ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- × Identifies overexcavated soil sample location

⊕ Former Monitoring Well

▨ Digesters Trench Excavation Extents

⬚ Other Interim Action Excavation Extents

COC = contaminant of concern

Note: Historical site feature locations are approximate.

N

0 30 60

Feet

Soil Cleanup Results for Digesters Trench Area

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect
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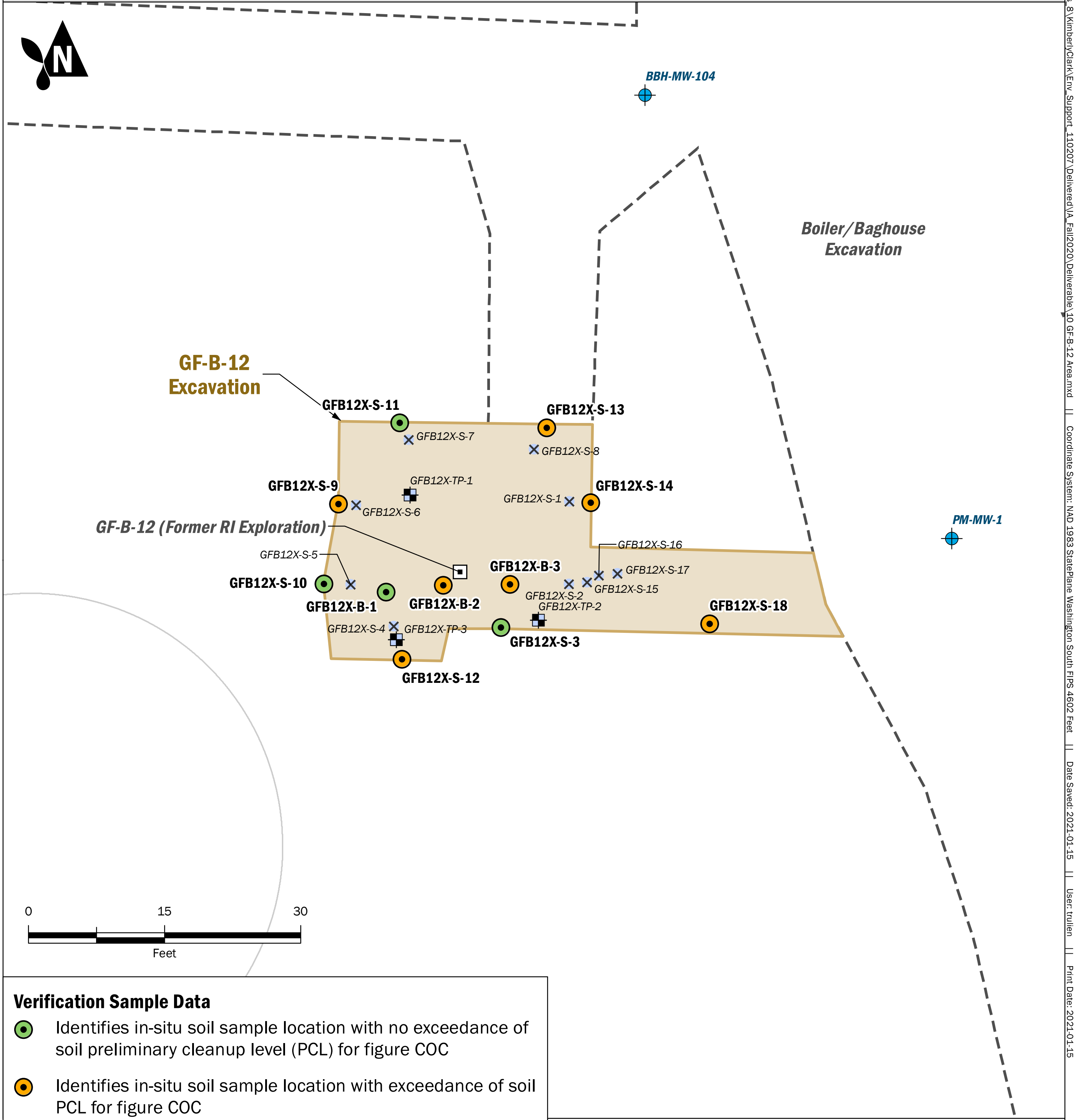
JAN-2021	BY: CB / TDR	FIGURE NO. 9
PROJECT NO. 110207	REVISED BY: RAP	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\09 Digesters Trench Area.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2021-01-15 || User: trulien || Print Date: 2021-01-15

Mercury



Verification Sample Data

- 🟢 Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- 🟠 Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location

⊕	Former Monitoring Well	▞	Test Pit	▭	GF-B-12 Excavation Extent

Note: Historical site feature locations are approximate.

