INTERIM ACTION REPORT

Kimberly-Clark Worldwide Site Upland Area
Everett, Washington

Prepared for: Kimberly-Clark Worldwide, Inc.

Project No. 110207 • April 8, 2015 Final

earth + water

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Acronyms

Aspect	Aspect Consulting, LLC
AST	above-ground storage tank
bgs	below ground surface
BMP	best management practice
BTEX	benzene, toluene, ethylbenzene, and xylenes
CEMEX	CEMEX USA soil remediation facility in Everett, Washington
City	City of Everett
Contractor	Clearcreek Contractors Inc.
COC	contaminant of concern
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSO	combined sewer overflow
CWM	Chemical Waste Management
DA	discharge authorization
DAHP	Washington State Department of Archaeology and Historic Preservation
D008	federal waste code for lead-contaminated characteristic hazardous waste
Ecology	Washington State Department of Ecology
EPH	extractable petroleum hydrocarbons
ESA	environmental site assessment
FS	Feasibility Study
GAC	granular activated carbon
IA	interim action
IACL	interim action cleanup level
K-C	Kimberly-Clark Worldwide Inc.
LDR	Land disposal restrictions
LLC	limited liability company
mg/kg	milligrams/kilograms
mg/L	milligrams per liter
MTCA	Model Toxics Control Act
NAPL	non-aqueous phase liquid

Order	Agreed Order No. DE 9476
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCS	petroleum-contaminated soil
pH	negative log of the hydrogen ion concentration in solution
PID	photoionization detector
POTW	publicly owned treatment works
PQL	practical quantitation limit
REC	recognized environmental condition
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
SAP	Sampling and Analysis Plan
Site	K-C Worldwide Site
SPLP	synthetic precipitation leaching procedure
SVOC	semivolatile organic compound
TCLP	toxicity characteristic leaching procedure
TEQ	toxic equivalent quotient/concentration
TPH	total petroleum hydrocarbons
µg/L	micrograms per liter
U.S.	United States
Upland Area	Upland Area of the Kimberly-Clark Worldwide Site
UST	underground storage tank
VPH	volatile petroleum hydrocarbons
VOC	volatile organic compound
WAC	Washington Administrative Code
95% UCL	95 percent upper confidence limit on the arithmetic mean

1 Introduction

Aspect Consulting, LLC (Aspect) has prepared this Interim Action Report on behalf of Kimberly-Clark Worldwide, Inc. (K-C), to document the interim action activities completed within the Upland Area of the Kimberly-Clark Worldwide Site (herein referred to as the Upland Area) (Figure 1). The interim action was conducted in accordance with the Interim Action Plan (Aspect, 2012), included as Exhibit C to Agreed Order No. ED 9476 (Order), which was prepared to guide opportunistic cleanup activities conducted in conjunction with facility demolition and prior to redevelopment of the Upland Area.

1.1 Interim Action Goal

The interim action represented a proactive early cleanup of contaminated soils identified from the Upland Area Phase 2 environmental site assessment (ESA) and remedial investigation (RI) sampling and analysis, with a goal to expedite the overall Upland Area cleanup process. The interim action involved permanent removal of contaminated soil, to the maximum extent practicable, to meet interim action soil cleanup levels (IACLs). The interim action did not conflict with or eliminate reasonable alternatives for the Upland Area final cleanup action in accordance with WAC 173-340-430(3)(b).

1.2 Interim Action Soil Cleanup Levels

The 2012 Interim Action Plan dictated that the interim action would, to the extent practicable, remove soil containing contaminant concentrations above soil IACLs. At the time of the Interim Action Plan and the beginning of the interim action, the soil IACLs were defined based on unrestricted land use because the future land use for the Upland Area was not determined. The Interim Action Plan allowed for a change to industrial-use IACLs if it became known that the Upland Area would remain in an industrial land use consistent with the Model Toxics Control Act (MTCA; Chapter 173-340 WAC).

The unrestricted soil IACLs accounted for soil-human direct contact, contact with terrestrial ecological receptors, and soil leaching to groundwater (groundwater protection). Site groundwater is not potable and the groundwater cleanup levels are therefore based on discharge to marine surface water and, for volatile organic compounds (VOCs) only, vapor intrusion. The MTCA-default soil concentrations based on groundwater protection of the marine surface water environment are intentionally conservative, applying the groundwater cleanup levels and default assumptions of MTCA (three-phase partitioning model in WAC 173-340-747(4)), but not fully accounting for contaminant attenuation occurring between a soil location and a location where a receptor could be exposed to groundwater. Soil concentrations protective of groundwater are commonly more stringent than those protective of direct contact, particularly for metals.

Consistent with the RI/FS Work Plan (Aspect, 2013b), IACLs based on direct contact were applied for those contaminants for which empirical evidence (based on pre-RI groundwater data) appeared to indicate that current soil concentrations are protective of groundwater. The empirical demonstration that soil concentrations are protective of groundwater will be fully evaluated based on all of the RI data. This evaluation may result in changes to the soil screening levels identified in the RI/FS Work Plan (i.e., whether they should be based on direct contact or groundwater protection) if exceedances in groundwater are identified for compounds that had no exceedances based solely on the pre-RI groundwater data. As a result, some residual concentrations of chemicals in soil in the IA areas, which have been reported herein as meeting IACLs based only on the direct contact pathway, may actually be above screening levels identified for the RI/FS if it is shown that soil is not protective of groundwater.

Notably, mercury and zinc were not identified as groundwater constituents of concern in the RI/FS Work Plan, based on the pre-RI data. Groundwater data collected during the RI indicate that those two metals are constituents of concern for groundwater in some portions of the Upland Area. Consequently, soil screening levels that will be applied in the RI for these metals will incorporate groundwater protection criteria, and thus will be reduced by several orders of magnitude. The revised criteria for these metals are at or nearly at natural background concentrations[1] determined in Ecology (1994), and any detection of mercury is an exceedance. These new lower criteria were not applied as IACLs in the interim action, but they are used for purposes of identifying residual exceedances for this report.

Ultimately, the groundwater monitoring proposed in the Interim Action Confirmational Groundwater Monitoring Work Plan (Aspect, 2014c), as well as long-term groundwater compliance monitoring requirements imposed for final cleanup action, will demonstrate whether residual soil concentrations in the interim action areas are protective of groundwater, in accordance with MTCA (WAC 173-340-747(9)).

In late September 2013, shortly after the interim action excavation program began, K-C contracted to sell the property to a maritime ship-building company, with a planned water-dependent industrial redevelopment consistent with City zoning and meeting MTCA requirements to qualify as an industrial property. In light of the anticipated future use as an industrial shipyard with no public access, K-C communicated to Ecology on October 7, 2013 requesting use of industrial-based IACLs. Ecology agreed at that time that the Upland Area would qualify for industrial cleanup levels based on the anticipated future use as an industrial shipyard with no public access. From that point forward, the interim actions were conducted applying industrial-use IACLs. It was expected that the planned industrial use would have qualified for an exclusion from a terrestrial ecological evaluation in accordance with WAC 173-340-7491(1)(b), so MTCA ecological indicator soil concentrations were not considered in the IACLs applied. Table 1 presents the IACLs.

Following completion of the interim action excavation work, the maritime ship building company terminated the contract to acquire the property. Even though the future use of the property is anticipated to be industrial, based on K-C's experience in the marketplace, unless the future use is certain, the forthcoming Upland Area RI/FS will proceed with evaluation relative to unrestricted cleanup levels, including incorporation of terrestrial ecological soil indicator concentrations as appropriate. This will result in changes to the soil screening levels identified in the RI/FS Work Plan and, as a result, some residual

[1] Representing natural mineral content without anthropogenic influence.

concentrations of chemicals in soil in the interim action areas that have been reported herein as meeting IACLs may actually be above screening levels identified for the RI/FS.

Since the majority of the interim action work was conducted considering industrial IACLs (beginning in October 2013), those IACLs are presented and discussed in this report. All of the interim action data representing in-place soil (i.e., representing current conditions) will be incorporated into the Upland Area RI/FS. Therefore, the interim action data will be evaluated relative to unrestricted cleanup levels as part of the RI/FS.

Pyron Environmental, under subcontract to Aspect, completed independent Level III data quality validation of the analytical data generated during the interim action, 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.

2 Interim Action Activities and Methodology

Through a competitive bid process, K-C selected Clearcreek Contractors Inc. of Everett, Washington, as the construction contractor (Contractor) for the interim action in August 2013. Interim action activities were conducted between mid-August of 2013 and mid-May of 2014. Aspect was the Engineer responsible for field direction of the Contractor, and performance monitoring of the interim action cleanup activities, on behalf of K-C, and is termed the Engineer in this Plan.

The Contractor began mobilization for the interim action on August 19, 2013, and then conducted several weeks of preparatory activities including:

- Installation of truck wash and other erosion control best management practices (BMPs);
- Mobilization of water treatment system components;
- Removal of remaining hog fuel present across the surface in the areas of the underground storage tank (UST) 70 and USTs 71/72/73 interim action areas;
- Physical screening and off-site disposal of stockpiled demolition debris from mill demolition;
- Test pitting to better define contaminant nature and extent for selected interim action areas; and
- Characterization and import of backfill material from the Farmers Market and Hidden Lake sources.

Excavation of potentially contaminated soil began on September 12, 2013, and continued through late March 2014. Final off-site transport of excavated material, final site grading, and demobilization occurred discontinuously into mid-May 2014.

2.1 Interim Action Areas

The 15 interim action areas (see Figure 1) and the contaminants targeted for removal in each were as follows:

- BA-MW-6 Area (oil-range total petroleum hydrocarbons [TPH]);
- Boiler/Baghouse Area (lead);
- Bunker C ASTs Area (oil-range TPH, gasoline-range TPH, and polycyclic aromatic hydrocarbons [PAHs]);
- CN-B-2 Area (oil-range TPH);
- GF-11 Area (lead);
- Heavy Duty Shop Sump Area (oil-range TPH);
- Hydraulic Barker Vault Area (oil-range TPH);
- Naval Reserve Parcel UST Area (diesel-range and gasoline-range TPH);
- Naval Reserve Parcel South Area (oil-range and gasoline-range TPH);
- Rail Car Dumper Area (oil-range TPH);
- REC2-MW-5 Area (near Diesel AST) (oil-range TPH);
- SHB-MW-1 Area (gasoline-range TPH, oil-range TPH, and copper);
- UST 29/Latex Spill Area (xylene and latex);
- UST 70 Area (diesel-range TPH); and
- USTs 71, 72, 73 Area (oil-range TPH).

2.2 Excavation Dewatering and Management of Water

Throughout the interim action, the Contractor 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 Interim Action Plan, water produced during dewatering was treated on-site using a temporary water treatment system prior to discharge of the treated water to City of Everett's (City) sanitary sewer in accordance with City Discharge Authorization (DA) number 254-13 granted to K-C in July 2013.

The Contractor's temporary water treatment system consisted of three 3-chamber weir tanks, bag filters, and two granular activated carbon (GAC) vessels. The weir tanks provided removal of settleable solids and floating separate-phase petroleum. Weir tank effluent was pumped through bag filters (5 to 20 micron) for removal of finer suspended solids, and then through GAC vessels for removal of dissolved-phase organics. The treated water was then discharged into K-C's on-site wastewater settling basin, from which it was discharged to City sanitary sewer with regulation of flow rate by the City. Water discharged to sewer was further treated in the City's publicly owned treatment works (POTW). Total discharge to the City POTW over the duration of the interim action was 5,676,900 gallons.

In accordance with the DA, water samples were collected monthly from a sampling port downstream of the GAC vessels throughout the period of water discharge from the interim action. There were no exceedances of the DA effluent criteria during the interim action (Table 2).

Separate-phase petroleum (free product) collected during excavation either by vacuum truck or adsorbent material was characterized and managed for off-site disposal by Emerald Services, as a subcontractor to the Contractor. In addition, approximately 6,230 gallons of separate-phase oil (free product) with oily water was removed and properly disposed of.

During demobilization of the water treatment system, the Contractor cleaned the weir tanks by removing and stockpiling the settled solids from within the tanks. The removed solids were solidified using polymer to allow handling, and hauled off-site for disposal at Republic Services' Regional Subtitle D Landfill in Roosevelt, Washington.

2.3 Soil Excavation and Segregation

The interim action cleanup involved conventional excavation and off-site disposal of contaminated soils. Excavation sidewalls were sloped as needed to facilitate excavation to the depths required to achieve cleanup goals. The dewatering was successful in allowing excavation and handling of unsaturated soil. In some cases, saturated soil was temporarily placed within the confines of the excavation, above the water table, to allow drainage of water back into the excavation prior to loading that material into trucks.

During excavation, Aspect made a determination of whether or not the materials being excavated were contaminated or not (met IACLs or not), based on information from prior investigations, pre-excavation test pits, and field screening evidence during excavation. Field screening methods included visual and olfactory observations, use of a photoionization detector (PID) for determining presence/absence of VOCs, and the use of a sheen test for presence of petroleum (although it was determined to be of limited utility).

Excavated material determined from field screening to be potentially not contaminated, was referred to as "overburden" and was stockpiled in stockpile areas underlined with reinforced 10-mil plastic sheeting and bermed with import sand. The stockpiled overburden was sampled to determine its disposition, as described in Section 2.4.

Excavated materials determined from field screening to be contaminated were loaded for off-site disposal. To the extent practical, contaminated soil that had been drained to an unsaturated condition was directly loaded into waiting dump trucks or intermodal containers for off-site transport to a licensed disposal facility, rather than stockpiled temporarily on-site. Contaminated soil that was temporarily stockpiled on-site, based on availability of trucks or intermodal containers for off-site transport, was placed in stockpile areas underlined with reinforced 10-mil plastic sheeting and bermed with import sand. When contaminated soil was temporarily stockpiled outside of the excavation, it was stockpiled outside of the 200-foot shoreline buffer and the stockpiles were covered daily and maintained until the material was loaded and hauled off-site for disposal.

2.4 Archaeological Monitoring

In accordance with the site-specific Cultural Resources Monitoring and Discovery Plan (SWCA, 2013), archaeological monitoring was conducted by qualified personnel from SWCA during the interim action where excavation through the fill unit into underlying native soil was possible. This occurred during excavation of the Bunker C ASTs area located in the eastern portion of the Upland Area where fill thickness is less and where excavation to depth was planned.

The excavation remained within hydraulically placed dredge fill material, and no archaeological sites were identified. Non-significant historical remains (e.g., pilings supporting a former fuel AST) were also observed. Localized deeper excavations for installation of a dewatering sump encountered apparent native organic-rich silt at a depth of approximately 11 to 12 feet. During excavation, a shelly deposit was observed, which required a work stoppage and further investigation by SWCA to determine if it was an archaeological midden; however, the SWCA archaeologists on-site determined that the shelly deposit did not contain intact midden.

One lithic artifact, an edge-altered cobble, associated with a few fire-modified rocks, was identified within the dredge fill, which also required a work stoppage for investigation by SWCA. Identification of the cobble and its association with fire-modified rocks warranted recording the artifact as an isolate. SWCA retained the isolate in curation until the end of the interim action, and then donated it on K-C’s behalf for permanent curation at the Tulalip Tribe’s Hibulb Cultural Center and Natural History Preserve, which is a certified collections and archaeological repository. The isolate was also recorded with the state Department of Archaeology and Historic Preservation (DAHP), as required. SWCA’s cultural resource monitoring report for the interim action has been provided to DAHP and Ecology; however, state law restricts public disclosure of the locational information regarding the artifact.

2.5 Performance Monitoring and Over-Excavation

Throughout the interim action, Aspect collected verification soil samples for chemical analysis from the sidewalls and bottoms of the excavations to assess compliance with IACLs. Excavation verification samples were collected by hand within the excavation if safe to do so, or using the excavator bucket. Excavation sidewall samples were generally collected at a horizontal spacing of roughly 15 feet and at 3-foot depth intervals across the depth of the sidewall, subject to access limitations. Excavation bottom samples were collected on roughly 15-foot spacing, subject to access limitations. The area-specific descriptions of Section 3 include discussion of sample numbers and differences from a strict 15-foot sample spacing.

Chemical analyses for the verification soil samples specific to each interim cleanup area were discussed with and approved by Ecology. For excavation areas targeting petroleum-related compounds, and which lacked prior data for metals or PCBs, pre-excavation characterization soil sampling and analysis (from test pits) was conducted to obtain metals and PCB data. If the characterization data indicated no exceedances for PCBs, PCBs were not included as analyses for the excavation verification samples. If the characterization data indicated no exceedances for metals, metals were analyzed in every fifth excavation verification sample collected. If there were exceedances indicated for PCBs or metals, those analytes were included in the verification analyses. Analytical results were generally obtained with a 24-hour laboratory turnaround to guide the excavation efforts with minimal down time.

If the excavation verification data indicated that IACLs were not achieved in an area of the excavation, that portion of the excavation was extended (over-excavated) to remove additional soil so as to meet IACLs, to the extent practicable. Where an excavation sidewall sample exceeded a IACL, the sidewall soil represented by that sample was over-excavated approximately 2 feet laterally, followed by collection of a new sidewall verification sample in that location. Where an excavation bottom sample exceeded IACLs, additional soil from the bottom of the excavation was over-excavated by a depth of approximately 1 foot, followed by collection of a new bottom verification soil sample at that location.

Ecology required that, to avoid the potential for additional remedial action within the footprints of the interim action excavations, over-excavation of the excavation bottom be conducted to meet IACLs for all constituents, if practicable.

Of note is copper, which, with the exception of Area SHB-MW-1, was not a contaminant targeted for removal in the interim action areas, but which commonly exceeded its IACL because the 36 milligrams per kilogram (mg/kg) IACL is equal to a natural background soil concentration as determined by Ecology (1994). Following discussion with Ecology regarding extending excavations solely based on copper exceeding 36 mg/kg, K-C agreed to excavate a maximum of two additional 1-foot lifts (vertically) from excavation bottoms to try to achieve the 36 mg/kg IACLs. If after the second lift the new bottom sample exceeded 36 mg/kg, additional excavation would be conducted if needed to achieve a bottom-sample copper concentration of 60 mg/kg copper, which is near the 90th percentile of the site data collected prior to the interim action. If K-C determined it technically impracticable to do such over-excavation, K-C would discuss with Ecology. At the end of the interim action, no excavation bottom verification samples remaining in place exceed 60 mg/kg copper.

Specifics of the excavation efforts and data for each area are described in Section 3.

2.6 Overburden Soil Sampling and Disposition

In most interim action areas, shallow soil was determined, based on existing data and field screening information, to be contaminated, so no overburden was generated. For the four excavation areas from which overburden soil was produced, the soil was temporarily stockpiled for sampling and analysis to characterize it for appropriate disposition. Three discrete samples of soil were collected and analyzed for each 100 cubic yards of stockpiled overburden from an area. The exception was collection of a single 3-point composite sample from the very small (approximately 4-cubic yard) stockpile of overburden produced from the small Heavy Duty Shop Sump area excavation (Section 3.6). The overburden soil samples were analyzed for gasoline-, diesel-, and oil-range TPH, priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc), SVOCs including PAHs, VOCs, and PCBs. The soil samples were typically analyzed with rush turnaround of results, and the results were used to qualify the material for use as backfill.

No geotechnically unsuitable overburden (as defined in Interim Action Plan) was produced during the interim action.

In total, approximately 1,700 cubic yards of geotechnically suitable overburden soil were excavated from the Bunker C ASTs, Heavy Duty Shop Sump, Naval Reserve Parcel UST, and Naval Reserve Parcel South areas and stockpiled for sampling and analysis. Fifty-two samples of the stockpiled overburden soil were collected for analysis, and the analytical data are presented in Table 3. For compaction purposes, the overburden soil was intended for placement only above the water table, thus IACLs for unsaturated soil are applicable.

Individual sample results from the overburden soil met IACLs except for a limited number of low-level exceedances for arsenic (3 of 52 exceedances, maximum 30 mg/kg concentration), copper (2 of 52 exceedances, maximum 53.2 mg/kg), zinc (11 of 52 exceedances, maximum 260 mg/kg), and mercury (5 of 52 exceedances, maximum 0.33 mg/kg concentration).

The overburden soil from each excavation area was placed as backfill above the water table (unsaturated soil) within the excavation from which it was produced.

2.7 Profiling and Off-Site Disposal of Excavated Material

Excavated materials to be disposed of off-site were first chemically profiled for waste designation using existing data, and approved for disposal by the licensed disposal facilities. Waste streams generated and disposed of off-site during the interim action included the following:

- Petroleum-contaminated soil (PCS) acceptable for treatment by thermal desorption and landfilling at the CEMEX USA soil remediation facility in Everett, Washington (CEMEX);
- PCS not acceptable by CEMEX because of excessive organic matter (wood) or debris, which was disposed of at Republic Services' Subtitle D landfill in Roosevelt, Washington;
- Xylene-contaminated soil which was landfilled at CEMEX;
- Material containing contaminants other than petroleum, which was disposed of at Republic Services' Subtitle D landfill in Roosevelt, Washington; and
- Characteristic hazardous waste soil (for lead; federal waste designation D008) which required treatment to meet universal treatment standards under the federal Land Disposal Restrictions (LDR) prior to disposal at the Chemical Waste Management (CWM) Subtitle C landfill in Arlington, Oregon. As required by CWM, three loads (truck + trailer, approximately 90 tons total) of this waste were initially delivered to CWM for their treatment pilot testing (chemical stabilization) to ensure that their treatment could meet the universal treatment standards. CWM confirmed that their treatment met the universal treatment standards. Each load of hazardous waste was transported under manifest from the site to the CWM facility.

In total, approximately 38,450 tons of contaminated soil and debris and 1,380 tons of inert debris were removed from the Upland Area and properly disposed of off-site during the interim action. Quantities of material removed from each cleanup area are described in Section 3. Appendix A provides the certificates of disposal for the waste streams along with the Hazardous Waste Manifests for the hazardous waste generated from the GF-11 area.

2.8 Excavation Backfill

Backfill of the interim action excavations largely consisted of imported aggregate from three local sources: Farmer's Market site in Everett, Hidden Lake in Shoreline, Washington, and the Stilly Sand and Gravel Quarry in Arlington, Washington. Approximately 24,650 cubic yards of imported aggregate were used for backfill during the interim action. The approximately 1,700 cubic yards of overburden soil described in Section 2.6 also comprised a small percentage of the total backfill quantity.

Representative sampling and chemical analyses of imported backfill material was conducted in accordance with the Interim Action Plan: 5 samples for up to 1,000 cubic yards of material, and 1 additional sample for every additional 1,000 cubic yards of material. The import soil samples were analyzed for gasoline-, diesel-, and oil-range TPH, priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc), SVOCs including PAHs, VOCs, and PCBs. Table 4 presents the analytical data for the import materials.

Fifty four of the 55 samples of import soil met the IACLs applied during the interim action; one sample had a detectable mercury concentration above the new IACL as discussed in Section 2.8.3.

Each source of import material is described briefly below.

2.8.1 Farmers Market

A total of 12,525 tons or about 8,000 cubic yards of material for use as backfill was imported from the Everett Farmers Market construction project located within one mile of the site. The material was native glacial outwash sand at depth. Twelve characterization samples were collected from the borrow source for chemical analysis - one sample of stockpiled soil and 11 from *in situ* material - using excavated test pits for sampling. The 12 samples met IACLs (Table 4).

2.8.2 Hidden Lake

A total of 5,472 tons or about 3,650 cubic yards of backfill material was imported from a sediment control project at Hidden Lake in Shoreline, Washington, which is an open-water feature constructed to improve aquatic habitat. The import material was sand removed from a sediment trap on Boeing Creek designed to keep sediment from filling Hidden Lake. Nine characterization samples were collected from the *in situ* material for chemical analysis using hand auger methods. The nine samples met IACLs (Table 4).

2.8.3 Stilly Sand and Gravel

A total of 19,549 tons or about 13,000 cubic yards of material used as backfill was imported from the Stilly Sand and Gravel Quarry in Arlington, Washington. Sixteen characterization samples were collected and analyzed from both stockpiled and *in situ* material. Fifteen of the 16 samples met IACLs. One sample, STIL-G16, had a detection of mercury (0.47 mg/kg) above the new IACL (any detection is an exceedance) (Table 4). As discussed in Section 1.2, the new IACL for mercury was not applied at the time of the interim action work.

2.8.4 Quarry Spalls

Quarry spalls (fractured bedrock, in the size range of 4 to 7 inches) were used for backfill below the water table in deeper excavated areas to provide a more stable base for compaction of overlying aggregate backfill. The spalls are native bedrock, but there is concern for naturally occurring metals concentrations in bedrock materials based on experiences at other sites. The lab was unable to crush the quarry spall to a particle size small enough for analysis of total metals in their instruments. However, the material could be crushed to an adequately small size to run the synthetic precipitation leaching procedure (SPLP; EPA Method 1312); therefore, the SPLP extraction with analysis of the leachate for priority pollutant metals was conducted to assess protectiveness of groundwater in accordance with WAC 173-340-747(7).

Zinc was the only metal detected in the SPLP leachate (Table 3). The detected leachable zinc concentration (31.6 μg/L) was less than 10 times the 81 μg/L groundwater cleanup level, so the material is protective of groundwater in accordance with WAC 173-340-747(7)(c)(i) (Table 4).

2.9 Confirmational Groundwater Monitoring

Post-construction confirmational groundwater monitoring is underway for the interim action areas, in accordance with the Ecology-approved Confirmational Groundwater Monitoring Work Plan (Aspect, 2014c), to assess whether the completed interim action soil cleanup activities are protective of groundwater (eliminated sources of leachable contaminants). The confirmational groundwater monitoring will initially be conducted on a quarterly basis for one year to assess potential seasonal variability in groundwater quality. Measured analyte concentrations well below groundwater IACLs for the monitoring period could demonstrate compliance for that analyte at that well.

A report of results from the initial four quarters of monitoring will be submitted to Ecology for review and determination of whether IACLs have been met for the specific interim action cleanup areas. If Ecology determines that the data do not adequately demonstrate compliance with cleanup standards for specific areas, additional confirmational monitoring will be conducted for those areas as agreed to with Ecology.

3 Interim Action Soil Cleanup by Area

The section describes the interim action activities completed for each area. Note that, in the verification soil sample data tables, the segregation of soil samples into unsaturated soil (above water table) versus saturated soil (below water table) is based on an analysis done for the forthcoming Upland Area RI, based on groundwater elevations measured in May 2014, which are the highest levels measured since 2012. As such, soil samples that were collected above the water table at the time of excavation may be represented as saturated soil in the data tables. This represents a conservative assessment because soil screening levels based on groundwater protection are more stringent for saturated soil than for unsaturated soil.

The table of soil analytical data for each area includes samples representing in-place soil, as well as over-excavated samples (at the end of the table) which 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 IACLs for saturated and unsaturated soil are also presented in the tables. At the end of the data tables, Table 21 summarizes contaminant concentrations remaining above IACLs in each interim action area, and Table 22 summarizes, for each area, the contaminants targeted for removal, tons of material removed, and the compliance monitoring conducted.