COC = contaminant of concern

Soil Cleanup Results for GF-B-12 Area

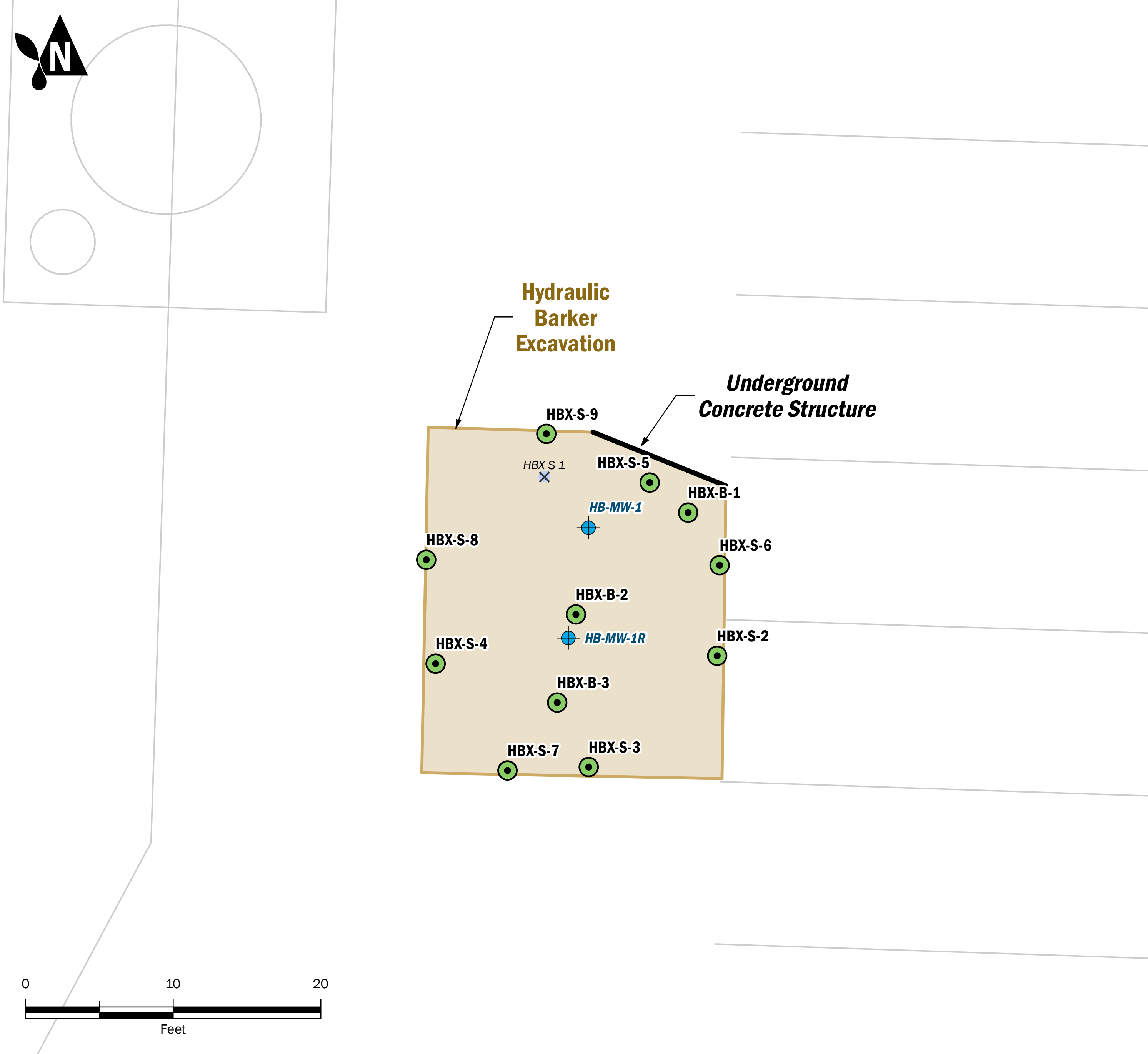
Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING

JAN-2021	BY: SJG / HRL	FIGURE NO.	
PROJECT NO. 110207	REVISED BY: - - -	10	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\10 GF-B-12 Area.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 2021-01-15 || User: trullen || Print Date: 2021-01-15

PCBs



Verification Sample Data

- ● Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- ● Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location
- ⊕ Former Monitoring Well
- ▨ Hydraulic Barker Excavation Extents

Note: Historical site feature locations are approximate.

COC = contaminant of concern

Soil Cleanup Results for Hydraulic Barker Area

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	JAN-2021	BY: SJG / HRL	FIGURE NO. **11**
	PROJECT NO. 110207	REVISED BY: - - -	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\11 Hydraulic Barker Area.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2021-01-15 || User: trullen || Print Date: 2021-01-15

Verification Sample Data

- ● Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- ● Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- × Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- × Identifies overexcavated soil sample location

- ⊕ Former Monitoring Well
- ▨ Log Pond Ship Conveyor Excavation Extents
- ⬚ Other Interim Action Excavation Extents

COC = contaminant of concern

Note: Historical site feature locations are approximate.

N

0 10 20
Feet

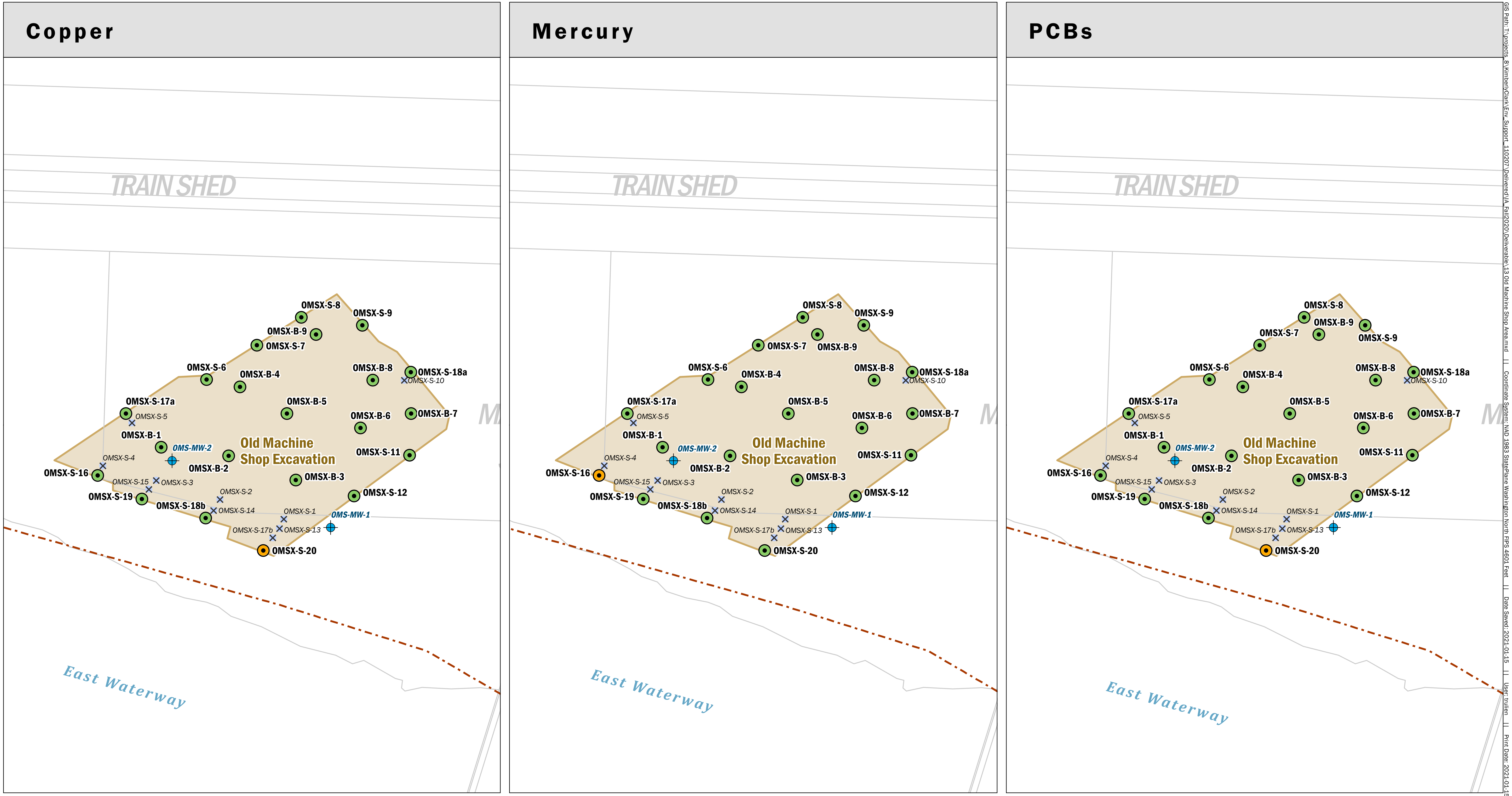
Soil Cleanup Results for Log Pond Ship Conveyor Area