The figure(s) presented for each interim action area depicts verification soil sample data representing in-place soil, for the primary constituents of concern that had IACL exceedances before or after excavation (TPH, cPAHs, metals). In several interim action areas, the verification soil samples were also analyzed for other constituents. The interim action verification data representing in-place soil will be presented with the rest of the site data as part of the RI, with mapping of the collective sample data representing post-interim action conditions.

In addition, Appendix B presents photographs of the interim action excavation in each area.

3.1 BA-MW-6 Area

Oil-range TPH was the contaminant of concern (COC) targeted in the interim action for this area. An elevated oil-range TPH concentration was initially detected in a shallow soil sample (9,300 mg/kg at 1.5-foot depth) collected from RI monitoring well BA-MW-6 in late October 2013. The boring had no exceedances for metals, PAHs, VOCs, or PCBs.

Based on the detected TPH concentration, and its location within 200 feet of the shoreline, K-C decided to include removal of TPH-impacted soil in this area (and the SHB-MW-1 and CN-B-2 areas, described below) as part of the interim action.

In January 2014, prior to initiating interim action excavation activities, four pre-excavation test pits (BA-6N, BA-6S, BA-6E, and BA-6W; Figure 2) were advanced proximate to the BA-MW-6 location to further characterize the lateral extent of the oil-range TPH exceeding IACLs. Two shallow soil samples were collected from each test pit at depths of approximately 0.5 and 2 feet below ground surface (bgs), and submitted for laboratory analysis of diesel- and oil-range TPH. The pre-excavation test pit samples successfully bound the lateral extent of soil with TPH concentrations exceeding the 2,000 mg/kg IACL (Table 4). The collective soil data from the BA-MW-6 area were transmitted to Ecology, and the additional interim action discussed and agreed to, in February 2014.

Prior to initiating excavation in this area, monitoring well BA-MW-6 was decommissioned in accordance with Chapter 173-160 WAC. However, prior to decommissioning, the well was sampled twice for purposes of the RI in accordance with the RI/FS Work Plan (Aspect, 2013b). TPH was not detected and there were no PAH exceedances in the two groundwater samples collected from well BA-MW-6 (data to be reported in the forthcoming RI Data Report).

The interim action for this area included excavation and proper off-site disposal of approximately 100 tons of soil. The excavation area depicted on Figure 2 reached a final depth of approximately 4 feet bgs. The eastern boundary of the excavation was bounded by a concrete footing. Soil excavated from this area was transported to CEMEX for thermal desorption and then permanent disposal in their permitted landfill.

A total of five excavation verification soil samples (three sidewall and two bottom samples) were collected from the final limits of the small excavation; a portion of the excavation was bounded by a concrete foundation wall (Figure 2). The verification sample frequency, with the additional eight samples collected from the pre-excavation test pits, was substantially compliant with the Interim Action Plan. Verification sample depths are included in Table 5. The verification soil samples were analyzed for diesel- and oil-range TPH and PAHs. The laboratory analytical results for the verification soil samples are included in Table 5.

No concentrations of diesel- or oil-range TPH or PAHs were detected in the five verification soil samples, demonstrating the excavation area complies with soil IACLs (Table 5).

As described in the Groundwater Monitoring Work Plan (Aspect, 2014c), confirmational groundwater monitoring for this area will be completed at new monitoring well BA6-MW-101 (Figure 2).

3.2 Boiler/Baghouse Area

Lead was the COC targeted for removal in the interim action for this area, although pre-excavation soil concentrations of arsenic, copper, mercury, nickel, and zinc also exceeded MTCA-default soil IACLs based on groundwater leaching to protect the marine environment. The Boiler/Baghouse area overlaps with petroleum impacts from the adjacent UST 71 interim action area; petroleum-related compounds in that area are addressed under the UST 71 interim action (refer to Section 3.15). Based on the toxicity characteristic leaching procedure (TCLP) metals data, the lead-contaminated soil designated as non-hazardous waste once excavated. The interim action excavation area and verification soil samples are depicted on Figure 3.

The interim action for this area included excavation and proper off-site disposal of approximately 2,380 tons of soil. The excavation area reached final depths ranging between approximately 2 to 6 feet bgs, with deeper depths in areas of over-excavation to removing soils with IACL exceedances. Groundwater was not encountered while excavating in this area. Soil excavated in this area was transported to Allied for permanent disposal via Subtitle D landfill.

During the excavation, an apparent 10-inch-diameter, 65-feet-deep steel-cased water supply well was exposed; no pump or other instrumentation was present in the well. A review of historical drawings did not reveal the existence of this well. In February 2014, Holt Services decommissioned the apparent well in accordance with Chapter 173-160

WAC, by perforating the entire depth of the casing and pressure grouting with high-yield bentonite grout from the bottom of the casing up to ground surface (via tremie pipe).

The east end of the excavation exposed large bundles of copper wire trending in a north-south orientation. The wire was removed from the excavation but no effort was made to chase wire across the site.

A total of 49 excavation verification soil samples (29 sidewall and 20 bottom samples) were collected from the final limits of the excavation (Figure 3). Subsurface concrete structures limited collection of bottom samples from the northeast and northwest ends of the excavation. Sample frequency was generally consistent with the Interim Action Plan. The verification soil samples were analyzed for metals (antimony, arsenic, cadmium, copper, lead, mercury, nickel, and zinc). Eleven samples were also analyzed for PAHs, and four samples were also analyzed for dioxins/furans.

Soil represented by eight bottom samples and one sidewall sample was subsequently over-excavated based on concentrations of arsenic, copper and/or lead above IACLs. The laboratory analytical results for the verification soil samples are included in Table 6.

Based on the verification soil sample results, soil contaminated by lead (target COC) was successfully removed to meet its industrial-based IACL (i.e., below 1,000 mg/kg). PAH and dioxin/furan concentrations met IACLs. Following over-excavation, residual concentrations of copper exceed its IACL. Concentrations of mercury and zinc meet the IACLs that were in effect at the time of the excavation (based on industrial direct contact), but exceed the IACLs subsequently applied for purposes of this report (based on groundwater leaching to protect the marine environment). The other metals met IACLs (Table 6).

Residual concentrations of copper exceed the 36 mg/kg IACL in three of the final excavation bottom samples (Figure 3), ranging from 45.3 mg/kg to 57.3 mg/kg; all residual detected copper concentrations in the excavation bottom samples are less than 60 mg/kg. Within the excavation bottom, residual concentrations of mercury exceed the new 0.1 mg/kg IACL in four samples (0.13 mg/kg to 16 mg/kg) (Table 5).

On the excavation sidewalls, 18 final verification samples exceed the IACL for copper, ranging from 36.6 mg/kg to 96.9 mg/kg. Residual concentrations of mercury exceed the new 0.1 mg/kg IACL in most sidewall samples (0.13 to 1.9 mg/kg). Eleven sidewall samples exceed the new 100 mg/kg zinc IACL (103 to 328 mg/kg) (Table 5).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at new monitoring wells BBH-MW-101, BBH-MW-102, BBH-MW-103, and BBH-MW-104, as depicted on Figure 3.

3.3 Bunker C ASTs Area

Oil-range TPH (Bunker C fuel oil), gasoline-range TPH, and PAHs were the COCs targeted for removal in the interim action for this area. Based on verification soil sampling during excavation, soil concentrations of copper and mercury also exceeded IACLs in this area. During the process of decommissioning and removing the Bunker C oil and caustic ASTs in the mid-1990s, Scott Paper conducted an independent cleanup of petroleum-contaminated shallow soils within the AST secondary containment area (Scott

Paper, 1995); that letter documents that the Bunker C oil tank being decommissioned did not have a bottom in it. A geomembrane separating the cleanup's import fill from the underlying soil was observed during the interim action excavation. In addition to the Bunker C fuel storage, gasoline ASTs were present in the northwestern portion of the area[2] (see Figures 4a and 4b), and a sump was discovered in the southwestern corner of the excavation as indicated on Figure 4a. The truck loading area on the north side of the building had reinforced concrete pavement ranging in thickness from 8 to 10 inches, which was removed prior to the start of the excavation. The interim action excavation area, and excavation verification soil samples are depicted on Figure 4a (TPH/cPAH exceedance data) and Figure 4b (metals exceedance data).

Monitoring wells MW-3, MW-4, and UST68-MW-6 were decommissioned in accordance with Chapter 173-160 WAC prior to interim action excavation in those areas.

During excavation, groundwater was encountered approximately 2 feet bgs within the eastern limits of the excavation and gradually deepened to the west, approaching 6 feet bgs in the western portion of the excavation. Dewatering was necessary during the excavation and prior to backfilling. The water was pumped to the water treatment system and ultimately to the City POTW under the DA, as described in Section 2.2.

The interim action successfully removed approximately 9,690 tons of petroleum-contaminated material from this area, including removal of several hundred feet of an 11-foot wide, 2-foot-thick monolithic concrete footer[3] to access underlying petroleum-saturated soils that were not removed during the mid-1990s independent cleanup. The only section of the footer that remains in place is next to the northern edge of the Warehouse (Figure 4a). The footer/foundation was wider in its northwest corner, where gasoline ASTs had also been present historically. Removal of the massive footer and gasoline AST area determined the configuration of the excavation's western edge (Figure 4a). The excavation area reached final depths ranging from approximately 6 to 8 feet bgs. Soil excavated in this area was transported to CEMEX for thermal treatment and then landfilling. Petroleum-contaminated concrete and wood pilings removed from this area were transported to Roosevelt Regional Landfill for disposal.

The south and east ends of the excavation were advanced as close as feasible to the edges of the Warehouse structure. Petroleum-contaminated soil exists beneath the northern portion of the Warehouse, as is documented by sidewall verification soil samples collected along the interim action excavation's southern edge (Figure 4a; Table 7). RI sampling and analysis beneath the Warehouse identified residual petroleum in soils associated with historical fuel storage facilities present prior to construction of the Warehouse (data presented in Aspect, 2014a). cPAHs also exceed IACLs in soil beneath the Warehouse. Petroleum-contaminated soil beneath the Warehouse was not targeted for removal during the interim action since the Warehouse may remain on-site for future use.

A total of 170 excavation verification soil samples (95 sidewall and 75 bottom samples) were collected from the limits of the excavation, with 2 bottom and 20 sidewall samples

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[2] Based on available aerial photographs, four gasoline ASTs were present in this area from the 1940s through 1960s, and one was present in the 1970s and 1980s.
[3] Footer for the secondary containment wall surrounding on three sides the most recent configuration of the tank farm.

subsequently over-excavated based on exceedances of IACLs (Figure 4a). Due to the expansion of the excavation, sample frequency in the Bunker AST area was reduced from the Interim Action Plan, with collection of sidewall samples at an interval ranging from 15 to 25 feet laterally and in a 25-foot grid for bottom samples. Given that the excavation was expanded in multiple locations in multiple times, particularly on the west side, the sampling locations adapted in an attempt to provide coverage for the changing configuration.

The verification soil samples were analyzed for diesel- and oil-range TPH and PAHs, and every fifth sample was analyzed for metals. When excavating in areas with field screening evidence of gasoline-range hydrocarbons, the verification samples were also analyzed for gasoline-range TPH and VOCs. The sample of petroleum-contaminated soil overexcavated from the former sump area was also analyzed for PCBs, which were not detected. The laboratory analytical results for the verification soil samples are included in Table 7.

Following the interim action soil removal, including over-excavation, residual soil concentrations of gasoline-range TPH, Bunker C (oil-range) TPH[4], total cPAH (TEQ[5]), copper, and mercury at one or more excavation verification sample locations exceed their respective IACLs based on groundwater leaching to protect marine surface water. No VOC exceedances were detected, and benzene, ethylbenzene, toluene, and xylenes were not detected in the verification soil samples, including in samples that were over-excavated (Table 7).

On the excavation bottom, TPH and PAH concentrations meet IACLs (Figure 4a), copper was detected at concentrations greater than its IACL in 2 of 15 verification soil samples (maximum detection of 42.7 mg/kg), and mercury exceeded its new IACL in 1 of 15 samples (0.13 mg/kg; Figure 4b) (Table 6).

On the excavation sidewalls away from the Warehouse, TPH concentrations meet IACLs. Total cPAH (TEQ) was detected in one 3-foot sidewall sample, BAST-S024, at a concentration (0.84 mg/kg) greater than the 0.4 mg/kg IACL for saturated soil but below the 7.9 mg/kg IACL for unsaturated soil; a 3-foot depth at this location was unsaturated at the time of excavation in October 2013, but during seasonal high water conditions (as assumed for this analysis) it is calculated to be saturated. In addition, low-level metals exceedances were detected at two sidewall sample locations away from the Warehouse: copper (52.9 mg/kg) and mercury (0.11 mg/kg) in sample BAST-S016, and mercury (0.18 mg/kg) in sample BAST-S043 (Table 6).

On the eastern excavation sidewall, along the northwest side of the Warehouse, samples BAST-S003 through BAST-S006 have no detectable TPH, consistent with the lack of historical petroleum storage and lack of observed TPH contamination beneath the northeastern portion of the Warehouse (refer to data in Aspect, 2014a). At the southeastern corner of the excavation, a marginal TPH exceedance (2,300 mg/kg TPH[6])

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[4] For this area, oil-range TPH was quantified using a Bunker C oil calibration standard and thus reported as Bunker C.
[5] Total toxicity equivalence.
[6] Sum of diesel-range + oil-range TPH concentrations assuming a single petroleum product, in accordance with Ecology policy.

was detected in sample BAST-S01 collected beneath the edge of the Warehouse (Figure 4a).

On the southern excavation sidewall, where residual petroleum-contaminated soils are present beneath the Warehouse, verification soil samples exceed IACLs for TPH (e.g., up to 9,300 mg/kg Total TPH at BAST-S007; up to 2,100 mg/kg gasoline-range TPH at BAST-S51). No metals exceedances were detected in samples collected along the southern excavation sidewall. Sidewall soil samples BAST-S065 (150 mg/kg gasoline-range TPH) and BAST-S075 (10,400 mg/kg Total TPH) were collected adjacent to a large concrete footer supporting the corner of the Warehouse; while these samples are not beneath the Warehouse per se, they represent soil considered inaccessible by conventional excavation without potentially compromising the Warehouse structure.

Selected verification soil samples of petroleum-contaminated soil collected on the southern excavation sidewall were also submitted for laboratory analysis of volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH), analyses which provide more detailed information regarding the hydrocarbon composition of the residual petroleum product. Table 20 presents the VPH/EPH data from collective interim action samples from all areas. The RI also included samples of petroleum-contaminated soil collected elsewhere beneath the Warehouse for VPH/EPH analysis. The collective data will be used, as part of the RI, to calculate risk-based soil cleanup levels for the residual petroleum-contaminated soil beneath the Warehouse. In addition, indoor air and sub-slab vapor sampling is being conducted as part of the RI to assess potential vapor intrusion risk posed by the subsurface soils (Aspect, 2014b). Using the collective information, the appropriate cleanup action for residual petroleum-contaminated soil beneath the Warehouse will be determined during completion of the Upland Area Feasibility Study.

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at the eight new monitoring wells BCT-MW-101 through BCT-MW-108, as depicted on Figure 4a.

3.4 CN-B-2 Area (Clark-Nickerson Mill)

Oil-range TPH was the COC targeted for removal in the interim action for this area. Based on verification soil sampling during excavation, soil concentrations of arsenic, copper, lead, mercury, zinc, and cPAHs also exceeded IACLs. An elevated oil-range TPH concentration was initially detected in two soil samples (66,000 and 14,000 mg/kg at 6-foot and 10-foot depths respectively) collected from RI soil boring CN-B-2 in December 2013. Based on the detected soil concentrations, and general proximity to the shoreline, K-C decided to include removal of TPH-impacted soil in this area as part of the interim action.

In January 2014, prior to initiating interim action excavation activities, four pre-excavation test pits (CN-2N, CN-2E, CN-2S and CN-2W; Figure 5) were advanced around the CN-B-2 location to further characterize the lateral extent of the oil-range TPH exceeding IACLs. Three soil samples were collected from each test pit at depths of approximately 5, 10, and 11 feet bgs, and submitted for laboratory analysis of diesel- and oil-range TPH. PCBs were analyzed but not detected in a pre-excavation characterization soil sample containing 86,000 mg/kg oil-range TPH. The pre-excavation test pit samples did not successfully bound the lateral or vertical extent of soil with TPH concentrations exceeding the 2,000 mg/kg IACL (Table 7). The collective soil data from the CN-B-2 area were transmitted to Ecology, and the additional interim action discussed and agreed to, in February 2014.

Prior to initiating the interim action activities in this area, groundwater monitoring well TM-MW-1 was sampled twice for purposes of the RI in accordance with the RI/FS Work Plan (Aspect, 2013b). TPH was not detected in either of the two groundwater samples from well TM-MW-1, and one of the samples had a marginal exceedance (0.034 µg/L) for total cPAH (TEQ) (data to be reported in the forthcoming RI report). While the interim action excavation extended approximately up to well TM-MW-1, the well remains intact following completion of the interim action.

Groundwater was encountered approximately 4 feet bgs within the limits of the excavation. Active dewatering continued throughout the duration of the excavation. The water was pumped to the water treatment system and ultimately to the City POTW under the DA described in Section 2.2.

The interim action for this area included excavation and proper off-site disposal of approximately 6,560 tons of soil. The excavation area depicted on Figure 5 reached a final depth of approximately 18 feet bgs. Two monolithic concrete foundation elements associated with the former Clark Nickerson Mill were left in place (Figure 5). The concrete foundations extend to a depth of approximately 12 feet with wood cribbing visible beneath the concrete to an unknown depth. The excavation contained abundant brick and dimensional lumber and was underlain by an unknown depth of sawdust, all associated with the former Clark Nickerson mill. Material excavated from this area that lacked a substantial percentage of debris was transported to CEMEX for thermal desorption and then landfilling. Much of the soil contained substantial brick and wood debris, making it unsuitable for CEMEX's thermal treatment process, and thus was transported to Roosevelt Regional Landfill for disposal.

A total of 81 excavation verification soil samples (53 sidewall and 28 bottom samples) were collected from the limits of the excavation, with 27 samples subsequently over-excavated based on exceedances of IACLs (Figure 6). The sample interval for bottom samples was greater than 15 feet due to the depth of the excavation and the large concrete monoliths which limited access with the excavator. Excavated material from the deepest areas of the excavation consisted of sawdust and was easily screened for presence of petroleum using olfactory and visual methods along with sheen testing. The verification soil samples were analyzed for diesel- and oil-range TPH, PAHs, and metals. The laboratory analytical results for the verification soil samples are included in Table 8.

Based on the verification soil sample results, residual soil concentrations of TPH within the excavated area meet soil IACLs.

On the excavation bottom, at depths of 16 to 18 feet below grade, one sample contains a low-level arsenic exceedance (25.2 mg/kg in CNB2-B21), one sample has a low-level lead exceedance (114 mg/kg in CNB2-B18), and three samples CNB2-B18, -B25, and -B27 have zinc concentrations greater than the new 85 mg/kg IACL for saturated soil (103 mg/kg, 102 mg/kg, and 216 mg/kg, respectively). In addition, a total cPAH (TEQ) concentration of 6.4 mg/kg, greater than the 0.4 mg/kg saturated soil IACL but less than the 7.9 mg/kg unsaturated soil IACL, was detected in one bottom sample (CNB2-B27) at a depth of 4 feet; the sample location was unsaturated at the time of excavation, but designates as saturated soil based on the seasonally high water table estimate used for the RI analysis of saturated vs. unsaturated soils (Table 8).

On the excavation sidewalls, sporadic low-level metals exceedances were also detected in selected samples: four copper exceedances (ranging from 36.8 to 77.6 mg/kg), one lead exceedance (121 mg/kg), and two mercury exceedances of the new 0.1 mg/kg IACL (0.13 to 0.15 mg/kg). One sample of saturated soil from the excavation sidewall also has an exceedance for total cPAH (TEQ) (0.73 mg/kg in CNB2-S36) (Table 8).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at new monitoring wells CN-MW-101, CN-MW-102, CN-MW-103 and CN-MW-104 (Figure 5).

3.5 GF-11 Area

Lead was the COC targeted for removal in this interim action area, based on a surficial occurrence of lead contamination at boring GF-11 conducted during the Phase 2 ESA. Based on the TCLP-leachable concentration of lead at the GF-11 boring, the lead-contaminated soils from this area designated as characteristic hazardous waste (federal waste code D008), and required treatment to meet universal treatment standards under the federal Land Disposal Restrictions prior to land disposal in a Subtitle C landfill.

Prior to initiating interim action excavation, six pre-excavation test pits (TP-1 through TP-6; Figure 6) were initially advanced in August 2013 around the anticipated perimeter of the GF-11 excavation area to better define the quantity of soil requiring excavation. From each test pit, soil samples from the test pit sidewall closest to boring GF-11 and from the test pit bottom were collected for chemical analysis of metals. Lead concentrations in the test pits ranged from 2.4 to 120 mg/kg, meeting the IACL for unsaturated soil (Table 8).

The interim action for this area included excavation and proper off-site treatment and disposal of 224 tons of hazardous (D008) soil. The excavation area depicted on Figure 6 reached a final depth of approximately 3 feet below the original soil grade. No groundwater was encountered during the excavation activities.

As stated in Section 2.7, approximately 90 tons of this waste were initially delivered under hazardous waste manifest to CWM's Subtitle C facility in Arlington, Oregon, for their treatment pilot testing (chemical stabilization). CWM confirmed that their treatment met the universal treatment standards. Once approved by CWM, the remaining excavated soils were transported under hazardous waste manifest to CWM's facility for chemical stabilization followed by Subtitle C land disposal. The hazardous soil was treated and disposed of within 90 days of generation.

The interim action excavation area, excavation verification soil samples, and pre-excavation characterization test pits are depicted on Figure 6. A total of nine excavation verification soil samples (seven sidewall and two bottom samples) were collected from the final limits of the excavation (Figure 6). Sample frequency for verification samples generally followed Interim Action Plan. The verification soil samples were analyzed for metals (arsenic, cadmium, copper, lead, mercury, nickel, and zinc) and PAHs. The laboratory analytical results for the verification soil samples are included in Table 9.

Following the interim action soil removal, lead concentrations within the excavated area meet the IACL. However, residual soil concentrations of copper, mercury, and zinc within the excavation exceed IACLs based on groundwater leaching to protect the marine environment. PAHs meet IACLs in the excavation (Table 9).

On the excavation bottom, mercury concentrations in two samples (0.33 to 0.43 mg/kg) exceed the new 0.1 mg/kg IACL. On the excavation sidewalls, detected concentrations of copper exceed the 36 mg/kg IACL in two samples (36.2 to 99.2 mg/kg), detected concentrations of mercury exceed the new 0.1 mg/kg IACL in five samples (0.11 to 0.50 mg/kg), and the detected zinc concentration in one sample (126 mg/kg) exceeded the new 100 mg/kg IACL. Soil samples from the surrounding test pits also exceeded IACLs for copper (up to 52.8 mg/kg) and mercury (up to 0.36 mg/kg) (Table 9).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at new monitoring well GF11-MW-101, as depicted on Figure 6.

3.6 Heavy Duty Shop Sump Area

Oil-range TPH was the inferred COC targeted in the interim action for this area, based on oily material observed in the sump structure during the Phase ESA (Recognized Environmental Condition [REC] 3 in AECOM, 2011). The contents of the sump structure were removed and properly disposed of during demolition of the Shop structure. No groundwater was observed during excavation. The interim action excavation and excavation verification soil samples are depicted on Figure 7.

No visual or olfactory evidence of contamination was observed during the interim action excavation of the sump structure or immediately surrounding sub-slab soils. Because of the extremely small excavation size (6- by 10-feet), only one verification sample was collected from each sidewall of the excavation. The five verification soil samples (one bottom and four sidewall) collected from the 6- by 10-foot sump removal excavation were sampled for SVOCs including PAHs, metals, TPH, PCBs, and VOCs. Excavation sample results contained no detectable TPH, PCBs or VOCs and no concentrations of SVOCs including PAHs above IACLs (Table 10). With the change in IACLs for zinc, one sidewall sample (HDS-EX-NSW) contained a zinc concentration (114 mg/kg) marginally exceeding the 100 mg/kg IACL; no other metals exceeded IACLs in the verification samples (Table 10).

Contamination of this area was inferred in the Phase 1 ESA but was not confirmed by the interim action field screening or analytical data. Therefore, no confirmational groundwater monitoring is being conducted for this area (Aspect, 2014c).

3.7 Hydraulic Barker Vault Area

During demolition of the mill, a vault was uncovered in the general area of the former Hydraulic Barker Building operations. The vault reportedly contained water with an approximately 2-inch layer of hydraulic oil floating on it. During demolition, a vactor truck was used to pump out the oil and water from the vault, and a steel plate was placed over it, pending cleanup in the interim action. Based on oil-contaminated soil within and immediately surrounding the vault, K-C decided to include removal of TPH-impacted soil in this area as part of the interim action.

Oil-range TPH was the COC targeted for removal in the interim action for this area. In September 2013, prior to initiating interim action excavation activities, one pre-excavation test pit (XYAREAVT-TP1; Figure 8) was advanced proximate to the vault location to further characterize the nature of the oil-range TPH. One soil sample was collected from the test pit at a depth of 8 feet bgs, and submitted for laboratory analysis of diesel- and oil-range TPH, metals, and PCBs. The pre-excavation test pit sample contained 8,650 mg/kg oil-range TPH, but PCB and metals concentrations were below IACLs (Table 10).

As a first step in the interim action, accumulated fluids within the vault were removed again by vactor. The vault structure was subsequently removed and properly disposed of, and visually impacted soil excavated. The excavation area depicted on Figure 8 reached a final depth of approximately 8 feet bgs. Minor groundwater seepage was noted at about 7.5 feet, but no dewatering was necessary to complete the excavation in this area. The interim action for this area included excavation of approximately 10 tons of soil, which was transported to CEMEX for thermal treatment and then landfill disposal.

A total of six excavation verification soil samples (four sidewall and two bottom samples) were collected from the limits of the very small excavation (Figure 8). Because of the small, irregular excavation shape, only one verification sample was collected from each sidewall of the excavation - approximately 10 feet apart. The verification soil samples were analyzed for diesel- and oil-range TPH and PAHs; every fifth sample was analyzed for metals. The laboratory analytical results for the verification soil samples are included in Table 11.

Based on the verification soil sample results, residual soil contaminant concentrations within the excavated area meet IACLs (Table 11).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at new monitoring well HBV-MW-101 (Figure 8).

3.8 Naval Reserve Parcel UST Area

Soils containing diesel-range TPH concentrations up to 40,000 mg/kg were left in place following the Navy's removal of gasoline and diesel USTs (Foster Wheeler, 1998). Diesel-range TPH was therefore the COC targeted for removal in the interim action for this area. Gasoline-range TPH was also a COC targeted for removal. Although not targeted for removal, cPAHs also exceeded soil IACLs in this area. The interim action excavation area and excavation verification soil samples for this area are depicted on Figure 9.

Groundwater was encountered approximately 8 feet bgs within the limits of the excavation. Dewatering was necessary during the deeper portions of the excavation and prior to backfilling. The water was pumped to the water treatment system and ultimately to the City POTW under the DA described in Section 2.2.

The interim action for this area included excavation and proper off-site disposal of approximately 2,280 tons of soil. The excavation area reached a final depth of approximately 12 feet bgs. Most of the soil excavated in this area was transported to CEMEX for thermal desorption and landfilling. However, abundant milled wood debris was present in the northeastern edge of the excavation, making this material unsuitable for CEMEX's thermal desorption process; the wood-laden material was therefore disposed of at Roosevelt Regional Landfill.

A total of 37 excavation verification soil samples (30 sidewall and 7 bottom samples) were collected from the limits of the excavation (Figure 9), with 2 sidewall and 1 bottom samples subsequently over-excavated based on exceedances of IACLs. Large quantities of milled lumber debris were present in the eastern and northeastern sidewalls of the excavation, which limited the number of verification sidewall samples collected. Steep unstable sidewalls and caving soil limited access to the bottom of the excavation. Bottom samples were limited by the reach of the excavator bucket while keeping a safe distance from the edge of the excavation.

The verification soil samples were analyzed for diesel- and oil-range TPH and PAHs; when field screening suggested the possible presence of gasoline-range hydrocarbons, verification samples were also analyzed for gasoline-range TPH and VOCs. Prior data from the Phase 2 ESA (Aspect, 2013a) demonstrated no metals exceedances, so metals analyses were not conducted for the verification samples. PCBs were not detected in any of the twelve soil samples collected during the Navy's 1997 demolition of the Naval Reserve Parcel and removal of the USTs in this area (Foster Wheeler, 1998). Based on these data, and the fact that the petroleum targeted for removal was from releases of gasoline and diesel fuels, for which MTCA does not require PCB sampling[7], PCB analyses were not conducted for the verification soil sampling in this UST area. The laboratory analytical results for the verification soil samples are included in Table 12. One verification soil sample subsequently overexcavated was also analyzed for EPH/VPH (Table 20).

Following the interim action soil removal, residual contaminant concentrations within the excavated area meet IACLs, with the exception of one sample of saturated soil from the excavation sidewall (NRU-S06) containing a 0.53 mg/kg total cPAH (TEQ) concentration marginally exceeding the 0.4 mg/kg IACL based on groundwater leaching for marine protection (Table 12).

In accordance with Aspect (2014c), confirmation groundwater monitoring for this area will be completed at existing monitoring well NRP-MW-2 and new monitoring wells NRU-MW-101 and NRU-MW-102, as depicted on Figure 9.

3.9 Naval Reserve Parcel South Area

During the Phase 2 ESA, petroleum-impacted soils (including gasoline-range and oil-range hydrocarbons) were identified at depths at and below the water table within this southern portion of the former Naval Reserve Parcel (former borings NRP-B-2, NRP-B-7, and NRP-B-17 through NRP-B-21). Despite the elevated soil TPH concentrations, no petroleum or PAH exceedances were detected in groundwater samples collected from well NRP-MW-1 in that immediate area. Given that the TPH-impacted soils were located within approximately 100 feet of the shoreline, Ecology requested that they be removed

[7] See Table 830-1 of WAC 173-340-900.

during the interim action (email communication from Andy Kallus to Steve Germiat and Cindy Jernigan, December 9, 2013, with follow-up teleconference on December 11, 2013).

Prior to initiating the interim action activities in this area, monitoring well NRP-MW-1 was decommissioned in accordance with Chapter 173-160 WAC. Three characterization test pits (NRA1-PC1, -PC2, and -PC3) were advanced within the initially planned excavation area; soil samples were collected from them at the water table depth for chemical analyses of gasoline-, diesel-, and oil-range TPH, BTEX, PAHs, metals, and PCBs. No exceedances were detected in soil samples from the three locations (Table 13).

The interim action for this area included excavation and proper off-site disposal of approximately 1,710 tons of soil. The excavation area depicted on Figure 10 reached a final depth of approximately 12 feet bgs. Groundwater was encountered approximately 8 feet bgs and dewatering was required to accomplish the excavation. Abundant creosote-treated piles were exposed on the east side of the excavation, presumed to be part of the former Clark-Nickerson mill. The Contractor was unsuccessful at pulling the piles out using the excavator, and they were therefore cut or broken off at the bottom of the excavation. Much of the contaminated soil excavated from this area was transported to CEMEX for thermal treatment and landfilling. Contaminated material containing excessive debris was transported and disposed of at Roosevelt Regional Landfill.

A total of 38 excavation verification soil samples (29 sidewall and 9 bottom samples) were collected from the limits of the excavation (Figure 10), four of which were subsequently over-excavated including sample NRS-S07 with an exceedance of gasoline-range TPH (Table 13). Verification sample frequency was adjusted somewhat from the Interim Action Plan due to the depth of the excavation, steep caving sidewalls, piling and bulkhead structures in the excavation. Final verification sampling intervals were was approximately 20 to 25 feet laterally, with a bottom grid of about 25-foot spacing.

The verification soil samples were analyzed for gasoline-, diesel-, and oil-range TPH, PAHs, and VOCs; every fifth sample was also analyzed for metals. The laboratory analytical results for the verification soil samples are included in Table 13. Apparent creosote sheen was observed at the NRS-S21/-S22 sample location after collection of those samples; therefore, that area was over-excavated despite the NRS-S21 and –S22 samples having no detected exceedances (Table 13).

Based on the verification soil sample results, residual soil contaminant concentrations within the excavated area meet soil IACLs (Table 12; Figure 10).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at new monitoring wells NRS-MW-101 and NRS-MW-102 (Figure 10).

3.10 Rail Car Dumper Area

Oil-range TPH was the COC targeted in the interim action for this area, based on oil staining observed on the structure (REC 4) during the Phase 1 ESA (AECOM, 2011), Based on verification soil sampling during excavation, soil concentrations of arsenic, copper, mercury, nickel, and zinc also exceeded IACLs in this area. The interim action excavation area and excavation verification soil samples are depicted on Figure 11.

The interim action for this area included excavation and proper off-site disposal of approximately 140 tons of soil. The excavation area depicted on Figure 11 reached final depths of approximately 2 to 6 feet bgs after localized over-excavation; groundwater was not observed during excavation. The western edge of the excavation was bounded by the seawall and the north and northeastern edges were bounded by the concrete structures associated with the former railcar dumper. Soil excavated in this area was transported to CEMEX for thermal treatment and then landfilling. Apparent boiler clinker (light gray indurated material, 1 to 2 inches in size) located adjacent to the northern concrete structure within the excavation was also removed and disposed of at Roosevelt Regional Landfill.

A total of 15 excavation verification soil samples (11 sidewall and 4 bottom samples) were collected from the limits of the excavation, with 5 samples subsequently over-excavated based on exceedances of IACLs (Figure 11). Verification sample frequency was consistent with the Interim Action Plan. The verification soil samples were analyzed for diesel- and oil-range TPH, PAHs, metals, and PCBs. The laboratory analytical results for the verification soil samples are included in Table 14.

Following the interim action soil removal including over-excavation, residual contaminant concentrations within the excavated area meet IACLs (Table 14).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at new monitoring well RCD-MW-101 (Figure 11).

3.11 REC2-MW-5 Area (near Diesel AST)

Oil-range TPH was the COC targeted for removal in this interim action area. Based on verification soil sampling during excavation, soil concentrations of copper, lead, mercury, zinc, and cPAHs also exceeded IACLs in this area. This location has previously been referred to as part of the Diesel AST area because of proximity to the former Diesel AST; however, the shallow soil contamination observed at the REC2-MW-5 location during the Phase 2 ESA was oil-range TPH – consistent with the adjacent Bunker C AST area – and it was unrelated to the former Diesel AST. The interim action excavation area and excavation verification soil samples are depicted on Figure 12.

Prior to initiating the interim action excavation, monitoring well REC2-MW-5 was decommissioned in accordance with Chapter 173-160 WAC.

Groundwater was encountered approximately 3 feet bgs within the limits of the excavation. Dewatering was necessary to accomplish over-excavation after initial verification sampling and prior to backfilling. The water was pumped to the water treatment system and ultimately to the City POTW under the DA described in Section 2.2.

The interim action for this area included excavation and proper off-site disposal of approximately 510 tons of soil. The excavation area depicted on Figure 12 reached a final depth of approximately 3 to 4 feet bgs. A cluster of stranded bare copper wires approximately 1 inch in diameter was exposed and removed during the excavation. Soil excavated in this area was transported to CEMEX for thermal treatment and then landfilling.

A total of 20 excavation verification soil samples (11 sidewall and 9 bottom samples) were collected from the limits of the excavation (Figure 12), with 3 samples subsequently over-excavated based on exceedances of IACLs. Verification sample frequency was consistent with the Interim Action Plan with a slight adjustment on the east side of the excavation due to the presence of subsurface concrete footings that limited access. The verification soil samples were analyzed for diesel- and oil-range TPH, PAHs, metals, and PCBs. The laboratory analytical results for the verification soil samples are included in Table 15.

Following the interim action soil removal including over-excavation, residual soil TPH concentrations within the excavated area meet IACLs. However, residual soil concentrations of copper, mercury, and zinc within the excavated area exceed respective IACLs based on groundwater leaching to protect the marine environment (Table 15).

On the excavation bottom, copper exceedances were detected in three samples (up to 56.9 mg/kg). In addition, concentrations of mercury in two samples (up to 0.17 mg/kg), and zinc in two samples (up to 525 mg/kg) exceeded their respective new IACLs. During over-excavation, the northern sidewall was sloughing and covered the excavation bottom represented by verification samples DAST-B04, DAST-B06, and DAST-B07 with metals exceedances.

On the excavation sidewalls, 5 of the 10 final verification samples contained minor copper exceedances (up to 47.7 mg/kg), while two samples each contained concentrations of mercury (up to 0.31 mg/kg) and zinc (up to 456 mg/kg) exceeded their respective new IACLs (Table 14; Figure 12).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at new monitoring well DAST-MW-101 (Figure 12).

3.12 SHB-MW-1 Area (Small Hydraulic Barker Area)

Gasoline-range and oil-range TPH along with copper were the COCs targeted for removal in this interim action area. Based on verification soil sampling during excavation, soil concentrations of mercury and zinc also exceeded IACLs in this area. Elevated TPH concentrations (4,800 mg/kg gasoline-range and 28,000 oil-range) were initially detected in a 3-foot soil sample collected from RI monitoring well SHB-MW-1 in late October 2013. Despite the high gasoline-range TPH concentration, no VOC exceedances were detected. Based on the detected soil TPH concentrations, and location within 200 feet of the shoreline, K-C decided to include removal of TPH-impacted soil in this area as part of the interim action.

In January 2014, prior to initiating interim action excavation activities, four pre-excavation test pits (SHB-1N, SHB-1E, SHB-1S and SHB-1W; Figure 13) were advanced proximate to the SHB-MW-1 location to further characterize the lateral extent of the oil-range TPH exceeding IACLs. One shallow soil sample was collected from each test pit at a depth of 2.5 to 3.5 feet bgs, and submitted for laboratory analysis of diesel- and oil-range TPH and copper. The pre-excavation test pit samples successfully bound the lateral extent of soil with TPH concentrations exceeding the 2,000 mg/kg IACL (Table 15). However, copper was detected at a concentration of 562 mg/kg, well above the IACL, in the soil sample from the northern test pit (SHB-1N). The collective pre-excavation soil data from the SHB-MW-1 area were transmitted to Ecology, and the additional interim action discussed and agreed to, in February 2014.

Prior to initiating the interim action activities in this area, monitoring well SHB-MW-1 was decommissioned in accordance with Chapter 173-160 WAC. Prior to decommissioning, the well was sampled twice for purposes of the RI in accordance with the RI/FS Work Plan (Aspect, 2013b). The two groundwater samples from well SHB-MW-1 had no detectable TPH and no PAH exceedances, but had arsenic exceedances (data to be reported in the forthcoming RI report).

The interim action for this area included excavation and proper off-site disposal of approximately 210 tons of soil. The excavation area depicted on Figure 13 reached a final depth of approximately 4 feet bgs. Groundwater was not encountered during excavation.

Because of the detected metals concentrations and debris content, the soil excavated from this area was deemed unacceptable for thermal treatment at CEMEX, so it was transported for disposal at Roosevelt Regional Landfill.

Initially, nine excavation verification soil samples (six sidewall and three bottom samples) were collected from the limits of the excavation (Figure 13). Verification sample frequency was consistent with the Interim Action Plan. The verification soil samples were analyzed for gasoline-, diesel-, and oil-range TPH, PAHs, metals, and VOCs.

The southern sidewall verification sample SHB-S03 had a detection of oil-range TPH at 4,300 mg/kg, so the sidewall was over-excavated in that area. Following over-excavation, the new verification sample collected from the south sidewall (SHB-S07) contained a TPH concentration less than the IACL. The laboratory analytical results for the verification soil samples are included in Table 16.

Following the interim action soil removal including over-excavation, residual soil TPH concentrations within the excavated area meet IACLs. However, residual soil concentrations of copper, mercury, and zinc within the excavated area exceed respective IACLs based on groundwater leaching to protect the marine environment (Table 16).

Soils on the excavation bottom meet IACLs.

On the excavation sidewalls, detected copper concentrations exceeded the IACL in three samples (up to 65.1 mg/kg), one mercury concentration (0.12 mg/kg) exceeded the new IACL, and zinc concentrations exceeded the new IACL in two samples (up to 229 mg/kg) (Table 16).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at new monitoring wells SHB-MW-101 and SHB-MW-102 (Figure 13).

3.13 UST 29/Latex Spill Area

Xylenes were the COC targeted for removal in this interim action area. Soil concentrations of cPAH along with diesel- and gasoline-range organics also exceeded IACLs in this area. A release of latex also occurred east of the former UST 29 xylene release location, and the latex partially overlaps the xylene release area. While the latex product spilled in this area contained trace concentrations of formaldehyde, vinyl acetate, and 1,4-dioxane, those compounds were not detected at concentrations greater than analytical reporting limits in soil or groundwater during the Phase 2 ESA (Aspect, 2013a). The interim action excavation area and excavation verification soil samples are depicted on Figure 14.

Monitoring wells UST29-MW-1 and REC6-MW-1 were decommissioned in accordance with Chapter 173-160 WAC prior to the interim action excavation.

Groundwater was encountered approximately 6 feet bgs within the limits of the excavation. Dewatering was necessary during the excavation and backfilling. The water was pumped to the water treatment system and ultimately to the City POTW under the DA described in Section 2.2.

The interim action for this area included excavation and proper off-site disposal of approximately 5,440 tons of soil. The excavation area reached a final depth of approximately 5 feet bgs on the eastern latex-impacted area, and from 15 to 17 feet bgs in the xylene release area. A concrete slab with tie downs for the two former underground storage tanks (USTs[8]) was exposed in the xylene release area. The presence of inert debris in the excavation made some soil excavated from this area unsuitable for thermal desorption at CEMEX. Much of the xylene-contaminated soil excavated from this area was transported to CEMEX for landfilling, whereas excavated material containing visible latex and/or excessive debris was transported to Roosevelt Regional Landfill for disposal.

A total of 57 excavation verification soil samples (41 sidewall and 16 bottom samples) were collected from the limits of the excavation, with 9 sidewall and 3 bottom samples subsequently over-excavated based on exceedances of IACLs (Figure 14). Verification bottom sample frequency was limited due to the depth of the excavation, steep sidewalls, and steel I-beam piles. The excavation bottom grid is on the order of 25 feet for the bottom verification samples.

The verification soil samples were analyzed for gasoline-, diesel-, and oil-range TPH, PAHs, and VOCs. PCBs were analyzed for but not detected in the characterization sample (XY-TPSW2-8) collected prior to excavation. Every fifth sample was also analyzed for metals, and samples collected from the latex release area were also analyzed for formaldehyde. The laboratory analytical results for the verification soil samples are included in Table 17.

Following the interim action soil removal including over-excavation, contaminant concentrations within the excavated area meet IACLs (Table 17). In accordance with Aspect (2014c), confirmation groundwater monitoring for this area will be completed at new monitoring wells UST29-MW-101 through UST29-MW-103 (Figure 14).

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[8] UST 29 contained xylene and UST 67 contained kerosene (Aspect, 2013a).

3.14 UST 70 Area

Diesel-range TPH was the COC targeted for removal in this interim action area. The interim action excavation area and excavation verification soil samples are depicted on Figure 15.

Monitoring well UST70-MW-1 was decommissioned in accordance with Chapter 173-160 WAC prior to excavation in this area.

Groundwater was encountered approximately 11 feet bgs within the limits of the excavation. Dewatering was necessary prior to backfilling. The water was pumped to the water treatment system and ultimately to the City POTW under the DA described in Section 2.2.

The interim action for this area included excavation and proper off-site disposal of approximately 1,050 tons of soil. The excavation area reached a final depth of approximately 10 to 12 feet bgs. A pair of concrete footings with tank tie downs was exposed and removed during the excavation. Numerous steel I-beams and steel tiebacks, which appeared to be from a former bulkhead structure, were exposed along the western wall of the excavation. Soil excavated from this area was transported to CEMEX for thermal treatment and then landfilling.

A total of 27 excavation verification soil samples (22 sidewall and 5 bottom samples) were collected from the limits of the excavation, with 8 sidewall samples subsequently over-excavated based on exceedances of IACLs (Figure 15). Verification bottom sample frequency was limited due to the depth of the excavation and access restrictions posed by the former tank's concrete pad, tie backs for the bulkhead, and, on the western sidewall, steel I-beam piles. The excavation bottom grid is on the order of 25 feet for the bottom verification samples.

The verification soil samples were analyzed for diesel- and oil-range TPH and PAHs; every fifth sample was also analyzed for metals. PCBs were analyzed for but not detected in the characterization sample (UST70-TP1) collected prior to excavation. The laboratory analytical results for the verification soil samples are included in Table 18.

Following the interim action soil removal including over-excavation, residual contaminant concentrations within the excavated area meet IACLs (Table 18).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at existing monitoring well UST70-MW-2 and new monitoring wells UST70-MW-101 and UST70-MW-102 (Figure 15).

3.15 USTs 71, 72, 73 Area

Oil-range TPH (Bunker C oil) (with associated cPAHs) was the COC targeted for removal in this interim action area. Based on verification soil sampling during excavation, soil concentrations of copper, mercury, and zinc also exceeded IACLs in this area. The interim action excavation area and excavation verification soil samples are depicted on Figure 16.

The interim action for this area included excavation and proper off-site disposal of approximately 8,150 tons of soil. The excavation area reached a final depth of approximately 15 feet bgs. Soil excavated from this area was transported to CEMEX for thermal desorption treatment and then landfilling; however, some soil containing abundant debris was transported to Roosevelt Regional Landfill for disposal.

Monitoring wells UST71-MW-1 and Boiler-MW-1 were decommissioned in accordance with Chapter 173-160 WAC prior to the interim action excavation of this area.

An operational 12-inch-diameter combined stormwater/sewer overflow (CSO) pipe existed within the area of the excavation. As part of this excavation, the Contractor constructed a temporary bypass pipe around the excavation area and plugged the existing CSO pipe just upstream of the excavation to maintain CSO function. Two temporary bypass lines were inserted in the CSO line's Type 2 catch basin upstream (east) of the expected excavation extent and routed to the Type 2 catch basin downstream (west) of the expected excavation. A float-controlled pump was installed in the upstream catch basin. When the water level in the catch basin began to rise, the pump engaged and pumped the upstream water past the excavation to the downstream catch basin, from where it discharged via the CSO outfall. The bypass system successfully maintained the CSO function throughout the excavation project. Following completion of excavation, and during backfill, the Contractor installed a new 18-inch-diameter corrugated high density polyethylene (HDPE) line between the Type 2 catch basins to restore (and improve) the CSO function.

Groundwater was encountered approximately 8 feet bgs within the limits of the excavation. Dewatering was necessary during the excavation and prior to backfilling; the water was treated and discharged to City POTW as described in Section 2.2. Separate-phase petroleum (free product) collected either by vacuum truck or absorbent material was characterized and managed for off-site disposal by Emerald Services, as a subcontractor to the Contractor.

During excavation, numerous large concrete foundation structures were exposed within or bounding the excavation. Along the southwest sidewall was a massive east-west-trending concrete wall or footing with a bottom depth of approximately 8 feet bgs. Visible Bunker C oil was present in a thin layer extending beneath the wall, which was inaccessible. At the northeast sidewall, three massive concrete foundations formally supporting boilers were exposed (Figure 16). The Contractor brought in large breaker equipment in an attempt to remove these structures, but was unsuccessful after two days effort.

A metal sheet pile wall separated the excavation into western and eastern sections; the western section encompassed the three former USTs whereas the eastern section encompassed the boiler area where the oil was burned as fuel. The western portion of the excavation exposed numerous wood piles which were broken off at the limits of the excavation. The pilings did not appear to be treated but many were at least partially coated in Bunker C oil. Each of the piles removed, and the abundant brick and concrete with soil from the eastern portion of the excavation, was disposed of at Roosevelt Regional Landfill. Soil from the western portion of the excavation was transported to CEMEX for thermal treatment and then landfilling.

A total of 102 excavation verification soil samples (71 sidewall and 31 bottom samples) were collected from the limits of the excavation (Figure 16), with 12 sidewall and 4 bottom samples subsequently over-excavated based on exceedances of IACLs. Grid spacing for bottom verification samples on the eastern third of the excavation was approximately 25 feet due to the depth and restricted access with the excavator.

The verification soil samples were analyzed for diesel- and oil-range TPH (quantified based as Bunker C) and PAHs; every fifth sample was also analyzed for metals. PCBs were analyzed for but not detected in the characterization sample (UST71-H06TP7) collected prior to excavation. The laboratory analytical results for the verification soil samples are included in Table 19.

Following the interim action soil removal including over-excavation, TPH and PAH concentrations within the accessible excavated area meet IACLs. Limited quantities of Bunker C-/cPAH-contaminated soil were left in place beneath four monolithic foundation elements, since it was deemed impracticable to remove the foundations (Figure 16; Table 19). Soil concentrations of Bunker C left in place ranged from 3,800 to 28,000 mg/kg, and cPAH ranged from 0.71 to 1.3 mg/kg. EPH data were collected for those soils and they will be assessed as part of the RI/FS.

In addition, residual soil concentrations of copper and mercury in selected verification soil samples exceed respective IACLs based on groundwater leaching to protect the marine environment. Metals concentrations in soils across the excavation bottom meet IACLs, except for marginal exceedances of the new mercury IACL in 4 of 27 samples (0.11 to 0.17 mg/kg). On the excavation sidewalls, 7 of 55 samples had detected mercury concentrations greater than the IACL (0.11 to 0.22 mg/kg), and 4 of the samples had detected copper concentrations greater than the IACL (36.9 to 74.5 mg/kg). Soils beneath the southern foundation monoliths had detected metals concentrations meeting IACLs. Beneath the northeastern foundation structures, detected metals concentrations also met IACLs except for one marginal mercury exceedance (0.11 mg/kg in sample BUST-B39); marginal mercury exceedances are also detected in soil samples collected adjacent to the northeastern structures (0.11 mg/kg in BUST-B41 and 0.17 mg/kg in BUST-S42; Table 19).

In accordance with Aspect (2014c), confirmational groundwater monitoring for this area will be completed at new monitoring wells UST71-MW-101 through UST71-MW-104, as depicted on Figure 16.

3.16 Removal of Hydraulic Oil from Former Elevator Base inside Warehouse

Hydraulic fluid was present in two vertical 14-inch-diameter pipes extending below the floor of the warehouse building. The pipes held hydraulic cylinders as part of a materials handling lift that was removed during demolition. A vacuum truck was used to remove the fluid and solids from the pipes, and the removed material was profiled and disposed of by Emerald Services. No groundwater was present in the pipes four weeks after vacuuming them out, indicating the pipes are not in connection with groundwater. The above-grade portion of the pipes were ground flush to the existing concrete floor, and the below-grade portions were filled with bentonite and pea gravel and sealed with a 2-foot-thick concrete cap.

4 Conclusions

The interim action achieved permanent removal of approximately 38,450 tons of contaminated material from the Upland Area, and successfully met industrial-based IACLs for the contaminants targeted for removal to the extent practicable. However, it is noted that for a number of IA areas, a reduced number of compliance samples could be collected from what was planned in the IA work plan (see prior discussions throughout this report). The reduced number of compliance samples lessens the confidence that IACLs were achieved throughout some of the IA areas. This uncertainty will be addressed in the Upland Area RI/FS. More than 5.6 million gallons of groundwater were also removed from the collective excavation areas for treatment. In addition, approximately 6,230 gallons of separate-phase oil (free product) with oily water was removed and properly disposed of off site.

Petroleum-contaminated soil was left in place beneath very large foundation elements within the USTs 71, 72, 73 interim action area. Petroleum-contaminated soil also remains in place beneath the Warehouse, which may remain on-site for future use. In addition, residual soil concentrations of selected metals (primarily copper, mercury, and zinc) within the excavation areas exceed IACLs based on leaching to groundwater for protection of the marine environment. The IACLs for copper, mercury, and, for saturated soil, zinc, are equal to natural background concentrations or analytical reporting limits, while the IACL for zinc in unsaturated soil (based on groundwater protection) is slightly greater than the natural background concentration. Exceedances for these metals are common throughout the Upland Area soil. These soils will also be addressed as part of the RI/FS.

All of the interim action data representing in-place soil (i.e., representing current conditions) will be incorporated into the Upland Area RI/FS. As long as the future site use is uncertain, the RI/FS will proceed with data evaluation relative to both unrestricted and industrial cleanup levels, including incorporation of terrestrial ecological soil indicator concentrations as appropriate.