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING

JAN-2021	BY: CB / TDR	FIGURE NO. 12
PROJECT NO. 110207	REVISED BY: RAP	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\12 Log Pond Chip Conveyor Area.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2021-01-15 || User: trulien || Print Date: 2021-01-15



GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\13 Old Machine Shop Area.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2021-01-15 || User: trullen || Print Date: 2021-01-15

Verification Sample Data

- ● Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- ● Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location

⊕ Former Monitoring Well

▨ Old Machine Shop Excavation Extents

☐ Other Interim Action Excavation Extents

COC = contaminant of concern

▯ Upland Area Boundary

Note: Historical site feature locations are approximate.

N

0 25 50
Feet

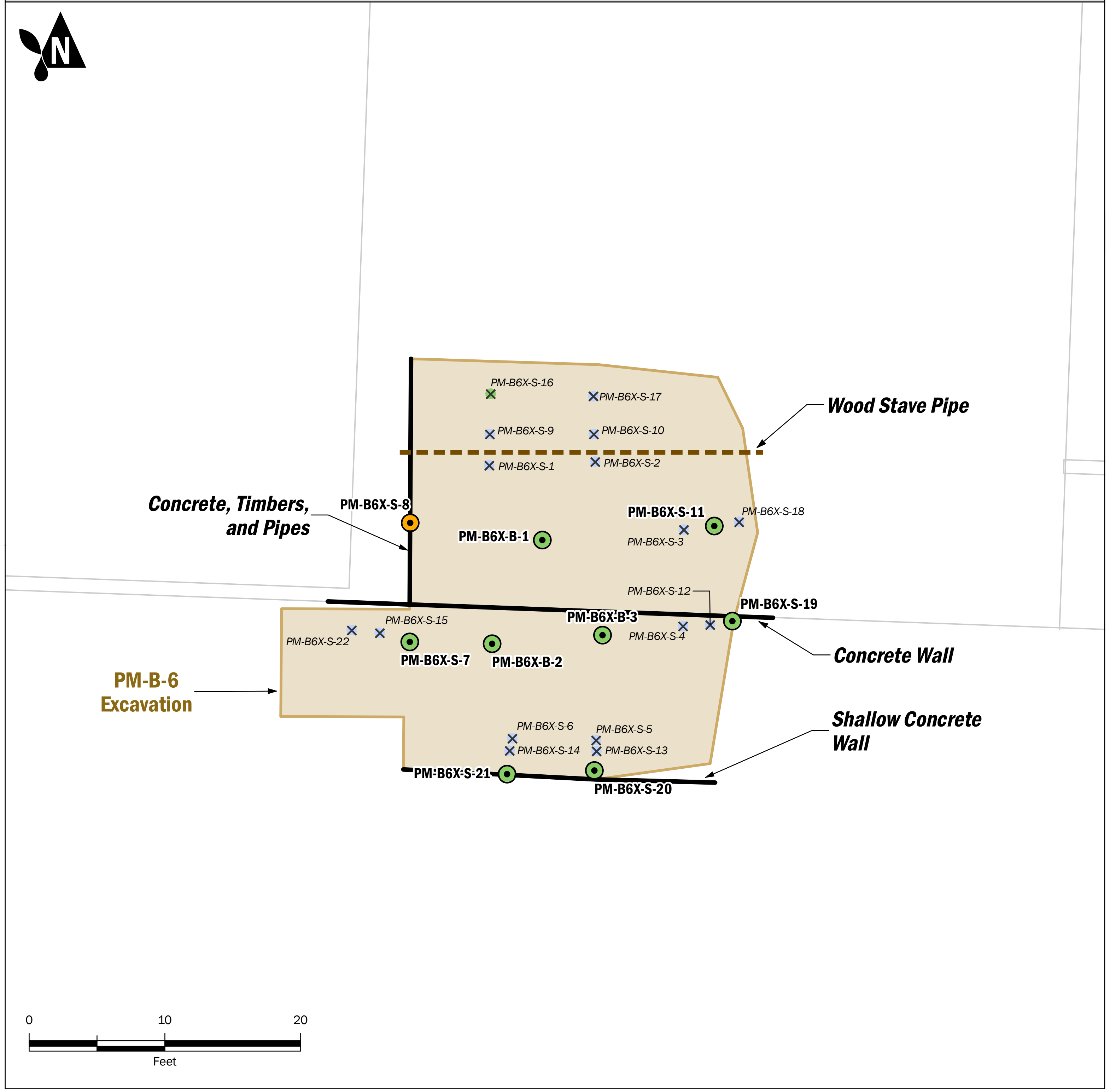
Soil Cleanup Results for Old Machine Shop Area