5 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

K-C Worldwide Site Upland Area

		APPLICABLE SOIL CRITERIA											
		Soil Protective of Groundwater							Soil Protective of Human Direct Contact[f]			Interim Action Cleanup Level (mg/kg)	
		Constants and Coefficients[a]			Calculated Values								
ANALYTE (BY GROUP)	Most Stringent Groundwater Screening Level (Industrial) (ug/L)	K_{oc} (Soil Organic Carbon-Water Partitioning Coefficient for organics) (L/kg)	K_d (Distribution Coefficient for metals) (L/kg)	Henrys Law Constant (Hcc; unitless)	Unsaturated Soil Concentration Protective of Leachability to Groundwater (mg/kg)[b] (gwl-u)	Saturated Soil Concentration Protective of Leachability to Groundwater (mg/kg)[c] (gwl-s)	Groundwater Exceedances Confirmed Empirically for Analyte?[d] (Y = yes; blank = no)	Soil, Method A, Industrial Land Use, Table Value (mg/kg)[e] (mA)	Soil, Method C, Most-Restrictive Standard Formula Value, Direct Contact, Industrial Land Use (mg/kg) (mC)	Natural Background Concentration (mg/kg)[g] (back)	Practical Quantitation Level (PQL) (mg/kg)[h] (pql)	Unsaturated Soil	Saturated Soil
Total Petroleum Hydrocarbons													
Gasoline Range Hydrocarbons	800 *(pot)*						Y	30/100			5	30/100 *(mA)*	30/100 *(mA)*
Diesel Range Hydrocarbons	500 *(pot)*						Y	2000			25	2000 *(mA)*	2000 *(mA)*
Oil Range Hydrocarbons	500 *(pot)*						Y	2000			100	2000 *(mA)*	2000 *(mA)*
Metals													
Antimony	640 *(marine)*		*45*	*0.00E+00*	580	29			1400		1	1400 *(mC)*	1400 *(mC)*
Arsenic	5 *(footnote j)*		*29*	*0.00E+00*	2.9	0.15	Y		88	20	1	20 *(back)*	20 *(back)*
Barium	2000 *(pot)*		*41*	*0.00E+00*	1600	83			700000		1	700000 *(mC)*	700000 *(mC)*
Beryllium	270 *(marine)*		*790*	*0.00E+00*	4300	210			7000	0.6	1	7000 *(mC)*	7000 *(mC)*
Cadmium	8.8 *(marine)*		*6.7*	*0.00E+00*	1.2	0.061			3500	1	1	3500 *(mC)*	3500 *(mC)*
Chromium (Total)	240000 *(marine)*		*1000*	*0.00E+00*	4800000	240000			5.3E+06	48	1	5300000 *(mC)*	5300000 *(mC)*
Copper	3.1 *(marine)*		*22*	*0.00E+00*	1.4	0.069	Y		140000	36	1	36 *(back)*	36 *(back)*
Lead	8.1 *(marine)*		*10000*	*0.00E+00*	1600	81	Y	1000		24	1	1000 *(mA)*	81 *(gwl-s)*
Mercury	0.025 *(marine)*		*52*	*4.70E-01*	0.026	0.0013	Y		1050	0.07	0.1	0.1 *(pql)*	0.1 *(pql)*
Nickel	8.2 *(marine)*		*65*	*0.00E+00*	11	0.54	Y		70000	48	1	48 *(back)*	48 *(back)*
Selenium	71 *(marine)*		*5*	*0.00E+00*	7.4	0.38			18000		1	18000 *(mC)*	18000 *(mC)*
Silver	1.9 *(marine)*		*8.3*	*0.00E+00*	0.32	0.016			18000		1	18000 *(mC)*	18000 *(mC)*
Thallium	0.22 *(marine)*		*71*	*0.00E+00*	0.31	0.016			35		1	35 *(mC)*	35 *(mC)*
Zinc	81 *(marine)*		*62*	*0.00E+00*	100	5	Y		1100000	85	1	100 *(gwl-u)*	85 *(back)*
Conventionals													
Formaldehyde	1600 *(footnote k)*								700000		0.05	700000 *(mC)*	700000 *(mC)*
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	1.7 *(pot)*	*86*		*1.0E-01*	0.035	0.0019			5000		0.05	5000 *(mC)*	5000 *(mC)*
1,1,1-Trichloroethane	12000 *(vi-c)*	*140*		*7.1E-01*	380	19			7000000		0.05	7000000 *(mC)*	7000000 *(mC)*
1,1,2,2-Tetrachloroethane	11 *(marine)*	*79*		*1.4E-02*	0.21	0.011			660		0.05	660 *(mC)*	660 *(mC)*
1,1,2-Trichloroethane	42 *(marine)*	*75*		*3.7E-02*	0.77	0.042			2300		0.05	2300 *(mC)*	2300 *(mC)*
1,1-Dichloroethane	1600 *(pot)*	*53*		*2.3E-01*	23	1.3			23000		0.05	23000 *(mC)*	23000 *(mC)*
1,1-Dichloroethene	280 *(vi-c)*	*65*		*1.1E+00*	5.1	0.25			180000		0.05	180000 *(mC)*	180000 *(mC)*
1,1-Dichloropropene											0.05		
1,2,3-Trichlorobenzene											0.25		
1,2,3-Trichloropropane	0.5 *(pql)*	*116*		*1.4E-02*	0.013	0.00069			4.4		0.05	4.4 *(mC)*	4.4 *(mC)*
1,2,4-Trichlorobenzene	2 *(marine)*	*1700*		*5.8E-02*	0.65	0.033			4500		0.25	4500 *(mC)*	4500 *(mC)*
1,2,4-Trimethylbenzene	61 *(vi-c)*	*614*		*2.5E-01*	7.4	0.37					0.05		
1,2-Dibromo-3-chloropropane	2 *(pql)*	*116*		*6.0E-03*	0.052	0.0028			160		0.05	160 *(mC)*	160 *(mC)*
1,2-Dibromoethane (EDB)	1 *(pql)*	*66*		*2.7E-02*	0.017	0.00091			66		0.05	66 *(mC)*	66 *(mC)*
1,2-Dichlorobenzene	1300 *(marine)*	*380*		*7.8E-02*	99	5			320000		0.05	320000 *(mC)*	320000 *(mC)*
1,2-Dichloroethane (EDC)	42 *(vi-c)*	*38*		*4.0E-02*	0.47	0.027			1400		0.05	1400 *(mC)*	1400 *(mC)*
1,2-Dichloropropane	15 *(marine)*	*47*		*1.2E-01*	0.2	0.011			3600		0.05	3600 *(mC)*	3600 *(mC)*
1,3,5-Trimethylbenzene	80 *(pot)*	*602*		*3.6E-01*	9.5	0.48			35000		0.05	35000 *(mC)*	35000 *(mC)*
1,3-Dichlorobenzene	960 *(marine)*										0.05		
1,3-Dichloropropane											0.05		
1,4-Dioxane	10 *(pql)*								1312		0.5	1312 *(mC)*	1312 *(mC)*
2,2-Dichloropropane											0.05		
2-Butanone	4800 *(pot)*	*4.51*		*2.3E-03*	23	1.6			2100000		0.5	2100000 *(mC)*	2100000 *(mC)*
2-Chlorotoluene	160 *(pot)*	*382.9*		*1.5E-01*	12	0.63			70000		0.05	70000 *(mC)*	70000 *(mC)*
2-Hexanone											0.5		
4-Chlorotoluene											0.05		
4-Methyl-2-pentanone	640 *(pot)*	*12.6*		*5.6E-03*	4.1	0.26			280000		0.5	280000 *(mC)*	280000 *(mC)*

Table 1 - Interim Action Cleanup Levels for Soil

K-C Worldwide Site Upland Area

ANALYTE (BY GROUP)	Most Stringent Groundwater Screening Level (Industrial) (ug/L)	APPLICABLE SOIL CRITERIA: Soil Protective of Groundwater: Constants and Coefficients [a]: K_{oc} (Soil Organic Carbon-Water Partitioning Coefficient for organics) (L/kg)	K_d (Distribution Coefficient for metals) (L/kg)	Henrys Law Constant (Hcc; unitless)	Calculated Values: Unsaturated Soil Concentration Protective of Leachability to Groundwater (mg/kg)[b] (gwl-u)	Saturated Soil Concentration Protective of Leachability to Groundwater (mg/kg)[c] (gwl-s)	Groundwater Exceedances Confirmed Empirically for Analyte?[d] (Y = yes; blank = no)	Soil, Method A, Industrial Land Use, Table Value (mg/kg)[e] (mA)	Soil Protective of Human Direct Contact[f]: Soil, Method C, Most-Restrictive Standard Formula Value, Direct Contact, Industrial Land Use (mg/kg) (mC)	Natural Background Concentration (mg/kg)[g] (back)	Practical Quantitation Level (PQL) (mg/kg)[h] (pql)	Interim Action Cleanup Level (mg/kg): Unsaturated Soil	Interim Action Cleanup Level (mg/kg): Saturated Soil
Acetone	7200 (pot)	0.58		1.6E-03	30	2.1			3200000		0.05	3200000 (mC)	3200000 (mC)
Benzene	24 (vi-c)	62		2.3E-01	0.39	0.021			2400		0.05	2400 (mC)	2400 (mC)
Bromobenzene											0.05		
Bromodichloromethane	0.9 (vi-c)	55		6.6E-02	0.013	0.00073			2100		0.05	2100 (mC)	2100 (mC)
Bromoform	360 (marine)	130		2.2E-02	10	0.55			17000		0.05	17000 (mC)	17000 (mC)
Bromomethane	28 (vi-c)	9		2.6E-01	0.17	0.01			4900		0.05	4900 (mC)	4900 (mC)
Carbon tetrachloride	4.4 (marine)	150		1.3E+00	0.15	0.0075			1900		0.05	1900 (mC)	1900 (mC)
Chlorobenzene	640 (vi-c)	220		1.5E-01	29	1.5			70000		0.05	70000 (mC)	70000 (mC)
Chloroethane	40000 (vi-c)	22		4.5E-01	360	20					0.05		
Chloroform	12 (vi-c)	53		1.5E-01	0.17	0.0095			4200		0.05	4200 (mC)	4200 (mC)
Chloromethane	340 (vi-c)	6		3.6E-01	2	0.12					0.5		
cis-1,2-Dichloroethene (DCE)	16 (pot)	36		1.7E-01	0.18	0.01			7000		0.05	7000 (mC)	7000 (mC)
cis-1,3-Dichloropropene											0.05		
Dibromochloromethane	2.2 (vi-c)	63		3.2E-02	0.035	0.0019			1600		0.05	1600 (mC)	1600 (mC)
Dibromomethane	80 (pot)	22		3.4E-02	0.65	0.039			35000		0.05	35000 (mC)	35000 (mC)
Dichlorodifluoromethane	25 (vi-c)	44		1.4E+01	0.92	0.018			700000		0.5	700000 (mC)	700000 (mC)
Ethylbenzene	2100 (marine)	200		3.2E-01	89	4.6			350000		0.05	350000 (mC)	350000 (mC)
Hexachlorobutadiene	8.1 (vi-c)	54000		3.3E-01	83	4.1			1700		0.25	1700 (mC)	1700 (mC)
Isopropylbenzene	800 (pot)	698		4.7E-01	110	5.5			350000		0.05	350000 (mC)	350000 (mC)
m,p-Xylenes	1000 (pot)	233		2.8E-01	49	2.5	Y		700000		0.1	49 (gwl-u)	2.5 (gwl-s)
Methylene chloride	940 (vi-c)	10		9.0E-02	5.7	0.36			21000		0.05	21000 (mC)	21000 (mC)
Methyl tert-butyl ether	190000 (vi-c)	10.9		1.8E-02	1200	74			73000		0.05	73000 (mC)	73000 (mC)
n-Propylbenzene	800 (pot)								350000		0.05	350000 (mC)	350000 (mC)
o-Xylene	1600 (pot)	240		2.1E-01	80	4.1	Y		700000		0.05	80 (gwl-u)	4.1 (gwl-s)
p-Isopropyltoluene	1600 (vi-c)										0.05		
sec-Butylbenzene	800 (pot)								350000		0.05	350000 (mC)	350000 (mC)
Styrene	100 (pot)	910		1.1E-01	18	0.89			700000		0.05	700000 (mC)	700000 (mC)
tert-Butylbenzene	800 (pot)								350000		0.05	350000 (mC)	350000 (mC)
Tetrachloroethene (PCE)	8.9 (marine)	270		7.5E-01	0.5	0.025			21000		0.025	21000 (mC)	21000 (mC)
Toluene	15000 (marine)	140		2.7E-01	460	24			280000		0.05	280000 (mC)	280000 (mC)
trans-1,2-Dichloroethene	250 (vi-c)	38		3.9E-01	3	0.16			70000		0.05	70000 (mC)	70000 (mC)
trans-1,3-Dichloropropene											0.05		
Trichloroethene (TCE)	8.4 (vi-c)	94		4.2E-01	0.19	0.0099			1800		0.05	1800 (mC)	1800 (mC)
Trichlorofluoromethane	260 (vi-c)	44		4.0E+00	5	0.18			1100000		0.05	1100000 (mC)	1100000 (mC)
Vinyl acetate	8000 (pot)	5.3		2.1E-02	40	2.7			3500000		0.05	3500000 (mC)	3500000 (mC)
Vinyl chloride	2.4 (marine)	19		1.1E+00	0.023	0.0011			88		0.05	88 (mC)	88 (mC)
Xylenes (total)	720 (vi-c)	230		2.8E-01	35	1.8	Y		700000		0.05	35 (gwl-u)	1.8 (gwl-s)
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene	650 (marine)	4900		6.4E-03	610	30			210000		0.03	210000 (mC)	210000 (mC)
Acenaphthylene	650 (marine)										0.03		
Anthracene	26000 (marine)	23000		2.7E-03	110000	5700			1100000		0.03	1100000 (mC)	1100000 (mC)
Benzo(g,h,i)perylene											0.03		
Fluoranthene	86 (marine)	49000		6.6E-04	800	40			140000		0.03	140000 (mC)	140000 (mC)
Fluorene	3500 (marine)	7700		2.6E-03	5100	260			140000		0.03	140000 (mC)	140000 (mC)
Phenanthrene											0.03		
Pyrene	2600 (marine)	68000		4.5E-04	33000	1700			110000		0.03	110000 (mC)	110000 (mC)
1-Methylnaphthalene	1.5 (pot)	2528		2.1E-02	0.72	0.036			4500		0.03	4500 (mC)	4500 (mC)
2-Methylnaphthalene	32 (pot)	2478		2.1E-02	15	0.76	Y		14000		0.03	15 (gwl-u)	0.76 (gwl-s)
Naphthalene	360 (vi-c)	1200		2.0E-02	83	4.2			70000		0.03	70000 (mC)	70000 (mC)
Benz(a)anthracene		360000		1.4E-04							0.01		
Benzo(a)pyrene		970000		4.6E-05							0.01		
Benzo(b)fluoranthene		1200000		4.6E-03							0.01		
Benzo(k)fluoranthene		1200000		3.4E-05							0.01		
Chrysene		400000		3.9E-03							0.01		
Dibenzo(a,h)anthracene		1800000		6.0E-07							0.01		
Indeno(1,2,3-cd)pyrene		3500000		6.6E-05							0.01		
Total cPAHs TEQ	0.031 (marine)	1350000		1.3E-03	7.9	0.40	Y		18		0.015	7.9 (gwl-u)	0.4 (gwl-s)

Table 1 - Interim Action Cleanup Levels for Soil

K-C Worldwide Site Upland Area

ANALYTE (BY GROUP)	Most Stringent Groundwater Screening Level (Industrial) (ug/L)	APPLICABLE SOIL CRITERIA Soil Protective of Groundwater Constants and Coefficients[a] K_{oc} (Soil Organic Carbon-Water Partitioning Coefficient for organics) (L/kg)	K_d (Distribution Coefficient for metals) (L/kg)	Henrys Law Constant (Hcc; unitless)	Calculated Values Unsaturated Soil Concentration Protective of Leachability to Groundwater (mg/kg)[b] *(gwl-u)*	Saturated Soil Concentration Protective of Leachability to Groundwater (mg/kg)[c] *(gwl-s)*	Groundwater Exceedances Confirmed Empirically for Analyte?[d] (Y = yes; blank = no)	Soil, Method A, Industrial Land Use, Table Value (mg/kg)[e] *(mA)*	Soil Protective of Human Direct Contact[f] Soil, Method C, Most-Restrictive Standard Formula Value, Direct Contact, Industrial Land Use (mg/kg) *(mC)*	Natural Background Concentration (mg/kg)[g] *(back)*	Practical Quantitation Level (PQL) (mg/kg)[h] *(pql)*	Interim Action Cleanup Level (mg/kg) Unsaturated Soil	Saturated Soil
Other Semivolatile Organics													
1,2,4-Trichlorobenzene	2 *(marine)*	*1700*		*5.8E-02*	0.65	0.033			4500		0.03	4500 *(mC)*	4500 *(mC)*
1,2-Dichlorobenzene	1300 *(marine)*	*380*		*7.8E-02*	99	5			320000		0.03	320000 *(mC)*	320000 *(mC)*
1,3-Dichlorobenzene	960 *(marine)*										0.03		
1,4-Dichlorobenzene	21 *(marine)*	*620*		*1.0E-01*	2.6	0.13			24000		0.03	24000 *(mC)*	24000 *(mC)*
2,4,5-Trichlorophenol	3600 *(marine)*	*1600*		*1.8E-04*	1100	56			350000		0.3	350000 *(mC)*	350000 *(mC)*
2,4,6-Trichlorophenol	10 *(pql)*	*380*		*3.2E-04*	0.76	0.039			3500		0.3	3500 *(mC)*	3500 *(mC)*
2,4-Dichlorophenol	190 *(marine)*	*150*		*1.3E-04*	6.2	0.32			11000		0.3	11000 *(mC)*	11000 *(mC)*
2,4-Dimethylphenol	550 *(marine)*	*210*		*8.2E-05*	24	1.3			70000		0.3	70000 *(mC)*	70000 *(mC)*
2,4-Dinitrophenol	3500 *(marine)*	*0.01*		*1.8E-05*	14	1			7000		0.3	7000 *(mC)*	7000 *(mC)*
2-Chloronaphthalene	1000 *(marine)*	*2478*		*1.3E-02*	470	24			280000		0.03	280000 *(mC)*	280000 *(mC)*
2-Chlorophenol	100 *(marine)*	*390*		*1.6E-02*	7.8	0.4			18000		0.3	18000 *(mC)*	18000 *(mC)*
2-Methylphenol	400 *(pot)*	*91*		*4.9E-05*	8.5	0.46			180000		0.3	180000 *(mC)*	180000 *(mC)*
2-Nitroaniline	160 *(pot)*	*111*		*2.4E-06*	4	0.21			35000		0.03	35000 *(mC)*	35000 *(mC)*
2-Nitrophenol											0.03		
3-Nitroaniline											0.9		
3-Methylphenol and 4-Methylphenol coelution	400 *(pot)*								175000		0.3	175000 *(mC)*	175000 *(mC)*
4,6-Dinitro-2-methylphenol											0.03		
4-Bromophenyl phenyl ether											0.03		
4-Chloro-3-methylphenol											0.3		
4-Chloroaniline	5 *(pql)*	*66*		*1.4E-05*	0.082	0.0046			660		3	660 *(mC)*	660 *(mC)*
4-Chlorophenyl phenyl ether											0.03		
4-Nitroaniline											0.9		
4-Nitrophenol											0.3		
Benzoic acid	64000 *(marine)*	*0.6*		*6.3E-05*	260	19			14000000		3	14000000 *(mC)*	14000000 *(mC)*
Benzyl alcohol	800 *(pot)*	*21*		*1.4E-05*	6.4	0.39			350000		0.03	350000 *(mC)*	350000 *(mC)*
Benzyl butyl phthalate	8.3 *(marine)*	*14000*		*5.2E-05*	22	1.1			69000		0.03	69000 *(mC)*	69000 *(mC)*
Bis(2-chloro-1-methylethyl) ether	37 *(marine)*	*83*		*3.0E-03*	0.73	0.04			1900		0.3	1900 *(mC)*	1900 *(mC)*
Bis(2-chloroethoxy)methane											0.3		
Bis(2-chloroethyl) ether	1.4 *(marine)*	*76*		*7.4E-04*	0.026	0.0014			120		0.3	120 *(mC)*	120 *(mC)*
Bis(2-ethylhexyl) phthalate	5.9 *(marine)*	*110000*		*4.2E-06*	120	6.1			9400		0.3	9400 *(mC)*	9400 *(mC)*
Carbazole		*3400*		*6.3E-07*							0.06		
Dibenzofuran	16 *(pot)*	*9161*		*8.7E-03*	28	1.4			3500		0.03	3500 *(mC)*	3500 *(mC)*
Diethyl phthalate	28000 *(marine)*	*82*		*1.9E-05*	550	30			2800000		0.03	2800000 *(mC)*	2800000 *(mC)*
Dimethyl phthalate	1100000 *(marine)*										0.03		
Di-n-butyl phthalate	2900 *(marine)*	*1600*		*3.9E-08*	890	45			350000		0.03	350000 *(mC)*	350000 *(mC)*
Di-n-octyl phthalate	160 *(pot)*	*83000000*		*2.7E-03*	2500000	130000			35000		0.03	35000 *(mC)*	35000 *(mC)*
Hexachlorobenzene	1 *(pql)*	*80000*		*5.4E-02*	15	0.76			82		0.03	82 *(mC)*	82 *(mC)*
Hexachlorobutadiene	8.1 *(marine)*	*54000*		*3.3E-01*	83	4.1			1700		0.03	1700 *(mC)*	1700 *(mC)*
Hexachlorocyclopentadiene	1100 *(marine)*	*200000*		*1.1E+00*	42000	2100			21000		0.09	21000 *(mC)*	21000 *(mC)*
Hexachloroethane	8.9 *(marine)*	*1800*		*1.6E-01*	3.1	0.15			2500		0.03	2500 *(mC)*	2500 *(mC)*
Isophorone	960 *(marine)*	*47*		*2.7E-04*	12	0.7			140000		0.03	140000 *(mC)*	140000 *(mC)*
Nitrobenzene	690 *(marine)*	*120*		*9.8E-04*	18	0.98			7000		0.03	7000 *(mC)*	7000 *(mC)*
N-Nitroso-di-n-propylamine	1 *(pql)*	*24*		*9.2E-05*	0.0085	0.00051			19		0.06	19 *(mC)*	19 *(mC)*
N-Nitrosodiphenylamine	6 *(marine)*	*1300*		*2.1E-04*	1.5	0.076			27000		0.06	27000 *(mC)*	27000 *(mC)*
Pentachlorophenol	10 *(pql)*	*590*		*1.0E-06*	1.2	0.059			330		0.3	330 *(mC)*	330 *(mC)*
Phenol	560000 *(marine)*	*29*		*1.6E-05*	5300	310			1100000		0.3	1100000 *(mC)*	1100000 *(mC)*
2,4-Dinitrotoluene	3.4 *(marine)*	*96*		*3.8E-06*	0.075	0.0041			420		0.03	420 *(mC)*	420 *(mC)*
2,6-Dinitrotoluene	16 *(pot)*	*69*		*3.1E-05*	0.27	0.015			88		0.03	88 *(mC)*	88 *(mC)*

Table 1 - Interim Action Cleanup Levels for Soil
K-C Worldwide Site Upland Area

ANALYTE (BY GROUP)	Most Stringent Groundwater Screening Level (Industrial) (ug/L)	APPLICABLE SOIL CRITERIA — Soil Protective of Groundwater — Constants and Coefficients [a]: K_{oc} (Soil Organic Carbon-Water Partitioning Coefficient for organics) (L/kg)	K_d (Distribution Coefficient for metals) (L/kg)	Henrys Law Constant (Hcc; unitless)	*Calculated Values*: Unsaturated Soil Concentration Protective of Leachability to Groundwater (mg/kg)[b] *(gwl-u)*	Saturated Soil Concentration Protective of Leachability to Groundwater (mg/kg)[c] *(gwl-s)*	**Groundwater Exceedances Confirmed Empirically for Analyte?[d] (Y = yes; blank = no)**	**Soil, Method A, Industrial Land Use, Table Value (mg/kg)[e]** *(mA)*	Soil Protective of Human Direct Contact[f]: Soil, Method C, Most-Restrictive Standard Formula Value, Direct Contact, Industrial Land Use (mg/kg) *(mC)*	**Natural Background Concentration (mg/kg)[g]** *(back)*	**Practical Quantitation Level (PQL) (mg/kg)[h]** *(pql)*	***Interim Action Cleanup Level (mg/kg)***: **Unsaturated Soil**	**Saturated Soil**
Polychlorinated Biphenyls (PCBs)													
Aroclor 1016		*110000*		*8.2E-03*							0.1		
Aroclor 1221											0.1		
Aroclor 1232											0.1		
Aroclor 1242											0.1		
Aroclor 1248											0.1		
Aroclor 1254		*130500*		*1.2E-02*							0.1		
Aroclor 1260		*820000*		*1.4E-02*							0.1		
Total PCBs	0.07 *(pql)*	*353500*		*7.8E-03*	5	0.23		10	66		0.7	10 *(mA)*	10 *(mA)*
Dioxins/Furans													
2,3,7,8-TCDD		*1.4E+07*		*4.2E-03*							1.0E-06		
1,2,3,7,8-PeCDD											2.5E-06		
1,2,3,4,7,8-HxCDD											2.5E-06		
1,2,3,6,7,8-HxCDD											2.5E-06		
1,2,3,7,8,9-HxCDD											2.5E-06		
1,2,3,4,6,7,8-HpCDD											2.5E-06		
OCDD											5.0E-06		
2,3,7,8-TCDF											1.0E-06		
1,2,3,7,8-PeCDF											2.5E-06		
2,3,4,7,8-PeCDF											2.5E-06		
1,2,3,4,7,8-HxCDF											2.5E-06		
1,2,3,6,7,8-HxCDF											2.5E-06		
1,2,3,7,8,9-HxCDF											2.5E-06		
2,3,4,6,7,8-HxCDF											2.5E-06		
1,2,3,4,6,7,8-HpCDF											2.5E-06		
1,2,3,4,7,8,9-HpCDF											2.5E-06		
OCDF											5.0E-06		
Total 2,3,7,8 TCDD (TEQ)[k]	6.3E-05 *(pql)*	*1.4E+07*		*4.2E-03*	1.6E-01	8.1E-03			1.7E-03	5.2E-06	6.3E-06	1.7E-03 *(mC)*	1.7E-03 *(mC)*

Notes:

a Values obtained from Ecology's CLARC database, June 2014.

b Calculated values from three-phase model, per MTCA Equation 747-1, with groundwater value (Cw) as most stringent land-use-specific groundwater screening level, site-specific f_{oc} = 0.0095, and MTCA-default dilution factor = 20. WAC 173-340-747 provides multiple additional means to evaluate soil concentrations protective of groundwater.

c Calculated values from three-phase model, per MTCA Equation 747-1, with groundwater value (Cw) as most stringent land-use-specific groundwater screening level, site-specific f_{oc} = 0.0095, and MTCA-default dilution factor = 1. WAC 173-340-747 provides multiple additional means to evaluate soil concentrations protective of groundwater.

d If the existing empirical groundwater data demonstrate no groundwater exceedances for a compound, the soil-leachability-to-groundwater pathway is considered incomplete for that compound, and the calculated soil-protective-of-groundwater criteria are not included for establishing that compound's preliminary soil screening levels.

e Because Upland Area groundwater is not a practicable source of drinking water, many Method A soil cleanup levels are not applicable. Method A soil cleanup levels are used for TPH, PCBs (ARAR), and arsenic (natural background).

f Direct contact screening levels applicable for soils to 15-foot depth.

g Natural background values for metals except arsenic from Natural Background Soil Metals Concentrations in Washington State (Ecology, 1994). Natural background concentration for arsenic from WAC 173-340-900, Table 720-1. Natural background value for dioxins/furans from Natural Background for Dioxins/Furans in Washington Soils—Technical Memorandum #8 (Ecology, 2010).

h Analytical method reporting limits. PQLs for total cPAH (TEQ) and total TCDD (TEQ) are adjusted for TEFs.

i K_{oc} and Hcc values for 2,3,7,8-TCDD are not provided in CLARC; therefore K_{oc} value is average of nine literature values and Hcc value is from ATSDR (1998).

j Based on background concentrations in Washington state (WAC 173-340-900, Table 720-1).

k Formaldehyde value based on protection of aquatic life (Anchor Environmental, 2008). Value is coincidentally equal to potable water screening level.

Basis for most-stringent groundwater screening level: (*marine*): marine water quality criterion. (*pot*): potable water criterion; (*vi-c*) Industrial vapor intrusion groundwater screening level. (*pql*): practical quantitation limit.

Table 2 - Analytical Data for Treated Water Discharged to Sanitary Sewer

K-C Worldwide Site Upland Area 110207

Chemical Name	City of Everett Wastewater Discharge Criteria (mg/L)	10/3/13	10/17/13	11/11/13	12/17/13	1/9/14	1/13/14	2/17/14	3/21/14
Total Petroleum Hydrocarbons (TPH)									
Gasoline Range Hydrocarbons in ug/L							100 U		
Diesel Range Hydrocarbons in ug/L							50 U		
Oil Range Hydrocarbons in ug/L							250 U		
Metals									
Total Arsenic in mg/L	0.5	0.00937	0.00539	0.0272	0.00886	0.0019		0.0104	0.00169
Total Cadmium in mg/L	0.24	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Total Chromium (Total) in mg/L	5.0	0.00816	0.001 U	0.00761	0.00235	0.001 U		0.0112	0.001 U
Total Copper in mg/L	3.0	0.0213	0.00348	0.0109	0.0038	0.00166		0.0182	0.005 U
Total Lead in mg/L	1.89	0.0238	0.0016	0.00342	0.001 U	0.001 U		0.00254	0.001 U
Total Mercury in mg/L	0.1	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	0.0001 U
Total Nickel in mg/L	2.83	0.0102	0.00148	0.00855	0.0067	0.00285		0.00639	0.00265
Total Silver in mg/L	0.49	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Total Zinc in mg/L	4.0	0.0505	0.00462	0.0129	0.343	0.0315		0.441	0.445
Conventional Chemistry Parameters									
Total Cyanide	0.65	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U
Fats/Oils/Grease in mg/L	200	3 U	3 U	3 U	3 U	3 U		3 U	3 U
pH	5.0 to 11.0	6.97	7.48		7.33	7.14		7.14	7.30
Volatile Organic Compounds (VOC)									
1,1,1,2-Tetrachloroethane in ug/L							1 U		
1,1,1-Trichloroethane in ug/L							1 U		
1,1,2,2-Tetrachloroethane in ug/L							1 U		
1,1,2-Trichloroethane in ug/L							1 U		
1,1-Dichloroethane in ug/L							1 U		
1,1-Dichloroethene in ug/L							1 U		
1,1-Dichloropropene in ug/L							1 U		
1,2,3-Trichlorobenzene in ug/L							1 U		
1,2,3-Trichloropropane in ug/L							1 U		
1,2,4-Trichlorobenzene in ug/L							1 U		
1,2,4-Trimethylbenzene in ug/L							1 U		
1,2-Dibromo-3-chloropropane in ug/L							10 U		
1,2-Dibromoethane (EDB) in ug/L							1 U		
1,2-Dichlorobenzene in ug/L							1 U		
1,2-Dichloroethane (EDC) in ug/L							1 U		
1,2-Dichloropropane in ug/L							1 U		
1,3,5-Trimethylbenzene in ug/L							1 U		
1,3-Dichlorobenzene in ug/L							1 U		
1,3-Dichloropropane in ug/L							1 U		
1,4-Dichlorobenzene in ug/L							1 U		
2,2-Dichloropropane in ug/L							1 U		
2-Butanone in ug/L							10 U		
2-Chlorotoluene in ug/L							1 U		
2-Hexanone in ug/L							10 U		
4-Chlorotoluene in ug/L							1 U		
4-Methyl-2-pentanone in ug/L							10 U		
Acetone in ug/L							10 U		
Benzene in ug/L							0.35 U		
Bromobenzene in ug/L							1 U		
Bromodichloromethane in ug/L							1 U		
Bromoform in ug/L							1 U		
Bromomethane in ug/L							1 U		
Carbon tetrachloride in ug/L							1 U		
Chlorobenzene in ug/L							1 U		
Chloroethane in ug/L							1 U		
Chloroform in ug/L							1 U		
Chloromethane in ug/L							10 U		
cis-1,2-Dichloroethene (DCE) in ug/L							1 U		
cis-1,3-Dichloropropene in ug/L							1 U		
Dibromochloromethane in ug/L							1 U		
Dibromomethane in ug/L							1 U		
Dichlorodifluoromethane in ug/L							1 U		
Ethylbenzene in ug/L							1 U		
Hexachlorobutadiene in ug/L							1 U		
Isopropylbenzene in ug/L							1 U		
Methyl tert-butyl ether (MTBE) in ug/L							1 U		
Methylene chloride in ug/L							5 U		
n-Propylbenzene in ug/L							1 U		
p-Isopropyltoluene in ug/L							1 U		
sec-Butylbenzene in ug/L							1 U		
Styrene in ug/L							1 U		
tert-Butylbenzene in ug/L							1 U		
Tetrachloroethene (PCE) in ug/L							1 U		
Toluene in ug/L							1 U		
trans-1,2-Dichloroethene in ug/L							1 U		
trans-1,3-Dichloropropene in ug/L							1 U		
Trichloroethene (TCE) in ug/L							1 U		
Trichlorofluoromethane in ug/L							1 U		
Vinyl chloride in ug/L							0.2 U		
m,p-Xylenes in ug/L							2 U		
o-Xylene in ug/L							1.2		
Naphthalene in ug/L							1 U		

Notes

Concentrations in shaded cells indicate value exceeds City of Everett Wastewater Discharge Criteria (mg/L).

U = Analyte was not detected at or above the reported result.

The 1/13/14 sample was collected when there was concern for breakthrough of petroleum contaminants from the contractor's wastewater treatment system.

Table 3 - Overburden Soil Quality Data

K-C Worldwide Site Upland Area 110207

		Bunker C AST Area			Heavy Duty Shop Sump	Naval Reserve Parcel UST Area																	
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	BAST-SP01-1-021714	BAST-SP01-2-021714	BAST-SP01-3-021714	HDS-SP-1	NRU-SP01-1-012414	NRU-SP01-2-012414	NRU-SP01-3-012414	NRU-SP02-1-012414	NRU-SP02-2-012414	NRU-SP02-3-012414	NRU-SP03-1-012414	NRU-SP03-2-012414	NRU-SP03-3-012414	NRU-SP04-1-012414	NRU-SP04-2-012414	NRU-SP04-3-012414	NRU-SP05-1-012414	NRU-SP05-2-012414	NRU-SP05-3-012414	NRU-SP06-1-012414	NRU-SP06-2-012414	NRU-SP06-3-012414
Total Petroleum Hydrocarbons (TPH)																							
Gasoline Range Hydrocarbons in mg/kg	100	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Diesel Range Hydrocarbons in mg/kg	2,000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	72 x	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
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
Total TPHs in mg/kg	2,000	ND	ND	ND	ND	ND	ND	ND	197	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals																							
Antimony in mg/kg	1,400	3.09 J	1 U	1 U	1.21	3.85	2.66	5.52	2.74	2.37	2.47	1 U	1.2	1 U	1 U	1 U	1 U	2.92	2.98	3.3	1.5	1.45	1.81
Arsenic in mg/kg	20	23.3	6.69	5.93	4.02	22.3 J	15.8 J	30 J	20 J	14.9 J	15.9 J	18.9 J	10.9 J	10.1 J	7.52 J	8.32 J	10.5 J	17.5 J	17.7 J	19.8 J	10.1 J	7.18 J	10.5 J
Beryllium in mg/kg	7,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium in mg/kg	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	8.9	5.83	12.9	10.6	12.4	12.2	12.1	10.8	11.3	11.9	9.14	9.9	6.89	11	12.6	11.6	13.5	12.1	15	12.8	11.5	10.5
Copper in mg/kg	36	24.7	8.36	21.5	12	31.6	29.8	35.1	35.8	33.4	28.9	24.2	29.2	53.2	21.5	28.5	26.2	28.7	32.9	36.6	29.7	20.8	24.7
Lead in mg/kg	1,000	33.2	6.73	23.5	15.5	66.8	62.4	76.5	85.4	81.7	70.1	16.7	21.1	14.3	10.8	16.1	15.8	130	92.3	109	40.2	43.7	35.2
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	0.18	0.1 U	0.1 U	0.1 U	0.29	0.1 U	0.1 U
Nickel in mg/kg	48	12.2	11.1	14.1	13.9 J	19.5	20.7	18.1	17.2	17.6	17.3	17.1	19.6	20.1	16.5	19.7	18	15.1	16.9	17.7	24.9	20.6	18.9
Selenium in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Thallium in mg/kg	35	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Zinc in mg/kg	100	77.8	17.6	33.7	27.8	197 J	129 J	256 J	154 J	260 J	132 J	88.4 J	93.9 J	81.7 J	55.8 J	67.3 J	71.3 J	141 J	156 J	177 J	95.3 J	102 J	108 J
Polycyclic Aromatic Hydrocarbons (PAHs)																							
Acenaphthene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.03 U	0.046	0.036	0.045	0.021	0.038	0.11	0.017	0.042	0.034	0.013	0.01 U	0.01 U	0.014	0.029	0.011	0.01	0.018	0.023
Acenaphthylene in mg/kg		0.01 U	0.01 U	0.01 U	0.03 U	0.01	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025	0.01 U	0.01 U	0.01 U	0.016	0.047
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.03 U	0.039	0.04	0.04	0.02	0.025	0.1 U	0.015	0.17	0.028	0.019	0.015	0.01 U	0.067	0.043	0.025	0.012	0.02	0.11
Benzo(g,h,i)perylene in mg/kg		0.018	0.016	0.01 U	0.03 U	0.083	0.11	0.098	0.064	0.078	0.15	0.018	0.046	0.018	0.024	0.022	0.013	0.13	0.11	0.085	0.026	0.053	0.12
Dibenzofuran in mg/kg	3,500	0.01 U	0.01 U	0.01 U	0.03 U	0.016	0.013	0.018	0.01 U	0.013	0.1 U	0.01 U	0.014	0.01	0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.01 U	0.01 U	0.011	0.018
Fluoranthene in mg/kg	140,000	0.038	0.014	0.011	0.03 U	0.27	0.33	0.27	0.17	0.2	0.3	0.051	0.21	0.088	0.081	0.075	0.043	1	0.3	0.21	0.06	0.1	0.37
Fluorene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.03 U	0.036	0.031	0.036	0.013	0.022	0.1 U	0.01 U	0.024	0.018	0.014	0.011	0.01 U	0.012	0.018	0.01 U	0.011	0.019	0.074
Phenanthrene in mg/kg		0.033	0.01 U	0.01 U	0.03 U	0.17	0.17	0.18	0.083	0.11	0.22	0.027	0.05	0.031	0.082	0.059	0.038	0.17	0.17	0.11	0.045	0.063	0.62
Pyrene in mg/kg	110,000	0.05	0.016	0.013	0.03 U	0.3	0.34	0.34	0.19	0.26	0.43	0.071	0.27	0.12	0.11	0.12	0.053	1.2	0.37	0.28	0.092	0.18	0.67
2-Methylnaphthalene in mg/kg	15	0.011	0.01 U	0.01 U	0.03 U	0.012	0.012	0.013	0.01 U	0.011	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.019
Naphthalene in mg/kg	70,000	0.01 U	0.01 U	0.01 U	0.03 U	0.019	0.019	0.022	0.016	0.023	0.1 U	0.01 U	0.01 U	0.01 U	0.019	0.016	0.01 U	0.015	0.015	0.023	0.011	0.019	0.019
Benz(a)anthracene in mg/kg		0.022	0.01 U	0.01 U	0.021	0.12	0.15	0.14	0.082	0.1	0.19	0.027	0.12	0.033	0.039	0.034	0.021	0.39	0.16	0.11	0.026	0.072	0.21
Benzo(a)pyrene in mg/kg		0.02	0.01 U	0.01 U	0.028	0.12	0.15	0.14	0.088	0.11	0.2	0.025	0.088	0.025	0.037	0.034	0.019	0.26	0.17	0.12	0.028	0.078	0.18
Benzo(b)fluoranthene in mg/kg		0.027	0.014	0.01 U	0.037	0.15	0.2	0.18	0.12	0.15	0.24	0.03	0.12	0.031	0.042	0.039	0.023	0.36	0.21	0.17	0.037	0.084	0.19
Benzo(k)fluoranthene in mg/kg		0.01 U	0.01 U	0.01 U	0.011	0.054	0.064	0.057	0.04	0.054	0.1 U	0.01	0.044	0.011	0.017	0.016	0.01 U	0.12	0.078	0.057	0.014	0.026	0.068
Chrysene in mg/kg		0.037	0.012	0.01 U	0.026	0.16	0.18	0.18	0.11	0.14	0.22	0.035	0.24	0.046	0.055	0.046	0.027	0.54	0.21	0.17	0.04	0.095	0.24
Dibenzo(a,h)anthracene in mg/kg		0.01 U	0.01 U	0.01 U	0.0057	0.023	0.028	0.026	0.017	0.021	0.1 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.04	0.03	0.023	0.01 U	0.012	0.029
Indeno(1,2,3-cd)pyrene in mg/kg		0.013	0.012	0.01 U	0.024	0.09	0.12	0.099	0.065	0.078	0.17	0.017	0.044	0.016	0.024	0.021	0.014	0.14	0.13	0.091	0.023	0.047	0.12
Total cPAHs TEQ in mg/kg	7.9	0.0276	0.00922	ND	0.0381	0.165	0.208	0.192	0.122	0.152	0.272	0.0343	0.125	0.0351	0.0503	0.046	0.0261	0.37	0.233	0.167	0.0389	0.103	0.244
Other Semivolatiles																							
1,2,4-Trichlorobenzene in mg/kg	4,500	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichlorobenzene in mg/kg	320,000	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,3-Dichlorobenzene in mg/kg		0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,4-Dichlorobenzene in mg/kg	24,000	0.01 U	0.01 U	0.011 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,4,5-Trichlorophenol in mg/kg	350,000	0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
2,4,6-Trichlorophenol in mg/kg	3,500	0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
2,4-Dichlorophenol in mg/kg	11,000	0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
2,4-Dimethylphenol in mg/kg	70,000	0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
2,4-Dinitrophenol in mg/kg	7,000	0.3 U	0.3 UJ	0.3 U	0.9 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
2-Chloronaphthalene in mg/kg	280,000	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Chlorophenol in mg/kg	18,000	0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
2-Methylphenol in mg/kg	180,000	0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
2-Nitroaniline in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.03 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Nitrophenol in mg/kg		0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
3 & 4 Methylphenol in mg/kg	175000	0.2 U	0.2 U	0.2 U	0.6 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
3-Nitroaniline in mg/kg		1 U	1 U	1 U	3 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol in mg/kg		0.3 U	0.3 U	0.3 U	0.9 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
4-Bromophenyl phenyl ether in mg/kg		0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Chloro-3-methylphenol in mg/kg		0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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

Table 3 - Overburden Soil Quality Data

K-C Worldwide Site Upland Area 110207

		Bunker C AST Area			Heavy Duty Shop Sump	Naval Reserve Parcel UST Area																	
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	BAST-SP01-1-021714	BAST-SP01-2-021714	BAST-SP01-3-021714	HDS-SP-1	NRU-SP01-1-012414	NRU-SP01-2-012414	NRU-SP01-3-012414	NRU-SP02-1-012414	NRU-SP02-2-012414	NRU-SP02-3-012414	NRU-SP03-1-012414	NRU-SP03-2-012414	NRU-SP03-3-012414	NRU-SP04-1-012414	NRU-SP04-2-012414	NRU-SP04-3-012414	NRU-SP05-1-012414	NRU-SP05-2-012414	NRU-SP05-3-012414	NRU-SP06-1-012414	NRU-SP06-2-012414	NRU-SP06-3-012414
4-Chloroaniline in mg/kg	660	1 U	1 U	1 U	3 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorophenyl phenyl ether in mg/kg		0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Nitroaniline in mg/kg		1 U	1 U	1 U	3 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol in mg/kg		0.3 U	0.3 U	0.3 U	0.9 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzoic acid in mg/kg	14,000,000	0.5 U	0.5 UJ	0.5 U	1.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzyl alcohol in mg/kg	350,000	0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
Benzyl butyl phthalate in mg/kg	69,000	0.1 U	0.1 U	0.1 U	0.03 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
Bis(2-chloro-1-methylethyl) ether in mg/kg	1,900	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bis(2-chloroethoxy)methane in mg/kg		0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bis(2-chloroethyl) ether in mg/kg	120	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bis(2-ethylhexyl) phthalate in mg/kg	9,400	0.16 U	0.16 U	0.16 U	0.48 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbazole in mg/kg		0.1 U	0.1 U	0.1 U	0.03 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
Diethyl phthalate in mg/kg	2,800,000	0.1 U	0.1 U	0.1 U	0.03 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
Dimethyl phthalate in mg/kg		0.1 U	0.1 U	0.1 U	0.03 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
Di-n-butyl phthalate in mg/kg	350,000	0.1 U	0.1 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
Di-n-octyl phthalate in mg/kg	35,000	0.1 U	0.1 U	0.1 U	0.03 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
Hexachlorobenzene in mg/kg	82	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorobutadiene in mg/kg	1,700	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorocyclopentadiene in mg/kg	21,000	0.03 U	0.03 U	0.03 U	0.09 U	0.03 UJ	0.03 U	0.03 U	0.03 U	0.03 U	0.3 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Hexachloroethane in mg/kg	2,500	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Isophorone in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Nitrobenzene in mg/kg	7,000	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
N-Nitroso-di-n-propylamine in mg/kg	19	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
N-Nitrosodiphenylamine in mg/kg	27,000	0.01 U	0.01 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pentachlorophenol in mg/kg	330	0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
Phenol in mg/kg	1,100,000	0.1 U	0.1 U	0.1 U	0.3 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	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
2,4-Dinitrotoluene in mg/kg	420	0.05 U	0.05 U	0.05 U	0.03 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,6-Dinitrotoluene in mg/kg	88	0.05 U	0.05 U	0.05 U	0.03 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Volatile Organic Compounds (VOC)																							
1,1,1,2-Tetrachloroethane in mg/kg	5,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1,1-Trichloroethane in mg/kg	7,000,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1,2,2-Tetrachloroethane in mg/kg	660	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1,2-Trichloroethane in mg/kg	2,300	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1-Dichloroethane in mg/kg	23,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1-Dichloroethene in mg/kg	180,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1-Dichloropropene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2,3-Trichlorobenzene in mg/kg		0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
1,2,3-Trichloropropane in mg/kg	4.4	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2,4-Trichlorobenzene in mg/kg	4,500	0.25 UJ	0.25 UJ	0.25 UJ		0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
1,2,4-Trimethylbenzene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dibromo-3-chloropropane in mg/kg	160	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
1,2-Dibromoethane (EDB) in mg/kg	66	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dichlorobenzene in mg/kg	320,000	0.05 UJ	0.05 UJ	0.05 UJ		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dichloroethane (EDC) in mg/kg	1,400	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dichloropropane in mg/kg	3,600	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,3,5-Trimethylbenzene in mg/kg	35,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,3-Dichlorobenzene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,3-Dichloropropane in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,4-Dichlorobenzene in mg/kg	24,000	0.05 UJ	0.05 UJ	0.05 UJ		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
2,2-Dichloropropane in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
2-Butanone in mg/kg	2,100,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
2-Chlorotoluene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
2-Hexanone in mg/kg		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
4-Chlorotoluene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
4-Methyl-2-pentanone in mg/kg	280,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Acetone in mg/kg	3,200,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Benzene in mg/kg	2,400	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ
Bromobenzene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Bromodichloromethane in mg/kg	2,100	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ

Table 3 - Overburden Soil Quality Data

K-C Worldwide Site Upland Area 110207

		Bunker C AST Area			Heavy Duty Shop Sump	Naval Reserve Parcel UST Area																	
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	BAST-SP01-1-021714	BAST-SP01-2-021714	BAST-SP01-3-021714	HDS-SP-1	NRU-SP01-1-012414	NRU-SP01-2-012414	NRU-SP01-3-012414	NRU-SP02-1-012414	NRU-SP02-2-012414	NRU-SP02-3-012414	NRU-SP03-1-012414	NRU-SP03-2-012414	NRU-SP03-3-012414	NRU-SP04-1-012414	NRU-SP04-2-012414	NRU-SP04-3-012414	NRU-SP05-1-012414	NRU-SP05-2-012414	NRU-SP05-3-012414	NRU-SP06-1-012414	NRU-SP06-2-012414	NRU-SP06-3-012414
Bromoform in mg/kg	17,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Bromomethane in mg/kg	4,900	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Carbon tetrachloride in mg/kg	1,900	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Chlorobenzene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Chloroethane in mg/kg		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Chloroform in mg/kg	4,200	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Chloromethane in mg/kg		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
cis-1,3-Dichloropropene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dibromochloromethane in mg/kg	1,600	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dibromomethane in mg/kg	35,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dichlorodifluoromethane in mg/kg	700,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Ethylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Hexachlorobutadiene in mg/kg	1,700	0.25 UJ	0.25 UJ	0.25 UJ		0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
Isopropylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Methylene chloride in mg/kg	21,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
n-Propylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
p-Isopropyltoluene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
sec-Butylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Styrene in mg/kg	700,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
tert-Butylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Tetrachloroethene (PCE) in mg/kg	21,000	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Toluene in mg/kg	280,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
trans-1,2-Dichloroethene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
trans-1,3-Dichloropropene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Trichloroethene (TCE) in mg/kg	1,800	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ
Trichlorofluoromethane in mg/kg	1,100,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Vinyl chloride in mg/kg	88	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
m,p-Xylenes in mg/kg	700,000	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
o-Xylene in mg/kg	700,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Naphthalene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ																			
Polychlorinated Biphenyls (PCBs)																							
Aroclor 1016 in mg/kg		0.02 U	0.02 U	0.02 U	0.1 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	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	0.1 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	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	0.1 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	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	0.1 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	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	0.1 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	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	0.1 U	0.02 U	0.02 U	0.021	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.17	0.13	0.068	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Aroclor 1260 in mg/kg		0.027	0.02 U	0.02 U	0.1 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	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	10	0.087	ND	ND	ND	ND	ND	0.081	ND	ND	ND	ND	ND	ND	0.23	0.19	0.128	ND	ND	ND	ND	ND	ND

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 3 - Overburden Soil Quality Data

K-C Worldwide Site Upland Area 110207

		Naval Reserve Parcel South Area																			
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	NRS-SP01-1-021014	NRS-SP01-2-021014	NRS-SP01-3-021014	NRS-SP02-1-021014	NRS-SP02-2-021014	NRS-SP02-3-021014	NRS-SP03-1-021014	NRS-SP03-2-021014	NRS-SP03-3-021014	NRS-SP04-1-021014	NRS-SP04-2-021014	NRS-SP04-3-021014	NRS-SP05-1-021014	NRS-SP05-2-021014	NRS-SP05-3-021014	NRS-SP06-1-021014	NRS-SP06-2-021014	NRS-SP06-3-021014	NRS-SP07-1-021014	NRS-SP07-2-021014
Total Petroleum Hydrocarbons (TPH)																					
Gasoline Range Hydrocarbons in mg/kg	100	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
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	50 U	50 U	50 U	200	50 U	50 U	50 U	50 U
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
Total TPHs in mg/kg	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	325	ND	ND	ND	ND
Metals																					
Antimony in mg/kg	1,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic in mg/kg	20	4.95	4.04	4.02	4.57	4.06	5.43	9.43	12.6	8.47	13.5	7.57	12.6	6.57	7.9	6.57	8.84	10.4	6.51	4.27	3.9
Beryllium in mg/kg	7,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium in mg/kg	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	12.6	11.8	11.4	9.93	9.71	11.7	14	14	11	12.3	15.1	14.9	13.6	12.8	13.5	12.2	14.5	14.1	9.13	9.07
Copper in mg/kg	36	21.1	15	14.3	15.2	14.9	17.5	27.9	29.5	25.1	22.7	23.2	27.3	18	19	19.5	21.3	23.6	17.6	10.9	11.3
Lead in mg/kg	1,000	4.8	3.58	3.89	9.98	8.34	8.61	16	17.3	10.9	24.6	14.9	31.3	5.66	7.37	8.39	5.86	8.27	5.33	2.65	2.52
Mercury in mg/kg	0.1	0.12 J	0.1 U	0.12	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	16.2	16.5	17.4	17.1	18.1	18	20.9	14.3	17.4	19.5	22.8	18.7	20.8	17.5	15.7	18.9	17.2	14	13.8
Selenium in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Thallium in mg/kg	35	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Zinc in mg/kg	100	32.9	25.6	23.5	43.1	37.8	52.9	58.8	80.2	43.8	58.5	48.9	62.9	30.4	31.9	33.5	32	41	29.6	18.2	18
Polycyclic Aromatic Hydrocarbons (PAHs)																					
Acenaphthene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.034	0.044	0.07	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.021	0.03	0.044	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg		0.01 U	0.01 U	0.01 U	0.01	0.014	0.013	0.01 U	0.011	0.01 U	0.041	0.047	0.046	0.011	0.02	0.014	0.025	0.023	0.022	0.01 U	0.01 U
Dibenzofuran in mg/kg	3,500	0.01 U	0.01 U	0.01 U	0.024	0.026	0.049	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.077	0.16	0.2	0.015	0.023	0.018	0.082	0.094	0.12	0.029	0.05	0.027	0.06	0.031	0.026	0.01 U	0.01 U
Fluorene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.033	0.046	0.096	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg		0.015	0.01 U	0.01 U	0.097	0.15	0.3	0.01 U	0.01 U	0.01	0.035	0.029	0.058	0.01 U	0.018	0.015	0.046	0.034	0.015	0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.014 J	0.01 U	0.01 U	0.082	0.15	0.21 J	0.018	0.03	0.022	0.1	0.11	0.12	0.03	0.056	0.033	0.07	0.06	0.036	0.01 U	0.011
2-Methylnaphthalene in mg/kg	15	0.01 U	0.01 U	0.01 U	0.026	0.033	0.025	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	70,000	0.01 U	0.01 U	0.01 U	0.054	0.061	0.039	0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.013	0.01 U	0.013	0.01 U	0.016	0.024	0.012	0.01 U	0.01 U
Benz(a)anthracene in mg/kg		0.01 U	0.01 U	0.01 U	0.021	0.055	0.048 J	0.01 U	0.016	0.01 U	0.051	0.06	0.065	0.021	0.035	0.02	0.032	0.022	0.021	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg		0.01 U	0.01 U	0.01 U	0.014	0.025	0.02	0.01 U	0.015	0.01 U	0.058	0.065	0.062	0.017	0.032	0.021	0.029	0.021	0.022	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg		0.01 U	0.01 U	0.01 U	0.021	0.045	0.033	0.012	0.02	0.014	0.077	0.093	0.09	0.024	0.041	0.023	0.04	0.028	0.027	0.01 U	0.01 U
Benzo(k)fluoranthene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.011	0.01 U	0.01 U	0.01 U	0.026	0.032	0.027	0.01 U	0.013	0.01 U	0.014	0.013	0.013	0.01 U	0.01 U
Chrysene in mg/kg		0.01 U	0.01 U	0.01 U	0.034	0.088	0.051 J	0.01	0.018	0.012	0.063	0.07	0.077	0.022	0.035	0.022	0.049	0.033	0.028	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	0.011	0.012	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
Indeno(1,2,3-cd)pyrene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.012	0.01 U	0.011	0.01 U	0.043	0.051	0.05	0.011	0.021	0.015	0.025	0.021	0.023	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	7.9	ND	ND	ND	0.02	0.0394	0.0314 J	0.0083	0.0209	0.00852	0.0794	0.0905	0.0873	0.0238	0.0439	0.028	0.0411	0.0302	0.0312	ND	ND
Other Semivolatiles																					
1,2,4-Trichlorobenzene in mg/kg	4,500	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichlorobenzene in mg/kg	320,000	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
1,3-Dichlorobenzene 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
1,4-Dichlorobenzene in mg/kg	24,000	0.010 U	0.012 U	0.010 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U
2,4,5-Trichlorophenol in mg/kg	350,000	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
2,4,6-Trichlorophenol in mg/kg	3,500	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
2,4-Dichlorophenol in mg/kg	11,000	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
2,4-Dimethylphenol in mg/kg	70,000	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
2,4-Dinitrophenol in mg/kg	7,000	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 U
2-Chloronaphthalene in mg/kg	280,000	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
2-Chlorophenol in mg/kg	18,000	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
2-Methylphenol in mg/kg	180,000	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
2-Nitroaniline in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Nitrophenol in mg/kg		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
3 & 4 Methylphenol in mg/kg	175000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
3-Nitroaniline in mg/kg		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol in mg/kg		0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 U
4-Bromophenyl phenyl ether 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
4-Chloro-3-methylphenol in mg/kg		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