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

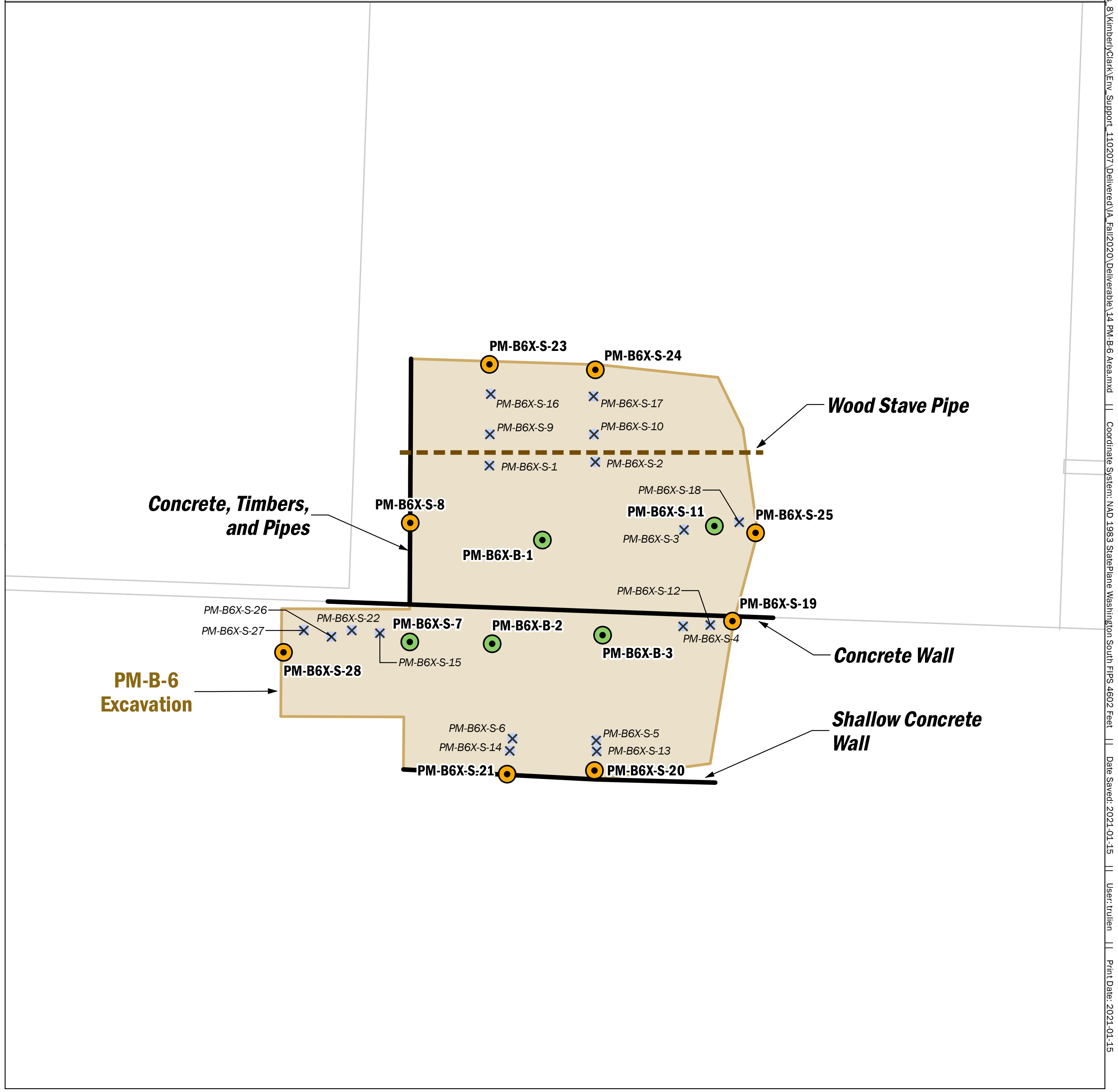
Aspect CONSULTING

JAN-2021	BY: CB / TDR	FIGURE NO. **13**
PROJECT NO. 110207	REVISED BY: RAP	

Copper



Mercury



Verification Sample Data

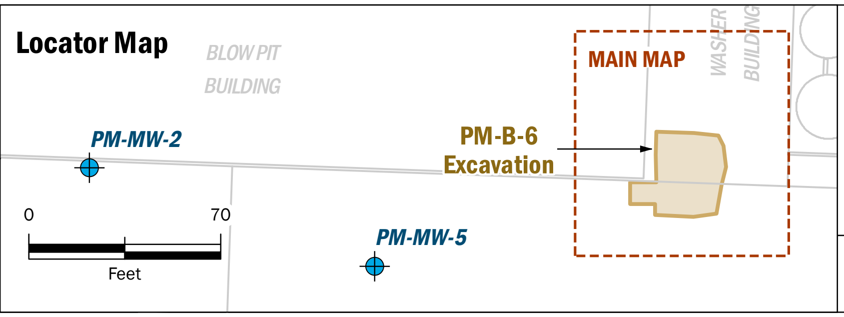
- ● Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- ● Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ☒ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- × Identifies overexcavated soil sample location

- ⊕ Former Monitoring Well
- ▨ PM-B-6 Excavation Extents
- ☐ Other Interim Action Excavation Extents

COC = contaminant of concern

Note: Historical site feature locations are approximate.

Locator Map



Soil Cleanup Results for PM-B-6 Area

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING

JAN-2021	BY: CB / TDR	FIGURE NO.	14
PROJECT NO. 110207	REVISED BY: RAP		

GIS Path: T:\projects_8\KimberlyClarkEnv_Support_110207\Deliverables\IA_Fall2020\Deliverable\14 PM-B-6 Area.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 2021-01-15 || User: trullen || Print Date: 2021-01-15

Metals (Arsenic, Copper, & Lead)

Verification Sample Data

- ● Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- ● Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location

⌖	Former Monitoring Well	▨	REC5-MW-1 Excavation Extents

Note: Historical site feature locations are approximate.