Table 3 - Overburden Soil Quality Data

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	Naval Reserve Parcel South Area NRS-SP01-1-021014	NRS-SP01-2-021014	NRS-SP01-3-021014	NRS-SP02-1-021014	NRS-SP02-2-021014	NRS-SP02-3-021014	NRS-SP03-1-021014	NRS-SP03-2-021014	NRS-SP03-3-021014	NRS-SP04-1-021014	NRS-SP04-2-021014	NRS-SP04-3-021014	NRS-SP05-1-021014	NRS-SP05-2-021014	NRS-SP05-3-021014	NRS-SP06-1-021014	NRS-SP06-2-021014	NRS-SP06-3-021014	NRS-SP07-1-021014	NRS-SP07-2-021014
4-Chloroaniline in mg/kg	660	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorophenyl phenyl ether 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
4-Nitroaniline in mg/kg		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol in mg/kg		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzoic acid in mg/kg	14,000,000	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzyl alcohol in mg/kg	350,000	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
Benzyl butyl phthalate in mg/kg	69,000	0.1 U	0.1 U	0.1 U	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	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Bis(2-chloro-1-methylethyl) ether in mg/kg	1,900	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bis(2-chloroethoxy)methane 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
Bis(2-chloroethyl) ether in mg/kg	120	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bis(2-ethylhexyl) phthalate in mg/kg	9,400	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 UJ	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbazole in mg/kg		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
Diethyl phthalate in mg/kg	2,800,000	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
Dimethyl phthalate in mg/kg		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
Di-n-butyl phthalate in mg/kg	350,000	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
Di-n-octyl phthalate in mg/kg	35,000	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
Hexachlorobenzene in mg/kg	82	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorobutadiene in mg/kg	1,700	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorocyclopentadiene in mg/kg	21,000	0.03 UJ	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Hexachloroethane in mg/kg	2,500	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Isophorone 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
Nitrobenzene in mg/kg	7,000	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
N-Nitroso-di-n-propylamine in mg/kg	19	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
N-Nitrosodiphenylamine in mg/kg	27,000	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
Pentachlorophenol in mg/kg	330	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
Phenol in mg/kg	1,100,000	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
2,4-Dinitrotoluene in mg/kg	420	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,6-Dinitrotoluene in mg/kg	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Volatile Organic Compounds (VOC)																					
1,1,1,2-Tetrachloroethane in mg/kg	5,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1,1-Trichloroethane in mg/kg	7,000,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1,2,2-Tetrachloroethane in mg/kg	660	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1,2-Trichloroethane in mg/kg	2,300	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1-Dichloroethane in mg/kg	23,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1-Dichloroethene in mg/kg	180,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1-Dichloropropene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2,3-Trichlorobenzene in mg/kg		0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
1,2,3-Trichloropropane in mg/kg	4.4	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2,4-Trichlorobenzene in mg/kg	4,500	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
1,2,4-Trimethylbenzene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dibromo-3-chloropropane in mg/kg	160	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
1,2-Dibromoethane (EDB) in mg/kg	66	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dichlorobenzene in mg/kg	320,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dichloroethane (EDC) in mg/kg	1,400	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dichloropropane in mg/kg	3,600	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,3,5-Trimethylbenzene in mg/kg	35,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,3-Dichlorobenzene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,3-Dichloropropane in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,4-Dichlorobenzene in mg/kg	24,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
2,2-Dichloropropane in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
2-Butanone in mg/kg	2,100,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
2-Chlorotoluene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
2-Hexanone in mg/kg		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
4-Chlorotoluene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
4-Methyl-2-pentanone in mg/kg	280,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Acetone in mg/kg	3,200,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Benzene in mg/kg	2,400	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ
Bromobenzene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Bromodichloromethane in mg/kg	2,100	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ

Table 3 - Overburden Soil Quality Data

K-C Worldwide Site Upland Area 110207

		Naval Reserve Parcel South Area																			
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	NRS-SP01-1-021014	NRS-SP01-2-021014	NRS-SP01-3-021014	NRS-SP02-1-021014	NRS-SP02-2-021014	NRS-SP02-3-021014	NRS-SP03-1-021014	NRS-SP03-2-021014	NRS-SP03-3-021014	NRS-SP04-1-021014	NRS-SP04-2-021014	NRS-SP04-3-021014	NRS-SP05-1-021014	NRS-SP05-2-021014	NRS-SP05-3-021014	NRS-SP06-1-021014	NRS-SP06-2-021014	NRS-SP06-3-021014	NRS-SP07-1-021014	NRS-SP07-2-021014
Bromoform in mg/kg	17,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Bromomethane in mg/kg	4,900	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Carbon tetrachloride in mg/kg	1,900	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Chlorobenzene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Chloroethane in mg/kg		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Chloroform in mg/kg	4,200	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Chloromethane in mg/kg		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
cis-1,3-Dichloropropene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dibromochloromethane in mg/kg	1,600	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dibromomethane in mg/kg	35,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dichlorodifluoromethane in mg/kg	700,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Ethylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Hexachlorobutadiene in mg/kg	1,700	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
Isopropylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Methylene chloride in mg/kg	21,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
n-Propylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
p-Isopropyltoluene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
sec-Butylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Styrene in mg/kg	700,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
tert-Butylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Tetrachloroethene (PCE) in mg/kg	21,000	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Toluene in mg/kg	280,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
trans-1,2-Dichloroethene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
trans-1,3-Dichloropropene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Trichloroethene (TCE) in mg/kg	1,800	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ
Trichlorofluoromethane in mg/kg	1,100,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Vinyl chloride in mg/kg	88	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
m,p-Xylenes in mg/kg	700,000	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
o-Xylene in mg/kg	700,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Naphthalene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.059 J	0.076 J	0.1 J	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
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	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	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	0.024	0.02 U
Total PCBs (Sum of Aroclors) in mg/kg	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.084	ND

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 3 - Overburden Soil Quality Data

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	NRS-SP07-3-021014	NRS-SP08-1-021914	NRS-SP08-2-021914	NRS-SP08-3-021914	NRS-SP09-1-021914	NRS-SP09-2-021914	NRS-SP09-3-021914	NRS-SP10-1-021914	NRS-SP10-2-021914	NRS-SP10-3-021914
		Naval Reserve Parcel South Area									
Total Petroleum Hydrocarbons (TPH)											
Gasoline Range Hydrocarbons in mg/kg	100	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
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
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
Total TPHs in mg/kg	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals											
Antimony in mg/kg	1,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.4
Arsenic in mg/kg	20	3.91	4.24	5.77	4.67	4.06	4.48	4.44	5.42	4.02	5.6
Beryllium in mg/kg	7,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium in mg/kg	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	7.95	10.3	14.1	11.5	14.4	11.1	11.4	13.1	11.4	11.8
Copper in mg/kg	36	9.63	18.2	21.6	19.7	19.4	17.2	17.6	19.8	17.2	18.6
Lead in mg/kg	1,000	2.85	5.55	5.58	36.2	8.75	12.8	15.2	233	7.36	9.64
Mercury in mg/kg	0.1	0.1 U	0.33	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	13.2	14.1	16.3	17.6	18.6	16.3	17.3	17	15.7	17.3
Selenium in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Thallium in mg/kg	35	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Zinc in mg/kg	100	16.9	27.5	33.2	47.6	38.4	43.7	36.1	58.4	29.8	75.9
Polycyclic Aromatic Hydrocarbons (PAHs)											
Acenaphthene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.028	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Acenaphthylene 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	0.1 U
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.19
Benzo(g,h,i)perylene in mg/kg		0.01 U	0.01 U	0.01 U	0.029	0.01 U	0.01	0.01 U	0.01 U	0.016	0.16
Dibenzofuran in mg/kg	3,500	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Fluoranthene in mg/kg	140,000	0.01 U	0.01 U	0.014	0.11	0.015	0.027	0.014	0.023	0.028	0.69
Fluorene in mg/kg	140,000	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	0.1 U
Phenanthrene in mg/kg		0.01 U	0.01 U	0.015	0.2	0.013	0.011	0.01 U	0.018	0.024	0.69
Pyrene in mg/kg	110,000	0.01 U	0.01 U	0.024	0.22	0.017	0.032	0.015	0.024	0.032	0.94
2-Methylnaphthalene in mg/kg	15	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Naphthalene in mg/kg	70,000	0.01 U	0.01 U	0.01	0.054	0.01 U	0.01 U	0.01 U	0.03	0.01 U	0.1 U
Benz(a)anthracene in mg/kg		0.01 U	0.01 U	0.01 U	0.046	0.01 U	0.015	0.01 U	0.01 U	0.013	0.36
Benzo(a)pyrene in mg/kg		0.01 U	0.01 U	0.01 U	0.043	0.01 U	0.015	0.01 U	0.01 U	0.014	0.31
Benzo(b)fluoranthene in mg/kg		0.01 U	0.01 U	0.01 U	0.043	0.01 U	0.02	0.01 U	0.01 U	0.016	0.36
Benzo(k)fluoranthene in mg/kg		0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.14
Chrysene in mg/kg		0.01 U	0.01 U	0.012	0.061	0.01 U	0.019	0.01 U	0.01	0.017	0.45
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	0.1 U
Indeno(1,2,3-cd)pyrene in mg/kg		0.01 U	0.01 U	0.01 U	0.021	0.01 U	0.01	0.01 U	0.01 U	0.012	0.16
Total cPAHs TEQ in mg/kg	7.9	ND	ND	0.00762	0.0565	ND	0.0207	ND	0.0076	0.0193	0.422
Other Semivolatiles											
1,2,4-Trichlorobenzene in mg/kg	4,500	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
1,2-Dichlorobenzene in mg/kg	320,000	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	0.1 U
1,3-Dichlorobenzene in mg/kg		0.01 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.1 UJ
1,4-Dichlorobenzene in mg/kg	24,000	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	0.1 U
2,4,5-Trichlorophenol in mg/kg	350,000	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	1 U
2,4,6-Trichlorophenol in mg/kg	3,500	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	1 U
2,4-Dichlorophenol in mg/kg	11,000	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	1 U
2,4-Dimethylphenol in mg/kg	70,000	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	1 U
2,4-Dinitrophenol in mg/kg	7,000	0.3 UJ	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	3 UJ
2-Chloronaphthalene in mg/kg	280,000	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	0.1 U
2-Chlorophenol in mg/kg	18,000	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	1 U
2-Methylphenol in mg/kg	180,000	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	1 U
2-Nitroaniline in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U
2-Nitrophenol in mg/kg		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	1 U
3 & 4 Methylphenol in mg/kg	175000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U
3-Nitroaniline in mg/kg		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U
4,6-Dinitro-2-methylphenol in mg/kg		0.3 UJ	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	3 UJ
4-Bromophenyl phenyl ether 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	0.1 U
4-Chloro-3-methylphenol in mg/kg		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	1 U

Table 3 - Overburden Soil Quality Data

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	Naval Reserve Parcel South Area NRS-SP07-3-021014	NRS-SP08-1-021914	NRS-SP08-2-021914	NRS-SP08-3-021914	NRS-SP09-1-021914	NRS-SP09-2-021914	NRS-SP09-3-021914	NRS-SP10-1-021914	NRS-SP10-2-021914	NRS-SP10-3-021914
4-Chloroaniline in mg/kg	660	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U
4-Chlorophenyl phenyl ether 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	0.1 U
4-Nitroaniline in mg/kg		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U
4-Nitrophenol in mg/kg		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	3 U
Benzoic acid in mg/kg	14,000,000	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	5 UJ
Benzyl alcohol in mg/kg	350,000	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	1 U
Benzyl butyl phthalate in mg/kg	69,000	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	1 U
Bis(2-chloro-1-methylethyl) ether in mg/kg	1,900	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Bis(2-chloroethoxy)methane 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	0.1 U
Bis(2-chloroethyl) ether in mg/kg	120	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Bis(2-ethylhexyl) phthalate in mg/kg	9,400	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U
Carbazole in mg/kg		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	1 U
Diethyl phthalate in mg/kg	2,800,000	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	1 U
Dimethyl phthalate in mg/kg		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	1 U
Di-n-butyl phthalate in mg/kg	350,000	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	1 U
Di-n-octyl phthalate in mg/kg	35,000	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	1 U
Hexachlorobenzene in mg/kg	82	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Hexachlorobutadiene in mg/kg	1,700	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Hexachlorocyclopentadiene in mg/kg	21,000	0.03 UJ	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.3 U
Hexachloroethane in mg/kg	2,500	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Isophorone 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	0.1 U
Nitrobenzene in mg/kg	7,000	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	0.1 U
N-Nitroso-di-n-propylamine in mg/kg	19	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
N-Nitrosodiphenylamine in mg/kg	27,000	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	0.1 U
Pentachlorophenol in mg/kg	330	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	1 U
Phenol in mg/kg	1,100,000	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	1 U
2,4-Dinitrotoluene in mg/kg	420	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U
2,6-Dinitrotoluene in mg/kg	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U
Volatile Organic Compounds (VOC)											
1,1,1,2-Tetrachloroethane in mg/kg	5,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1,1-Trichloroethane in mg/kg	7,000,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1,2,2-Tetrachloroethane in mg/kg	660	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1,2-Trichloroethane in mg/kg	2,300	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1-Dichloroethane in mg/kg	23,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1-Dichloroethene in mg/kg	180,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,1-Dichloropropene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2,3-Trichlorobenzene in mg/kg		0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
1,2,3-Trichloropropane in mg/kg	4.4	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2,4-Trichlorobenzene in mg/kg	4,500	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
1,2,4-Trimethylbenzene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dibromo-3-chloropropane in mg/kg	160	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
1,2-Dibromoethane (EDB) in mg/kg	66	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dichlorobenzene in mg/kg	320,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dichloroethane (EDC) in mg/kg	1,400	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,2-Dichloropropane in mg/kg	3,600	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,3,5-Trimethylbenzene in mg/kg	35,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,3-Dichlorobenzene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,3-Dichloropropane in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
1,4-Dichlorobenzene in mg/kg	24,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
2,2-Dichloropropane in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
2-Butanone in mg/kg	2,100,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
2-Chlorotoluene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
2-Hexanone in mg/kg		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
4-Chlorotoluene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
4-Methyl-2-pentanone in mg/kg	280,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Acetone in mg/kg	3,200,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Benzene in mg/kg	2,400	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ
Bromobenzene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Bromodichloromethane in mg/kg	2,100	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ

Table 3 - Overburden Soil Quality Data

K-C Worldwide Site Upland Area 110207

		Naval Reserve Parcel South Area									
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	NRS-SP07-3-021014	NRS-SP08-1-021914	NRS-SP08-2-021914	NRS-SP08-3-021914	NRS-SP09-1-021914	NRS-SP09-2-021914	NRS-SP09-3-021914	NRS-SP10-1-021914	NRS-SP10-2-021914	NRS-SP10-3-021914
Bromoform in mg/kg	17,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Bromomethane in mg/kg	4,900	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Carbon tetrachloride in mg/kg	1,900	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Chlorobenzene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Chloroethane in mg/kg		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Chloroform in mg/kg	4,200	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Chloromethane in mg/kg		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
cis-1,3-Dichloropropene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dibromochloromethane in mg/kg	1,600	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dibromomethane in mg/kg	35,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dichlorodifluoromethane in mg/kg	700,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Ethylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Hexachlorobutadiene in mg/kg	1,700	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
Isopropylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Methylene chloride in mg/kg	21,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
n-Propylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
p-Isopropyltoluene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
sec-Butylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Styrene in mg/kg	700,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
tert-Butylbenzene in mg/kg	350,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Tetrachloroethene (PCE) in mg/kg	21,000	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ	0.025 UJ
Toluene in mg/kg	280,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
trans-1,2-Dichloroethene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
trans-1,3-Dichloropropene in mg/kg		0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Trichloroethene (TCE) in mg/kg	1,800	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ	0.03 UJ
Trichlorofluoromethane in mg/kg	1,100,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Vinyl chloride in mg/kg	88	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
m,p-Xylenes in mg/kg	700,000	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
o-Xylene in mg/kg	700,000	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Naphthalene in mg/kg	70,000	0.05 UJ	0.05 UJ	0.05 UJ	0.2 J	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
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
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
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
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
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
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	0.04
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	0.039
Total PCBs (Sum of Aroclors) in mg/kg	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.129

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 4 - Import Backfill Soil Quality Data

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	BACKFILL-FARM-STOCKPILE1 8/23/13	BACKFILL-FARM-TP1 8/20/13 (10 ft)	BACKFILL-FARM-TP1 8/20/13 (25 ft)	BACKFILL-FARM-TP2 8/20/13 (15 ft)	BACKFILL-FARM-TP3 8/20/13 (6 ft)	BACKFILL-FARM-TP4 8/20/13 (12 ft)	BACKFILL-FARM-TP5 8/20/13 (10 ft)	BACKFILL-FARM-TP6 8/23/13 (12 ft)	BACKFILL-FARM-TP7 8/23/13 (14 ft)	BACKFILL-FARM-TP8 8/23/13 (12 ft)	BACKFILL-FARM-TP9 8/23/13 (12 ft)	BACKFILL-FARM-TP10 8/23/13 (12 ft)	BACKFILL-HL-HA1 8/29/13 (2 ft)	BACKFILL-HL-HA2 8/29/13 (2 ft)	BACKFILL-HL-HA3 8/29/13 (2 ft)	BACKFILL-HL-HA4 8/29/13 (2 ft)	BACKFILL-HL-HA5 8/29/13 (2 ft)	BACKFILL-HL-HA6 8/29/13 (2 ft)	BACKFILL-HL-HA7 8/29/13 (2 ft)	BACKFILL-HL-HA8 8/29/13 (2 ft)	BACKFILL-HL-HA9 8/29/13 (2 ft)	Cemex-QS-011014 1/10/14
Total Petroleum Hydrocarbons (TPH)																							
Gasoline Range Hydrocarbons in mg/k	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
Diesel Range Hydrocarbons in mg/kg	2,000	50 UJ	50 UJ	50 U	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	
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	
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	
Metals																							
Antimony in mg/kg	1,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Arsenic in mg/kg	20	1.7	1.37	1.17	2.37	1.07	1.49	1.49	3.61	1.26	1.93	1.34	1.36	1.29	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Beryllium in mg/kg	7,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Cadmium in mg/kg	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Chromium (Total) in mg/kg	5,300,000	7.89	5.71	12	8.17	7.97	7.6	7.55	16.6	6.63	9.56	7.12	6.83	9.24	8	7.23	8.47	7.56	6.27	9.03	7.54	5.82	
Copper in mg/kg	36	7.02	6.17	8.47	14	5.05	8.48	6.01	10.4	5.74	6.84	6.2	6.06	5.99	5.57	5.11	5.15	5.17	5.46	5.75	4.85	4.24	
Lead in mg/kg	1,000	10.8	1.2	2.12	52	1.27	9.7	1.93	2.52	1.18	1.63	2.02	1 U	4.01	2.32	2.56	2.25	2.83	1.95	3.23	2.54	1.92	
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	
Nickel in mg/kg	48	20.6	21	21.6	21.6	23.2	20.4	22.5	27	20.8	25.2	23.8	24	18.7 J	17.8 J	17 J	17.7 J	16.1 J	13.4 J	17.9 J	16.4 J	14.5 J	
Selenium in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Silver in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Thallium in mg/kg	35	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Zinc in mg/kg	100	17.4	8.67	14.4	33	8.17	13.3	9.79	14.7	9.25	13.1	11.6	8.64	22.5	18.2	21.5	17	21.5	15.2	21.6	20.2	12.2	
SPLP Metals																							
Antimony in mg/L	1,400																						0.005 U
Arsenic in mg/L	20																						0.005 U
Beryllium in mg/L	7,000																						0.005 U
Cadmium in mg/L	3,500																						0.005 U
Chromium (Total) in mg/L	5,300,000																						0.005 U
Copper in mg/L	36																						0.005 U
Lead in mg/L	1,000																						0.005 U
Mercury in mg/L	0.1																						0.1 U
Nickel in mg/L	48																						0.005 U
Selenium in mg/L	18,000																						0.005 U
Silver in mg/L	18,000																						0.005 U
Thallium in mg/L	35																						0.005 U
Zinc in mg/L	100																						0.0316 J
Polycyclic Aromatic Hydrocarbons (PAHs)																							
Acenaphthene 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	
Acenaphthylene 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	
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	
Benzo(g,h,i)perylene 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	0.051	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Dibenzofuran in mg/kg	3,500	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 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	0.14	0.01 U	0.014	0.024	0.034	0.01 U	0.023	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	
Phenanthrene 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	0.096	0.01 U	0.01 U	0.013	0.028	0.01 U	0.015	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	0.16 J	0.01 U	0.012	0.021	0.032	0.01 U	0.025	0.01 U	0.01 U	
2-Methylnaphthalene in mg/kg	14,000	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	
Naphthalene in mg/kg	70,000	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	
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	0.057 J	0.01 U	0.01 U	0.01 U	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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.066	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.012	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	0.091	0.01 U	0.01 U	0.014	0.016	0.01 U	0.015	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	0.036	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	0.077 J	0.01 U	0.01 U	0.013	0.016	0.01 U	0.015	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	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
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	0.052	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.01 U	0.01 U	
Total cPAHs TEQ in mg/kg	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0916	ND	ND	0.00853	0.0174	ND	0.0162	ND	ND	

Table 4 - Import Backfill Soil Quality Data
K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	BACKFILL-FARM-STOCKPILE1 8/23/13	BACKFILL-FARM-TP1 8/20/13 (10 ft)	BACKFILL-FARM-TP1 8/20/13 (25 ft)	BACKFILL-FARM-TP2 8/20/13 (15 ft)	BACKFILL-FARM-TP3 8/20/13 (6 ft)	BACKFILL-FARM-TP4 8/20/13 (12 ft)	BACKFILL-FARM-TP5 8/20/13 (10 ft)	BACKFILL-FARM-TP6 8/23/13 (12 ft)	BACKFILL-FARM-TP7 8/23/13 (14 ft)	BACKFILL-FARM-TP8 8/23/13 (12 ft)	BACKFILL-FARM-TP9 8/23/13 (12 ft)	BACKFILL-FARM-TP10 8/23/13 (12 ft)	BACKFILL-HL-HA1 8/29/13 (2 ft)	BACKFILL-HL-HA2 8/29/13 (2 ft)	BACKFILL-HL-HA3 8/29/13 (2 ft)	BACKFILL-HL-HA4 8/29/13 (2 ft)	BACKFILL-HL-HA5 8/29/13 (2 ft)	BACKFILL-HL-HA6 8/29/13 (2 ft)	BACKFILL-HL-HA7 8/29/13 (2 ft)	BACKFILL-HL-HA8 8/29/13 (2 ft)	BACKFILL-HL-HA9 8/29/13 (2 ft)	Cemex-QS-011014 1/10/14
Other Semivolatiles																							
1,2,4-Trichlorobenzene in mg/kg	4,500	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
1,2-Dichlorobenzene in mg/kg	320,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
1,3-Dichlorobenzene in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
1,4-Dichlorobenzene in mg/kg	24,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
2,4,5-Trichlorophenol in mg/kg	350,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
2,4,6-Trichlorophenol in mg/kg	3,500	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
2,4-Dichlorophenol in mg/kg	11,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	
2,4-Dimethylphenol in mg/kg	70,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
2,4-Dinitrophenol in mg/kg	7,000	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	
2-Chloronaphthalene in mg/kg	280,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
2-Chlorophenol in mg/kg	18,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
2-Methylphenol in mg/kg	180,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
2-Nitroaniline in mg/kg	35,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
2-Nitrophenol in mg/kg		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
3 & 4 Methylphenol in mg/kg	175000	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	
3-Nitroaniline in mg/kg		3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	
4,6-Dinitro-2-methylphenol in mg/kg		0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	
4-Bromophenyl phenyl ether in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
4-Chloro-3-methylphenol in mg/kg		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
4-Chloroaniline in mg/kg	660	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	
4-Chlorophenyl phenyl ether in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
4-Nitroaniline in mg/kg		3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	
4-Nitrophenol in mg/kg		0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	
Benzoic acid in mg/kg	14,000,000	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	
Benzyl alcohol in mg/kg	350,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
Benzyl butyl phthalate in mg/kg	69,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 UJ	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Bis(2-chloro-1-methylethyl) ether in n	1,900	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Bis(2-chloroethoxy)methane in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Bis(2-chloroethyl) ether in mg/kg	120	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Bis(2-ethylhexyl) phthalate in mg/kg	9,400	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 UJ	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	
Carbazole in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Diethyl phthalate in mg/kg	2,800,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Dimethyl phthalate in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Di-n-butyl phthalate in mg/kg	350,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Di-n-octyl phthalate in mg/kg	35,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Hexachlorobenzene in mg/kg	82	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Hexachlorobutadiene in mg/kg	1,700	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 UJ	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 UJ	
Hexachlorocyclopentadiene in mg/kg	21,000	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	
Hexachloroethane in mg/kg	2,500	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Isophorone in mg/kg	140,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Nitrobenzene in mg/kg	7,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
N-Nitroso-di-n-propylamine in mg/kg	19	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
N-Nitrosodiphenylamine in mg/kg	27,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Pentachlorophenol in mg/kg	330	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
Phenol in mg/kg	1,100,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	
2,4-Dinitrotoluene in mg/kg	420	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
2,6-Dinitrotoluene in mg/kg	88	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	

Table 4 - Import Backfill Soil Quality Data

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	BACKFILL-FARM-STOCKPILE1 8/23/13	BACKFILL-FARM-TP1 8/20/13 (10 ft)	BACKFILL-FARM-TP1 8/20/13 (25 ft)	BACKFILL-FARM-TP2 8/20/13 (15 ft)	BACKFILL-FARM-TP3 8/20/13 (6 ft)	BACKFILL-FARM-TP4 8/20/13 (12 ft)	BACKFILL-FARM-TP5 8/20/13 (10 ft)	BACKFILL-FARM-TP6 8/23/13 (12 ft)	BACKFILL-FARM-TP7 8/23/13 (14 ft)	BACKFILL-FARM-TP8 8/23/13 (12 ft)	BACKFILL-FARM-TP9 8/23/13 (12 ft)	BACKFILL-FARM-TP10 8/23/13 (12 ft)	BACKFILL-HL-HA1 8/29/13 (2 ft)	BACKFILL-HL-HA2 8/29/13 (2 ft)	BACKFILL-HL-HA3 8/29/13 (2 ft)	BACKFILL-HL-HA4 8/29/13 (2 ft)	BACKFILL-HL-HA5 8/29/13 (2 ft)	BACKFILL-HL-HA6 8/29/13 (2 ft)	BACKFILL-HL-HA7 8/29/13 (2 ft)	BACKFILL-HL-HA8 8/29/13 (2 ft)	BACKFILL-HL-HA9 8/29/13 (2 ft)	Cemex-QS-011014 1/10/14
Volatile Organic Compounds (VOC)																							
1,1,1,2-Tetrachloroethane in mg/kg	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1,1-Trichloroethane in mg/kg	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1,2,2-Tetrachloroethane in mg/kg	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1,2-Trichloroethane in mg/kg	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1-Dichloroethane in mg/kg	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1-Dichloroethene in mg/kg	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1-Dichloropropene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2,3-Trichlorobenzene in mg/kg		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
1,2,3-Trichloropropane in mg/kg	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2,4-Trichlorobenzene in mg/kg	4,500																						
1,2,4-Trimethylbenzene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dibromo-3-chloropropane in mg/	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
1,2-Dibromoethane (EDB) in mg/kg	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dichlorobenzene in mg/kg	320,000																						
1,2-Dichloroethane (EDC) in mg/kg	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dichloropropane in mg/kg	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,3,5-Trimethylbenzene in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,3-Dichlorobenzene in mg/kg																							
1,3-Dichloropropane in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,4-Dichlorobenzene in mg/kg	24,000																						
2,2-Dichloropropane in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
2-Butanone in mg/kg	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
2-Chlorotoluene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
2-Hexanone in mg/kg		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
4-Chlorotoluene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
4-Methyl-2-pentanone in mg/kg	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Acetone in mg/kg	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Benzene in mg/kg	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Bromobenzene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Bromodichloromethane in mg/kg	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Bromoform in mg/kg	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Bromomethane in mg/kg	4,900	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Carbon tetrachloride in mg/kg	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Chlorobenzene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Chloroethane in mg/kg		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Chloroform in mg/kg	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Chloromethane in mg/kg		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
cis-1,3-Dichloropropene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Dibromochloromethane in mg/kg	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Dibromomethane in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Dichlorodifluoromethane in mg/kg	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Ethylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Hexachlorobutadiene in mg/kg	1,700																						
Isopropylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Methyl tert-butyl ether (MTBE) in mg/	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Methylene chloride in mg/kg	21,000	0.5 U	0.72 U	0.5 U	0.76 U	0.67 U	0.59 U	0.62 U	0.5 U	0.5 U	0.76 U	0.52 U	0.70 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
n-Propylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
p-Isopropyltoluene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
sec-Butylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Styrene in mg/kg	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
tert-Butylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Tetrachloroethene (PCE) in mg/kg	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	
Toluene in mg/kg	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
trans-1,2-Dichloroethene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
trans-1,3-Dichloropropene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Trichloroethene (TCE) in mg/kg	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Trichlorofluoromethane in mg/kg	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Vinyl chloride in mg/kg	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
m,p-Xylenes in mg/kg	49	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	
o-Xylene in mg/kg	80	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Naphthalene in mg/kg	70,000																						

Table 4 - Import Backfill Soil Quality Data

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	BACKFILL-FARM-STOCKPILE1 8/23/13	BACKFILL-FARM-TP1 8/20/13 (10 ft)	BACKFILL-FARM-TP1 8/20/13 (25 ft)	BACKFILL-FARM-TP2 8/20/13 (15 ft)	BACKFILL-FARM-TP3 8/20/13 (6 ft)	BACKFILL-FARM-TP4 8/20/13 (12 ft)	BACKFILL-FARM-TP5 8/20/13 (10 ft)	BACKFILL-FARM-TP6 8/23/13 (12 ft)	BACKFILL-FARM-TP7 8/23/13 (14 ft)	BACKFILL-FARM-TP8 8/23/13 (12 ft)	BACKFILL-FARM-TP9 8/23/13 (12 ft)	BACKFILL-FARM-TP10 8/23/13 (12 ft)	BACKFILL-HL-HA1 8/29/13 (2 ft)	BACKFILL-HL-HA2 8/29/13 (2 ft)	BACKFILL-HL-HA3 8/29/13 (2 ft)	BACKFILL-HL-HA4 8/29/13 (2 ft)	BACKFILL-HL-HA5 8/29/13 (2 ft)	BACKFILL-HL-HA6 8/29/13 (2 ft)	BACKFILL-HL-HA7 8/29/13 (2 ft)	BACKFILL-HL-HA8 8/29/13 (2 ft)	BACKFILL-HL-HA9 8/29/13 (2 ft)	Cemex-QS-011014 1/10/14
Polychlorinated Biphenyls (PCBs)																							
Aroclor 1016 in mg/kg		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	
Aroclor 1221 in mg/kg		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	
Aroclor 1232 in mg/kg		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	
Aroclor 1242 in mg/kg		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	
Aroclor 1248 in mg/kg		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	
Aroclor 1254 in mg/kg		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	
Aroclor 1260 in mg/kg		0.1 UJ	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	
Total PCBs (Sum of Aroclors) in mg/kg	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

Table 4 - Import Backfill Soil Quality Data
K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	STIL-G1 12/5/13	STIL-G2 12/5/13	STIL-G3 12/5/13	STIL-G4 12/5/13	STIL-G5 12/5/13	STIL-G6 12/5/13	STIL-G7 12/5/13	STIL-G8 12/5/13	STIL-G9 1/14/14	STIL-G10 1/14/14	STIL-G11 1/14/14	STIL-G12 1/14/14	STIL-G13 2/19/14	STIL-G14 2/19/14	STIL-G15 2/19/14	STIL-G16 2/19/14
Total Petroleum Hydrocarbons (TPH)																	
Gasoline Range Hydrocarbons in mg/k	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
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	50 U	50 U	50 U	50 U
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
Total TPHs in mg/kg	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals																	
Antimony in mg/kg	1,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic in mg/kg	20	1.95	1.64	1.98	1.68	1.85	1.92	1 U	2.56	2.14	2.33	2.24	1.71	2.56	2.57	2.88	2.59
Beryllium in mg/kg	7,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium in mg/kg	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	16.7	14.6	18	10.4	23.6	9.18	8.26	14.3	13.4	17.7	14.1	11.4	13	11.3	12.2	9.92
Copper in mg/kg	36	10.1	12.7	13.8	11.8	13.4	11.5	10.4	14.9	14.5	14.5	13.2	11.8	13.1	12.8	13.5	12.7
Lead in mg/kg	1,000	2.35	2.36	2.59	2.39	2.35	2.21	2.1	2.4	2.86	2.76	2.84	2.53	2.8	2.83	2.66	2.88
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	0.47
Nickel in mg/kg	48	32.8	29.3	31.1	24.8	29.9	20.5	20.6	34.4	35.5	37.9	33.5	29.3	27.4	28.2	29.6	26.1
Selenium in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Thallium in mg/kg	35	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Zinc in mg/kg	100	13	14.3	14.3	11.4	13.8	10.8	11.5	16.9	15	17.2	15.1	12.8	14.4	15.2	15.2	14.2
SPLP Metals																	
Antimony in mg/L	1,400																
Arsenic in mg/L	20																
Beryllium in mg/L	7,000																
Cadmium in mg/L	3,500																
Chromium (Total) in mg/L	5,300,000																
Copper in mg/L	36																
Lead in mg/L	1,000																
Mercury in mg/L	0.1																
Nickel in mg/L	48																
Selenium in mg/L	18,000																
Silver in mg/L	18,000																
Thallium in mg/L	35																
Zinc in mg/L	100																
Polycyclic Aromatic Hydrocarbons (PAHs)																	
Acenaphthene 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	0.016
Acenaphthylene 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
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	0.037
Benzo(g,h,i)perylene 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	0.045
Dibenzofuran in mg/kg	3,500	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01
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	0.15
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	0.016
Phenanthrene 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	0.14
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	0.21
2-Methylnaphthalene in mg/kg	14,000	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	0.013
Naphthalene in mg/kg	70,000	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	0.021
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	0.088
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	0.079
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	0.092
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	0.034
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	0.11
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	0.014
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	0.047
Total cPAHs TEQ in mg/kg	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.108

Table 4 - Import Backfill Soil Quality Data
K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	STIL-G1 12/5/13	STIL-G2 12/5/13	STIL-G3 12/5/13	STIL-G4 12/5/13	STIL-G5 12/5/13	STIL-G6 12/5/13	STIL-G7 12/5/13	STIL-G8 12/5/13	STIL-G9 1/14/14	STIL-G10 1/14/14	STIL-G11 1/14/14	STIL-G12 1/14/14	STIL-G13 2/19/14	STIL-G14 2/19/14	STIL-G15 2/19/14	STIL-G16 2/19/14
Other Semivolatiles																	
1,2,4-Trichlorobenzene in mg/kg	4,500	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichlorobenzene in mg/kg	320,000	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
1,3-Dichlorobenzene 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
1,4-Dichlorobenzene in mg/kg	24,000	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
2,4,5-Trichlorophenol in mg/kg	350,000	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
2,4,6-Trichlorophenol in mg/kg	3,500	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
2,4-Dichlorophenol in mg/kg	11,000	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
2,4-Dimethylphenol in mg/kg	70,000	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
2,4-Dinitrophenol in mg/kg	7,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
2-Chloronaphthalene in mg/kg	280,000	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
2-Chlorophenol in mg/kg	18,000	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
2-Methylphenol in mg/kg	180,000	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
2-Nitroaniline in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Nitrophenol in mg/kg		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
3 & 4 Methylphenol in mg/kg	175000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
3-Nitroaniline in mg/kg		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol in mg/kg		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
4-Bromophenyl phenyl ether 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
4-Chloro-3-methylphenol in mg/kg		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
4-Chloroaniline in mg/kg	660	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorophenyl phenyl ether 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
4-Nitroaniline in mg/kg		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol in mg/kg		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzoic acid in mg/kg	14,000,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Benzyl alcohol in mg/kg	350,000	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
Benzyl butyl phthalate in mg/kg	69,000	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
Bis(2-chloro-1-methylethyl) ether in m	1,900	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bis(2-chloroethoxy)methane 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
Bis(2-chloroethyl) ether in mg/kg	120	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bis(2-ethylhexyl) phthalate in mg/kg	9,400	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbazole in mg/kg		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
Diethyl phthalate in mg/kg	2,800,000	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
Dimethyl phthalate in mg/kg		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
Di-n-butyl phthalate in mg/kg	350,000	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
Di-n-octyl phthalate in mg/kg	35,000	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
Hexachlorobenzene in mg/kg	82	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorobutadiene in mg/kg	1,700	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorocyclopentadiene in mg/kg	21,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Hexachloroethane in mg/kg	2,500	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Isophorone 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
Nitrobenzene in mg/kg	7,000	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
N-Nitroso-di-n-propylamine in mg/kg	19	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
N-Nitrosodiphenylamine in mg/kg	27,000	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
Pentachlorophenol in mg/kg	330	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
Phenol in mg/kg	1,100,000	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
2,4-Dinitrotoluene in mg/kg	420	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,6-Dinitrotoluene in mg/kg	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Table 4 - Import Backfill Soil Quality Data
K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	STIL-G1 12/5/13	STIL-G2 12/5/13	STIL-G3 12/5/13	STIL-G4 12/5/13	STIL-G5 12/5/13	STIL-G6 12/5/13	STIL-G7 12/5/13	STIL-G8 12/5/13	STIL-G9 1/14/14	STIL-G10 1/14/14	STIL-G11 1/14/14	STIL-G12 1/14/14	STIL-G13 2/19/14	STIL-G14 2/19/14	STIL-G15 2/19/14	STIL-G16 2/19/14
Volatile Organic Compounds (VOC)																	
1,1,1,2-Tetrachloroethane in mg/kg	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane in mg/kg	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene in mg/kg	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene in mg/kg		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane in mg/kg	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene in mg/kg	4,500	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane in mg/	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene in mg/kg	320,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane in mg/kg	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3,5-Trimethylbenzene in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene in mg/kg	24,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,2-Dichloropropane in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone in mg/kg	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone in mg/kg		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone in mg/kg	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene in mg/kg	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	4,900	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride in mg/kg	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane in mg/kg	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene in mg/kg	1,700	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	21,000	0.5 U	0.5 U	0.5 U	1.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene in mg/kg	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene (TCE) in mg/kg	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride in mg/kg	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	49	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
o-Xylene in mg/kg	80	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Table 4 - Import Backfill Soil Quality Data
K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	STIL-G1 12/5/13	STIL-G2 12/5/13	STIL-G3 12/5/13	STIL-G4 12/5/13	STIL-G5 12/5/13	STIL-G6 12/5/13	STIL-G7 12/5/13	STIL-G8 12/5/13	STIL-G9 1/14/14	STIL-G10 1/14/14	STIL-G11 1/14/14	STIL-G12 1/14/14	STIL-G13 2/19/14	STIL-G14 2/19/14	STIL-G15 2/19/14	STIL-G16 2/19/14
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
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
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
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
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
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
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
Total PCBs (Sum of Aroclors) in mg/kg	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes

Concentrations in shaded cells indicate value exceeds Interi

J = Analyte was positively identified. The reported result is a

U = Analyte was not detected at or above the reported resu

UJ = Analyte was not detected at or above the reported esti

Table 5 - Excavation Verification Soil Quality Data for BA-MW-6 Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place		Sidewall Samples in Place				Pre-Excavation Characterization Samples							
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BA-B01 3/5/14 (5 ft)	BA-B02 3/5/14 (6 ft)	BA-S01 3/5/14 (4 ft)	BA-S01 FD 3/5/14 (4 ft)	BA-S02 3/5/14 (4 ft)	BA-S03 3/5/14 (4 ft)	BA-6E 1/15/14 (0.5-1 ft)	BA-6E 1/15/14 (1.5-2 ft)	BA-6N 1/15/14 (0.5-1 ft)	BA-6N 1/15/14 (1.5-2 ft)	BA-6S 1/15/14 (0.5-1 ft)	BA-6S 1/15/14 (1.5-2 ft)	BA-6W 1/15/14 (0.5-1 ft)	BA-6W 1/15/14 (1.5-2 ft)
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	50 U	50 U
Oil Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U	250 U	250 U	250 U	250 U	430	250 U	650	1,100	250 U	250 U	250 U	940
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	ND	ND	ND	455	ND	675	1,120	ND	ND	ND	965
Polycyclic Aromatic Hydrocarbons (PAHs)																
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U								
Acenaphthylene in mg/kg			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	1,100,000	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			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U								
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U								
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U								
Phenanthrene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U								
Pyrene in mg/kg	110,000	110,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U								
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U								
Benz(a)anthracene in mg/kg			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								
Benzo(b)fluoranthene in mg/kg			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								
Chrysene in mg/kg			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								
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								
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	ND	ND	ND	ND								

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

U = Analyte was not detected at or above the reported result.

Table 6 - Excavation Verification Soil Quality Data for Boiler/Baghouse Interim Action Area

K-C Worldwide Site Upland Area 110207

Bottom Samples in Place

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	BBH-B01 10/16/13 (3 ft)	BBH-B01 FD 10/16/13 (3 ft)	BBH-B02 10/16/13 (2 ft)	BBH-B03 10/16/13 (3 ft)	BBH-B05 10/16/13 (2 ft)	BBH-B06 10/16/13 (3 ft)	BBH-B07 10/16/13 (3 ft)	BBH-B10 10/16/13 (4 ft)	BBH-B16 10/23/13 (3 ft)	BBH-B17 10/30/13 (5 ft)	BBH-B19 10/30/13 (5 ft)	BBH-B20 11/18/13 (6 ft)
Total Petroleum Hydrocarbons (TPH)													
Diesel Range Hydrocarbons in mg/kg	2,000												
Oil Range Hydrocarbons in mg/kg	2,000												
Total TPHs in mg/kg	2,000												
Metals													
Antimony in mg/kg	1,400	1 U	1 U	1 U	1 U	4.01	1 U	1.22	1.52	2.07	1.59	6.62	1 U
Arsenic in mg/kg	20	3.85	3.87	2.2	3.03	5.58	8.07	2.1	1 U	3.62	1.58	1 U	1 U
Cadmium in mg/kg	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Copper in mg/kg	36	12.7	13.1	17.8	18.1	23.3	**45.3**	**57.3**	13.1	10.6	21.1	**47.3**	17.7
Lead in mg/kg	1,000	5.96	4.6	3.76	3.47	65.3	595	15.1	7.3	28.6	9.59	326	8.81
Mercury in mg/kg	0.1	0.1 U	0.1 U	0.1 U	0.1 U	**0.13** J	**0.43** J	0.1 U	0.1 U	0.1 U	**0.13**	**16**	0.1 U
Nickel in mg/kg	48	15.4 J	16.3 J	12.3 J	11.6 J	9.89 J	17.8 J	15 J	10.1 J	8.25	11.9	9.21	1.96
Zinc in mg/kg	100	25.9	25.6	25.8	18.1	27.7	56.8	40.6	30.2	12.9	24.5	16.3	3.64
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene in mg/kg	210,000	0.01 U	0.01 U			0.048						0.01 U	0.01 U
Acenaphthylene in mg/kg		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			0.091						0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg		0.01 U	0.01 U			0.081						0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	0.011	0.01 U			0.3						0.01 U	0.01 U
Fluorene in mg/kg	140,000	0.01 U	0.01 U			0.05						0.01 U	0.01 U
Phenanthrene in mg/kg		0.01 U	0.01 U			0.37						0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.012	0.01 U			0.37						0.01 U	0.01 U
Naphthalene in mg/kg	70,000	0.01 U	0.01 U			0.052						0.01 U	0.01 U
Benz(a)anthracene in mg/kg		0.01 U	0.01 U			0.16						0.01 U	0.01 U
Benzo(a)pyrene in mg/kg		0.01 U	0.01 U			0.14						0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg		0.013	0.01 U			0.17						0.01 U	0.01 U
Benzo(k)fluoranthene in mg/kg		0.01 U	0.01 U			0.068						0.01 U	0.01 U
Chrysene in mg/kg		0.01 U	0.01 U			0.2						0.01 U	0.01 U
Dibenzo(a,h)anthracene in mg/kg		0.01 U	0.01 U			0.025						0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg		0.01 U	0.01 U			0.094						0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	7.9	0.00835	ND			0.194						ND	ND
Dioxins/Furans													
Total HpCDD in mg/kg		2.9E-05	0.00015										
Total HpCDF in mg/kg		1.1E-05	2.4E-05										
Total HxCDD in mg/kg		1.3E-05	3E-05										
Total HxCDF in mg/kg		3.3E-06	7E-06										
Total PeCDD in mg/kg		9.1E-06	1.7E-05										
Total PeCDF in mg/kg		3.2E-06	2.8E-06										
Total TCDD in mg/kg		7.3E-06	1.2E-05										
Total TCDF in mg/kg		3.7E-06	3.2E-06										
2,3,7,8-TCDD in mg/kg		5.4E-07 U	5.3E-07 U										
1,2,3,7,8-PeCDD in mg/kg		3.2E-07 U	5.9E-07 U										
1,2,3,4,7,8-HxCDD in mg/kg		2.7E-07 U	5E-07 U										
1,2,3,6,7,8-HxCDD in mg/kg		1.1E-06 J	5.5E-07 U										
1,2,3,7,8,9-HxCDD in mg/kg		6.7E-07 J	1.9E-06 J										
1,2,3,4,6,7,8-HpCDD in mg/kg		1.2E-05	4.6E-05										
OCDD in mg/kg		8.8E-05	0.0005										
2,3,7,8-TCDF in mg/kg		5.4E-07 U	3.6E-07 J										
1,2,3,7,8-PeCDF in mg/kg		2.7E-07 J	4.3E-07 J										
2,3,4,7,8-PeCDF in mg/kg		3.3E-07 J	5.8E-07 U										
1,2,3,4,7,8-HxCDF in mg/kg		6.2E-07 J	9.5E-07 J										
1,2,3,6,7,8-HxCDF in mg/kg		3E-07 J	3.7E-07 U										
1,2,3,7,8,9-HxCDF in mg/kg		2.7E-06 U	2.7E-06 U										
2,3,4,6,7,8-HxCDF in mg/kg		3.2E-07 U	5.1E-07 J										
1,2,3,4,6,7,8-HpCDF in mg/kg		5E-06	6.1E-06										
1,2,3,4,7,8,9-HpCDF in mg/kg		2.7E-06 U	4.9E-07 J										
OCDF in mg/kg		7.1E-06	2.4E-05										
Total 2,3,7,8 TCDD [TEQ] (ND = 1/2 RDL) in mg/kg	0.0017	1.4E-06 J	2.4E-06 J										

Sidewall Samples in Place

Chemical Name	BBH-S01 10/15/13 (1.5 ft)	BBH-S01 FD 10/15/13 (1.5 ft)	BBH-S02 10/15/13 (1.5 ft)	BBH-S03 10/15/13 (1.5 ft)	BBH-S04 10/15/13 (1.5 ft)	BBH-S05 10/15/13 (1.5 ft)	BBH-S06 10/15/13 (1.5 ft)	BBH-S07 10/15/13 (1.5 ft)	BBH-S08 10/15/13 (1.5 ft)	BBH-S09 10/15/13 (1.5 ft)	BBH-S11 10/15/13 (1.5 ft)	BBH-S12 10/15/13 (1.5 ft)	BBH-S13 10/15/13 (1.5 ft)	BBH-S14 10/15/13 (1.5 ft)
Total Petroleum Hydrocarbons (TPH)														
Diesel Range Hydrocarbons in mg/kg														
Oil Range Hydrocarbons in mg/kg														
Total TPHs in mg/kg														
Metals														
Antimony in mg/kg	1.12	1 U	4.21	12.4	2.34	5.57	8.29	6.05	1 U	5.91	23.1	2.42	2.76	3.62
Arsenic in mg/kg	12.6	11.9	13.3	18	4.18	15.5	12.3	11.1	2.56	10.5	9.8	4.56	4.13	7.11
Cadmium in mg/kg	1 U	1.17	26.4	9.78	1 U	9.16	1.44	1 U	1 U	1.86	1 U	1 U	1 U	1 U
Copper in mg/kg	27.7	34.3	**67.9**	**44.1**	28.8	**75.3**	**52.2**	**58.5**	30.6	**76.5**	**74.5**	28.4	**69.9**	**72.3**
Lead in mg/kg	27.5	36.4	143	125	17.2	58.2	374	78.6	57.6	132	485	62.1	282	160
Mercury in mg/kg	**0.21** J	**0.31**	**0.58** J	**0.4** J	**0.22** J	**0.53** J	**0.84** J	**0.94** J	**0.12** J	**1.1** J	**1.9** J	**0.34** J	**1.7** J	**0.99** J
Nickel in mg/kg	16.3	18.4	19.2	19.9	23	16.6	19	14	16.7	20	26	16.7	2.34	6.3
Zinc in mg/kg	67.4	**103** J	**328**	**207** J	64.2 J	**216** J	**172** J	95.1 J	40.9 J	**131** J	79.7 J	33.6 J	17.3 J	55.1 J
Polycyclic Aromatic Hydrocarbons (PAHs)														
Acenaphthene in mg/kg	0.073	0.01 U					0.58				0.2			
Acenaphthylene in mg/kg	0.01 U	0.01 U					0.1 U				0.1 U			
Anthracene in mg/kg	0.097	0.01 U					0.65				0.41			
Benzo(g,h,i)perylene in mg/kg	0.061	0.041					0.4				0.24			
Fluoranthene in mg/kg	0.27	0.079					2.5				1.4			
Fluorene in mg/kg	0.1	0.01 U					0.32				0.17			
Phenanthrene in mg/kg	0.37	0.012					2.2				1.4			
Pyrene in mg/kg	0.23	0.078					2.4				1.3			
Naphthalene in mg/kg	0.56	0.01 U					0.13				0.1 U			
Benz(a)anthracene in mg/kg	0.11	0.072					0.95				0.55			
Benzo(a)pyrene in mg/kg	0.1	0.065					0.76				0.43			
Benzo(b)fluoranthene in mg/kg	0.13	0.09					0.85				0.49			
Benzo(k)fluoranthene in mg/kg	0.044	0.035					0.29				0.25			
Chrysene in mg/kg	0.11	0.076					1.1				0.64			
Dibenzo(a,h)anthracene in mg/kg	0.016	0.011					0.12				0.1 U			
Indeno(1,2,3-cd)pyrene in mg/kg	0.065	0.045					0.46				0.26			
Total cPAHs TEQ in mg/kg	0.138	0.0911					1.04				0.596			
Dioxins/Furans														
Total HpCDD in mg/kg														
Total HpCDF in mg/kg														
Total HxCDD in mg/kg														
Total HxCDF in mg/kg														
Total PeCDD in mg/kg														
Total PeCDF in mg/kg														
Total TCDD in mg/kg														
Total TCDF in mg/kg														
2,3,7,8-TCDD in mg/kg														
1,2,3,7,8-PeCDD in mg/kg														
1,2,3,4,7,8-HxCDD in mg/kg														
1,2,3,6,7,8-HxCDD in mg/kg														
1,2,3,7,8,9-HxCDD in mg/kg														
1,2,3,4,6,7,8-HpCDD in mg/kg														
OCDD in mg/kg														
2,3,7,8-TCDF in mg/kg														
1,2,3,7,8-PeCDF in mg/kg														
2,3,4,7,8-PeCDF in mg/kg														
1,2,3,4,7,8-HxCDF in mg/kg														
1,2,3,6,7,8-HxCDF in mg/kg														
1,2,3,7,8,9-HxCDF in mg/kg														
2,3,4,6,7,8-HxCDF in mg/kg														
1,2,3,4,6,7,8-HpCDF in mg/kg														
1,2,3,4,7,8,9-HpCDF in mg/kg														
OCDF in mg/kg														
Total 2,3,7,8 TCDD [TEQ] (ND = 1/2 RDL) in mg/kg														

Notes

All soils in this excavation are unsaturated. Concentrations shaded and bolded indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

Table 6 - Excavation Verification Soil Quality Data for Boiler/Baghouse Interim Action Area