COC = contaminant of concern

Soil Cleanup Results for REC5-MW-1 Area

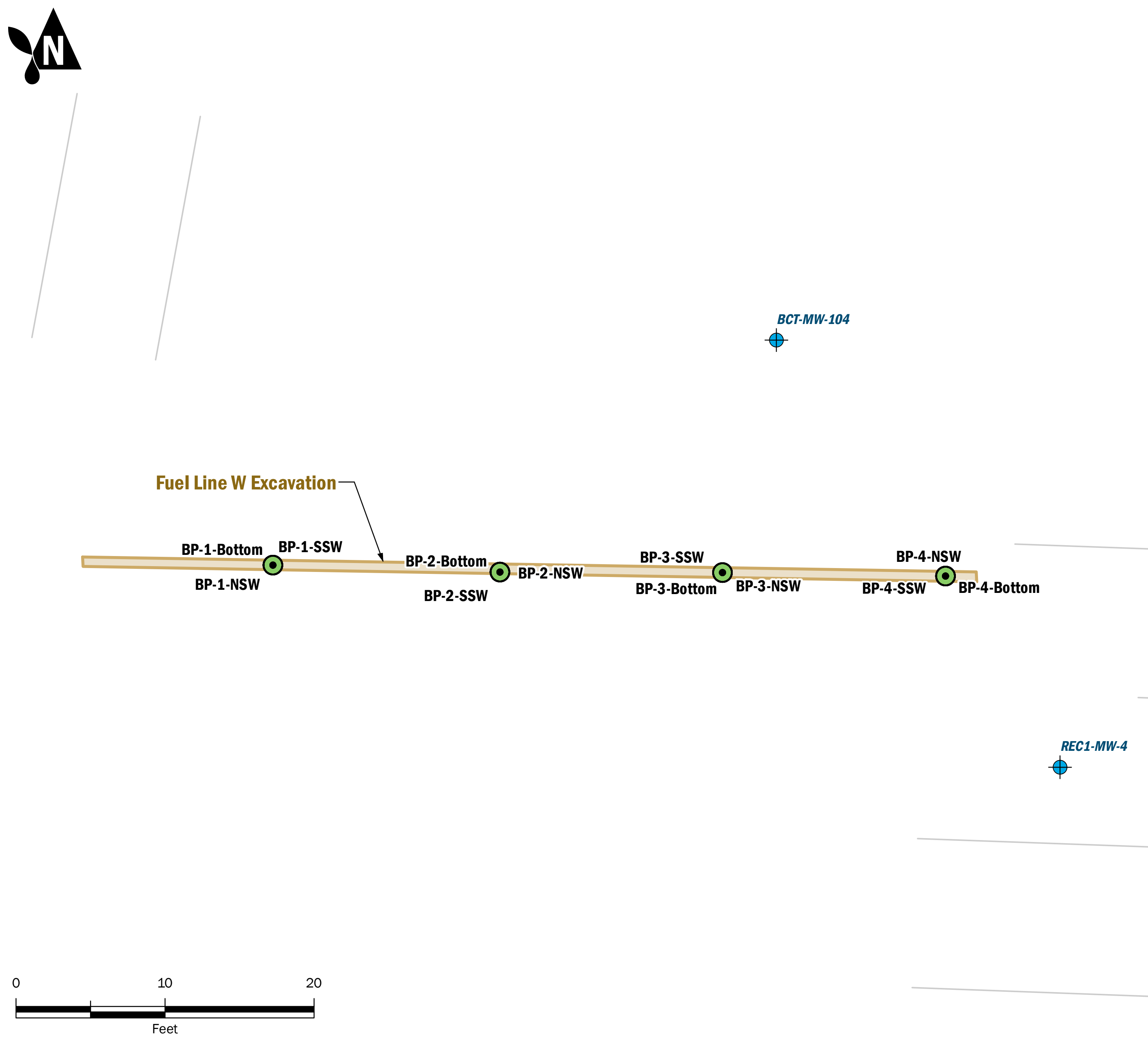
Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING

JAN-2021	BY: SJG / HRL	FIGURE NO. **15**
PROJECT NO. 110207	REVISED BY: - - -	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\15 REC5-MW-1 Area.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 2021-01-15 || User: trullen || Print Date: 2021-01-15

TPH-cPAH



Verification Sample Data

- 🟢 Identifies in-situ soil sample location with no exceedance of soil preliminary cleanup level (PCL) for figure COC
- 🟠 Identifies in-situ soil sample location with exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location with no exceedance of soil PCL for figure COC
- ✕ Identifies overexcavated soil sample location
- ⌖ Former Monitoring Well
- ▢ Fuel Line W Excavation Extents

Note: Historical site feature locations are approximate.

COC = contaminant of concern

Soil Cleanup Results for Fuel Line W Area

Report for Second Interim Action
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	JAN-2021	BY: SJG / HRL	FIGURE NO.
	PROJECT NO. 110207	REVISED BY: - - -	16

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Fall2020\Deliverable\16 Fuel Line W Area.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 2021-01-15 || User: trullen || Print Date: 2021-01-15