K-C Worldwide Site Upland Area 110207

		Sidewall Samples in Place																Overexcavated Samples								
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	BBH-S15 10/15/13 (1.5 ft)	BBH-S16 10/15/13 (1.5 ft)	BBH-S17 10/15/13 (1.5 ft)	BBH-S18 10/15/13 (1.5 ft)	BBH-S19 10/15/13 (1.5 ft)	BBH-S20 10/15/13 (1.5 ft)	BBH-S20 FD 10/15/13 (1.5 ft)	BBH-S21 10/15/13 (1.5 ft)	BBH-S22 10/15/13 (1.5 ft)	BBH-S23 10/15/13 (1.5 ft)	BBH-S24 10/15/13 (1.5 ft)	BBH-S25 10/15/13 (1.5 ft)	BBH-S26 10/15/13 (1.5 ft)	BBH-S27 10/15/13 (1.5 ft)	BBH-S28 10/15/13 (1.5 ft)	BBH-S29 10/23/13 (1.5 ft)	BBH-B04 10/16/13 (2 ft) OverEx	BBH-B08 10/16/13 (3 ft) OverEx	BBH-B09 10/16/13 (3 ft) OverEx	BBH-B11 10/16/13 (3 ft) OverEx	BBH-B13 10/23/13 (4 ft) OverEx	BBH-B14 10/23/13 (4 ft) OverEx	BBH-B15 10/23/13 (4 ft) OverEx	BBH-B18 10/30/13 (5 ft) OverEx	BBH-S10 10/15/13 (1.5 ft) OverEx
Total Petroleum Hydrocarbons (TPH)																										
Diesel Range Hydrocarbons in mg/kg	2,000																									
Oil Range Hydrocarbons in mg/kg	2,000																									
Total TPHs in mg/kg	2,000																									
Metals																										
Antimony in mg/kg	1,400	3.75	3.05	2.31	5.12	9.02	7.9	10.3 J	24 J	4.56 J	1 U	1 U	1 U	1 U	1 U	1 U	13.4	5.24	35.5	19.9	4.56	18	4.03	2.49	1.44	16.4
Arsenic in mg/kg	20	4.86	3.03	5.75	8.58	16.2	9.2	9.93	12	8.45	2.35	4.25	4.78	6.18	3.76	3.86	18.5	13.5	**34.8**	13.5	1 U	**58.2**	4	1 U	1.4	13.5
Cadmium in mg/kg	3,500	1 U	1 U	1 U	1 U	1.18	1.29	1.6	2.46	2.4	1 U	1 U	1 U	1 U	1 U	1 U	3.33	1 U	1.79	1.35	1 U	1 U	1 U	1 U	1 U	2.72
Copper in mg/kg	36	**96.9**	**36.6**	**63.5**	**49.6**	35.6	**81.5**	**81.7**	**47.9**	**71.8**	16.5	14.3	32.9	18.9	19.2	14.1	**59.2**	**90.3**	**180**	**86.7**	**164**	**140**	26.6	**137**	**901**	**136**
Lead in mg/kg	1,000	151	73.1	114	99.7	80.2	182	232	779	54.7	4.32	3.76	4.72	4.07	3.1	5.18	275	35.3	**1,840**	407	132	301	94.7	67.3	174	584
Mercury in mg/kg	0.1	**0.41** J	0.1 U	**0.31** J	**0.25** J	**0.19** J	**0.52** J	**0.78**	**0.81**	**0.49**	0.1 U	0.1 U	**0.13**	**0.14**	0.1 U	0.1 U	**0.8**	0.1 U	**1.1** J	**1.2** J	0.1 U	**0.64**	**0.33**	0.1 U	**0.11**	**2.1** J
Nickel in mg/kg	48	4.96	8.6	4.36	14.3	18.2	19	21.7	12.7	14.9	23.3	14.7	15.2	9.51	12.3	12.3	19.8	26.7 J	12.8 J	17.7 J	1.88 J	12.1	13.1	1 U	8.79	18.1
Zinc in mg/kg	100	32 J	24 J	40.8 J	93.5 J	**145** J	**106** J	**149** J	84.3 J	**121** J	33.5 J	27 J	25.6 J	12.7 J	19.7 J	19.9 J	**299**	30.2	**343**	**187**	11.4	**515**	**152**	6.3	62.5	**167** J
Polycyclic Aromatic Hydrocarbons (PAHs)																										
Acenaphthene in mg/kg	210,000		0.01 U						0.063					0.01 U					0.026							
Acenaphthylene in mg/kg			0.01 U						0.01 U					0.01 U					0.01 U							
Anthracene in mg/kg	1,100,000		0.01 U						0.13					0.01 U					0.063							
Benzo(g,h,i)perylene in mg/kg			0.01 U						0.08					0.01 U					0.11							
Fluoranthene in mg/kg	140,000		0.01 U						0.37					0.01 U					0.36							
Fluorene in mg/kg	140,000		0.01 U						0.052					0.01 U					0.021							
Phenanthrene in mg/kg			0.01 U						0.4					0.01 U					0.2							
Pyrene in mg/kg	110,000		0.01 U						0.4					0.01 U					0.36							
Naphthalene in mg/kg	70,000		0.01 U						0.022					0.01 U					0.015							
Benz(a)anthracene in mg/kg			0.01 U						0.19					0.01 U					0.2							
Benzo(a)pyrene in mg/kg			0.01 U						0.15					0.01 U					0.19							
Benzo(b)fluoranthene in mg/kg			0.011						0.18					0.01 U					0.23							
Benzo(k)fluoranthene in mg/kg			0.01 U						0.056					0.01 U					0.075							
Chrysene in mg/kg			0.01 U						0.23					0.01 U					0.24							
Dibenzo(a,h)anthracene in mg/kg			0.01 U						0.025					0.01 U					0.03							
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U						0.089					0.01 U					0.12							
Total cPAHs TEQ in mg/kg	7.9		0.00815						0.206					ND					0.258							
Dioxins/Furans																										
Total HpCDD in mg/kg																		6.9E-05	0.00138							
Total HpCDF in mg/kg																		2.3E-06 U	0.00028							
Total HxCDD in mg/kg																		1.9E-05	0.00211							
Total HxCDF in mg/kg																		1.2E-06 J	0.00018							
Total PeCDD in mg/kg																		2.6E-07 J	0.00166							
Total PeCDF in mg/kg																		1.5E-06 J	0.00033							
Total TCDD in mg/kg																		6.6E-06	0.00145							
Total TCDF in mg/kg																		2.7E-06	0.00073							
2,3,7,8-TCDD in mg/kg																		5.6E-07 U	7E-06							
1,2,3,7,8-PeCDD in mg/kg																		2.6E-07 J	2.5E-05							
1,2,3,4,7,8-HxCDD in mg/kg																		2.1E-07 J	3.2E-05							
1,2,3,6,7,8-HxCDD in mg/kg																		1.1E-06 J	6.8E-05							
1,2,3,7,8,9-HxCDD in mg/kg																		7.9E-07 J	5.9E-05							
1,2,3,4,6,7,8-HpCDD in mg/kg																		1.8E-05	0.00066							
OCDD in mg/kg																		0.00017	0.00474							
2,3,7,8-TCDF in mg/kg																		5.6E-07 U	3.3E-05							
1,2,3,7,8-PeCDF in mg/kg																		1.7E-07 U	2.2E-05 J							
2,3,4,7,8-PeCDF in mg/kg																		2.4E-07 J	3.3E-05							
1,2,3,4,7,8-HxCDF in mg/kg																		3E-07 U	2.5E-05 J							
1,2,3,6,7,8-HxCDF in mg/kg																		1.7E-07 U	1.3E-05							
1,2,3,7,8,9-HxCDF in mg/kg																		2.8E-06 U	1.7E-06 J							
2,3,4,6,7,8-HxCDF in mg/kg																		1.6E-07 U	1.7E-05 J							
1,2,3,4,6,7,8-HpCDF in mg/kg																		9.6E-07 U	7.4E-05							
1,2,3,4,7,8,9-HpCDF in mg/kg																		2.8E-06 U	7.4E-06							
OCDF in mg/kg																		1.6E-06 J	0.00026							
Total 2,3,7,8 TCDD [TEQ] (ND = 1/2 RDL) in mg/kg	0.0017																	1.3E-06 J	7.7E-05							

Notes

All soils in this excavation are unsaturated. Concentrations shaded and bolded indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place																								
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-B001 10/10/13 (3.5 ft) SAT	BAST-B002 10/17/13 (4 ft) SAT	BAST-B003 10/17/13 (5 ft) SAT	BAST-B004 10/17/13 (5 ft) SAT	BAST-B005 10/17/13 (6 ft) SAT	BAST-B006 10/17/13 (6 ft) SAT	BAST-B007 10/17/13 (5 ft) SAT	BAST-B008 10/17/13 (6 ft) SAT	BAST-B010 10/18/13 (5 ft) SAT	BAST-B011 10/17/13 (4 ft) SAT	BAST-B012 10/17/13 (4 ft) SAT	BAST-B013 10/17/13 (4 ft) SAT	BAST-B014 10/17/13 (4 ft) SAT	BAST-B015 10/17/13 (5 ft) SAT	BAST-B016 10/17/13 (5 ft) SAT	BAST-B017 10/17/13 (5 ft) SAT	BAST-B018 10/17/13 (5 ft) SAT	BAST-B021 10/17/13 (4 ft) SAT	BAST-B022 10/22/13 (7 ft) SAT	BAST-B023 10/18/13 (4 ft) SAT	BAST-B023 FD 10/18/13 (4 ft) SAT	BAST-B024 10/17/13 (5 ft) SAT	BAST-B026 10/22/13 (6 ft) SAT	BAST-B027 10/22/13 (7 ft) SAT	BAST-B028 10/22/13 (7 ft) SAT
Total Petroleum Hydrocarbons (TPH)																											
Gasoline Range Hydrocarbons in mg/kg	100	100																									
Diesel Range Hydrocarbons in mg/kg	2,000	2,000																									
Oil Range Hydrocarbons in mg/kg	2,000	2,000																									
Bunker C 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	330	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	280
Total TPHs 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	330	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	280
Metals																											
Antimony in mg/kg	1,400	1,400						1 U																1 U			
Arsenic in mg/kg	20	20						5.67																1 U		1 U	
Barium in mg/kg	700,000	700,000																									
Beryllium in mg/kg	7,000	7,000																									
Cadmium in mg/kg	3,500	3,500						1 U																1 U		1 U	
Chromium (Total) in mg/kg	5,300,000	5,300,000																									
Copper in mg/kg	36	36						27.2																5.12		6.68	
Lead in mg/kg	81	1,000						2.55																1.5		1 U	
Mercury in mg/kg	0.1	0.1						0.1 U																0.1 U		0.1 U	
Nickel in mg/kg	48	48						14.5																11.6		10.9	
Selenium in mg/kg	18,000	18,000																									
Silver in mg/kg	18,000	18,000																									
Thallium in mg/kg	35	35																									
Zinc in mg/kg	85	100						25																9.04		12.8 J	
Polycyclic Aromatic Hydrocarbons (PAHs)																											
Acenaphthene in mg/kg	210,000	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	0.011	0.01 U	0.01 U	0.01 U	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	0.021
Acenaphthylene 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	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	0.01 U	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025
Benzo(g,h,i)perylene in mg/kg			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	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzofuran in mg/kg	3,500	3,500																									
Fluoranthene in mg/kg	140,000	140,000	0.038	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01
Fluorene in mg/kg	140,000	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	0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.023
Phenanthrene in mg/kg			0.019	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.07	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.075
Pyrene in mg/kg	110,000	110,000	0.038	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012	0.065	0.048	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.071
2-Methylnaphthalene in mg/kg	14,000	14,000																									
Naphthalene in mg/kg	70,000	70,000	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	0.01 U
Benz(a)anthracene in mg/kg			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	0.019	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	0.01 U	0.01 U	0.01 U	0.027
Benzo(a)pyrene in mg/kg			0.015	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.013	0.025	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017
Benzo(b)fluoranthene in mg/kg			0.026	0.01 U	0.01 U	0.01 U	0.01 U	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	0.01 U	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	0.01 U
Chrysene in mg/kg			0.021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.013	0.032	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.036
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	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg			0.019	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.4	7.9	0.0219	ND	ND	ND	ND	ND	ND	ND	0.0146	0.0172	0.0284	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0221
Volatile Organic Compounds (VOC)																											
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000																									
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000																									
1,1,2,2-Tetrachloroethane in mg/kg	660	660																									
1,1,2-Trichloroethane in mg/kg	2,300	2,300																									
1,1-Dichloroethane in mg/kg	23,000	23,000																									
1,1-Dichloroethene in mg/kg	180,000	180,000																									
1,1-Dichloropropene in mg/kg																											
1,2,3-Trichlorobenzene in mg/kg																											
1,2,3-Trichloropropane in mg/kg	4.4	4.4																									
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500																									
1,2,4-Trimethylbenzene in mg/kg																											
1,2-Dibromo-3-chloropropane in mg/kg	160	160																									
1,2-Dibromoethane (EDB) in mg/kg	66	66																									
1,2-Dichlorobenzene in mg/kg	320,000	320,000																									
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400																									
1,2-Dichloropropane in mg/kg	3,600	3,600																									
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000																									
1,3-Dichlorobenzene in mg/kg																											
1,3-Dichloropropane in mg/kg																											
1,4-Dichlorobenzene in mg/kg	24,000	24,000																									
2,2-Dichloropropane in mg/kg																											
2-Butanone in mg/kg	2,100,000	2,100,000																									
2-Chlorotoluene in mg/kg	70,000	70,000																									
2-Hexanone in mg/kg																											
4-Chlorotoluene in mg/kg																											
4-Methyl-2-pentanone in mg/kg	280,000	280,000																									

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area
K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place																								
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-B001 10/10/13 (3.5 ft) SAT	BAST-B002 10/17/13 (4 ft) SAT	BAST-B003 10/17/13 (5 ft) SAT	BAST-B004 10/17/13 (5 ft) SAT	BAST-B005 10/17/13 (6 ft) SAT	BAST-B006 10/17/13 (6 ft) SAT	BAST-B007 10/17/13 (5 ft) SAT	BAST-B008 10/17/13 (6 ft) SAT	BAST-B010 10/18/13 (5 ft) SAT	BAST-B011 10/17/13 (4 ft) SAT	BAST-B012 10/17/13 (4 ft) SAT	BAST-B013 10/17/13 (4 ft) SAT	BAST-B014 10/17/13 (4 ft) SAT	BAST-B015 10/17/13 (5 ft) SAT	BAST-B016 10/17/13 (5 ft) SAT	BAST-B017 10/17/13 (5 ft) SAT	BAST-B018 10/17/13 (5 ft) SAT	BAST-B021 10/17/13 (4 ft) SAT	BAST-B022 10/22/13 (7 ft) SAT	BAST-B023 10/18/13 (4 ft) SAT	BAST-B023 FD 10/18/13 (4 ft) SAT	BAST-B024 10/17/13 (5 ft) SAT	BAST-B026 10/22/13 (6 ft) SAT	BAST-B027 10/22/13 (7 ft) SAT	BAST-B028 10/22/13 (7 ft) SAT
Acetone in mg/kg	3,200,000	3,200,000																									
Benzene in mg/kg	2,400	2,400																									
Bromobenzene in mg/kg																											
Bromodichloromethane in mg/kg	2,100	2,100																									
Bromoform in mg/kg	17,000	17,000																									
Bromomethane in mg/kg	4,900	4,900																									
Carbon tetrachloride in mg/kg	1,900	1,900																									
Chlorobenzene in mg/kg	70,000	70,000																									
Chloroethane in mg/kg																											
Chloroform in mg/kg	4,200	4,200																									
Chloromethane in mg/kg																											
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000																									
cis-1,3-Dichloropropene in mg/kg																											
Dibromochloromethane in mg/kg	1,600	1,600																									
Dibromomethane in mg/kg	35,000	35,000																									
Dichlorodifluoromethane in mg/kg	700,000	700,000																									
Ethylbenzene in mg/kg	350,000	350,000																									
Hexachlorobutadiene in mg/kg	1,700	1,700																									
Isopropylbenzene in mg/kg	350,000	350,000																									
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000																									
Methylene chloride in mg/kg	21,000	21,000																									
n-Propylbenzene in mg/kg	350,000	350,000																									
p-Isopropyltoluene in mg/kg																											
sec-Butylbenzene in mg/kg	350,000	350,000																									
Styrene in mg/kg	700,000	700,000																									
tert-Butylbenzene in mg/kg	350,000	350,000																									
Tetrachloroethene (PCE) in mg/kg	21,000	21,000																									
Toluene in mg/kg	280,000	280,000																									
trans-1,2-Dichloroethene in mg/kg	70,000	70,000																									
trans-1,3-Dichloropropene in mg/kg																											
Trichloroethene (TCE) in mg/kg	1,800	1,800																									
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000																									
Vinyl chloride in mg/kg	88	88																									
m,p-Xylenes in mg/kg	49	2.5																									
o-Xylene in mg/kg	80	4.1																									
Naphthalene in mg/kg	70,000	70,000																									
Polychlorinated Biphenyls (PCBs)																											
Aroclor 1016 in mg/kg																											
Aroclor 1221 in mg/kg																											
Aroclor 1232 in mg/kg																											
Aroclor 1242 in mg/kg																											
Aroclor 1248 in mg/kg																											
Aroclor 1254 in mg/kg																											
Aroclor 1260 in mg/kg																											
Total PCBs (Sum of Aroclors) in mg/kg	10	10																									

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.
Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.
SAT = Sample of saturated soil; samples without this designation are unsaturated soil.
J = Analyte was positively identified. The reported result is an estimate.
U = Analyte was not detected at or above the reported result.
UJ = Analyte was not detected at or above the reported estimate.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place																								
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-B029 10/22/13 (7 ft) SAT	BAST-B030 10/17/13 (3.5 ft) SAT	BAST-B031 10/17/13 (4 ft) SAT	BAST-B032 10/23/13 (3 ft)	BAST-B033 10/22/13 (3 ft) SAT	BAST-B034 10/22/13 (7 ft) SAT	BAST-B035 10/22/13 (7 ft) SAT	BAST-B036 10/21/13 (7 ft) SAT	BAST-B037 10/22/13 (7 ft) SAT	BAST-B038 10/22/13 (7 ft) SAT	BAST-B039 10/21/13 (3 ft)	BAST-B040 10/22/13 (3 ft) SAT	BAST-B041 10/17/13 (3.5 ft) SAT	BAST-B042 10/18/13 (6 ft) SAT	BAST-B043 10/24/13 (9 ft) SAT	BAST-B044 10/24/13 (9 ft) SAT	BAST-B045 10/24/13 (9 ft) SAT	BAST-B046 10/25/13 (7 ft) SAT	BAST-B047 10/25/13 (8 ft) SAT	BAST-B048 10/30/13 (3 ft)	BAST-B048 FD 10/30/13 (3 ft)	BAST-B049 10/30/13 (3 ft)	BAST-B050 10/30/13 (3 ft)	BAST-B051 11/1/13 (5 ft) SAT	BAST-B051 FD 11/1/13 (5 ft) SAT
Total Petroleum Hydrocarbons (TPH)																											
Gasoline Range Hydrocarbons in mg/kg	100	100				2 U																					
Diesel Range Hydrocarbons in mg/kg	2,000	2,000																									
Oil Range Hydrocarbons in mg/kg	2,000	2,000																									
Bunker C in mg/kg	2,000	2,000	250 U	250 U	250 U	250 U	250 U	250 U	540	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	450	250 U	250 U	250 U	250 U	250 U	250 U	1,000 J	250 UJ
Total TPHs in mg/kg	2,000	2,000	250 U	250 U	250 U	250 U	250 U	250 U	540	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	450	250 U	250 U	250 U	250 U	250 U	250 U	1,000	250 U
Metals																											
Antimony in mg/kg	1,400	1,400			1 U																						
Arsenic in mg/kg	20	20			1 U						6.95															1.92 J	1.37 J
Barium in mg/kg	700,000	700,000																									
Beryllium in mg/kg	7,000	7,000																									
Cadmium in mg/kg	3,500	3,500			1 U						1 U															1 U	1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																									
Copper in mg/kg	36	36			2.81						32.9															**42.7**	**40.4**
Lead in mg/kg	81	1,000			2.48						5.62															15.8	16.3
Mercury in mg/kg	0.1	0.1			0.1 U						0.1 U															0.1 U	0.1 U
Nickel in mg/kg	48	48			4.98						24.5															9.98	10.1
Selenium in mg/kg	18,000	18,000																									
Silver in mg/kg	18,000	18,000																									
Thallium in mg/kg	35	35																									
Zinc in mg/kg	85	100			21.8						39.2 J															30.6	23
Polycyclic Aromatic Hydrocarbons (PAHs)																											
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.063	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.01 U	1.4	1.1
Acenaphthylene 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	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	0.01 U	0.066	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.01 U	0.01 U	0.056	0.051
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01 U	0.01 U	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	0.01 U	0.01 U	0.047	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.027	0.025
Dibenzofuran in mg/kg	3,500	3,500																									
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.027	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.041	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.047	0.041
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.071	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.01 U	2.3	1.7
Phenanthrene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.27	0.01 U	0.01 U	0.018	0.01 U	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	0.01 U	0.63	0.57
Pyrene in mg/kg	110,000	110,000	0.01 U	0.015	0.011	0.01 U	0.01 U	0.01 U	0.19	0.01 U	0.012	0.03	0.01 U	0.01 U	0.01 U	0.01 U	0.12	0.01 U	0.01	0.023	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1	0.087
2-Methylnaphthalene in mg/kg	14,000	14,000																									
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	0.06	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.036	0.01 U	0.01 U	0.014	0.011	0.033	0.042	0.11	0.13
Benz(a)anthracene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.072	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.041	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.033	0.031
Benzo(a)pyrene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.043	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.03	0.027
Benzo(b)fluoranthene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.019	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.041	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.028	0.027
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	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	0.097	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.071	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.053	0.05
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	0.01 U	0.01 U	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	0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.019	0.02
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	ND	ND	ND	ND	0.0546	ND	ND	ND	ND	ND	ND	ND	0.0621	ND	ND	ND	ND	ND	ND	ND	ND	0.0395	0.0363
Volatile Organic Compounds (VOC)																											
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000				0.05 U																					
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000				0.05 U																					
1,1,2,2-Tetrachloroethane in mg/kg	660	660				0.05 U																					
1,1,2-Trichloroethane in mg/kg	2,300	2,300				0.05 U																					
1,1-Dichloroethane in mg/kg	23,000	23,000				0.05 U																					
1,1-Dichloroethene in mg/kg	180,000	180,000				0.05 U																					
1,1-Dichloropropene in mg/kg						0.05 U																					
1,2,3-Trichlorobenzene in mg/kg						0.25 U																					
1,2,3-Trichloropropane in mg/kg	4.4	4.4				0.05 U																					
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500				0.25 U																					
1,2,4-Trimethylbenzene in mg/kg						0.05 U																					
1,2-Dibromo-3-chloropropane in mg/kg	160	160				0.5 U																					
1,2-Dibromoethane (EDB) in mg/kg	66	66				0.05 U																					
1,2-Dichlorobenzene in mg/kg	320,000	320,000				0.05 U																					
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400				0.05 U																					
1,2-Dichloropropane in mg/kg	3,600	3,600				0.05 U																					
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000				0.05 U																					
1,3-Dichlorobenzene in mg/kg						0.05 U																					
1,3-Dichloropropane in mg/kg						0.05 U																					
1,4-Dichlorobenzene in mg/kg	24,000	24,000				0.05 U																					
2,2-Dichloropropane in mg/kg						0.05 U																					
2-Butanone in mg/kg	2,100,000	2,100,000				0.5 U																					
2-Chlorotoluene in mg/kg	70,000	70,000				0.05 U																					
2-Hexanone in mg/kg						0.5 U																					
4-Chlorotoluene in mg/kg						0.05 U																					
4-Methyl-2-pentanone in mg/kg	280,000	280,000				0.5 U																					

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place																								
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-B029 10/22/13 (7 ft) SAT	BAST-B030 10/17/13 (3.5 ft) SAT	BAST-B031 10/17/13 (4 ft) SAT	BAST-B032 10/23/13 (3 ft)	BAST-B033 10/22/13 (3 ft) SAT	BAST-B034 10/22/13 (7 ft) SAT	BAST-B035 10/22/13 (7 ft) SAT	BAST-B036 10/21/13 (7 ft) SAT	BAST-B037 10/22/13 (7 ft) SAT	BAST-B038 10/22/13 (7 ft) SAT	BAST-B039 10/21/13 (3 ft)	BAST-B040 10/22/13 (3 ft) SAT	BAST-B041 10/17/13 (3.5 ft) SAT	BAST-B042 10/18/13 (6 ft) SAT	BAST-B043 10/24/13 (9 ft) SAT	BAST-B044 10/24/13 (9 ft) SAT	BAST-B045 10/24/13 (9 ft) SAT	BAST-B046 10/25/13 (7 ft) SAT	BAST-B047 10/25/13 (8 ft) SAT	BAST-B048 10/30/13 (3 ft)	BAST-B048 FD 10/30/13 (3 ft)	BAST-B049 10/30/13 (3 ft)	BAST-B050 10/30/13 (3 ft)	BAST-B051 11/1/13 (5 ft) SAT	BAST-B051 FD 11/1/13 (5 ft) SAT
Acetone in mg/kg	3,200,000	3,200,000				0.5 U																					
Benzene in mg/kg	2,400	2,400				0.03 U																					
Bromobenzene in mg/kg						0.05 U																					
Bromodichloromethane in mg/kg	2,100	2,100				0.05 U																					
Bromoform in mg/kg	17,000	17,000				0.05 U																					
Bromomethane in mg/kg	4,900	4,900				0.5 U																					
Carbon tetrachloride in mg/kg	1,900	1,900				0.05 U																					
Chlorobenzene in mg/kg	70,000	70,000				0.05 U																					
Chloroethane in mg/kg						0.5 U																					
Chloroform in mg/kg	4,200	4,200				0.05 U																					
Chloromethane in mg/kg						0.5 U																					
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000				0.05 U																					
cis-1,3-Dichloropropene in mg/kg						0.05 U																					
Dibromochloromethane in mg/kg	1,600	1,600				0.05 U																					
Dibromomethane in mg/kg	35,000	35,000				0.05 U																					
Dichlorodifluoromethane in mg/kg	700,000	700,000				0.5 U																					
Ethylbenzene in mg/kg	350,000	350,000				0.05 U																					
Hexachlorobutadiene in mg/kg	1,700	1,700				0.25 U																					
Isopropylbenzene in mg/kg	350,000	350,000				0.05 U																					
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000				0.05 U																					
Methylene chloride in mg/kg	21,000	21,000				0.5 U																					
n-Propylbenzene in mg/kg	350,000	350,000				0.05 U																					
p-Isopropyltoluene in mg/kg						0.05 U																					
sec-Butylbenzene in mg/kg	350,000	350,000				0.05 U																					
Styrene in mg/kg	700,000	700,000				0.05 U																					
tert-Butylbenzene in mg/kg	350,000	350,000				0.05 U																					
Tetrachloroethene (PCE) in mg/kg	21,000	21,000				0.025 U																					
Toluene in mg/kg	280,000	280,000				0.05 U																					
trans-1,2-Dichloroethene in mg/kg	70,000	70,000				0.05 U																					
trans-1,3-Dichloropropene in mg/kg						0.05 U																					
Trichloroethene (TCE) in mg/kg	1,800	1,800				0.03 U																					
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000				0.5 U																					
Vinyl chloride in mg/kg	88	88				0.05 U																					
m,p-Xylenes in mg/kg	49	2.5				0.1 U																					
o-Xylene in mg/kg	80	4.1				0.05 U																					
Naphthalene in mg/kg	70,000	70,000				0.05 U																					
Polychlorinated Biphenyls (PCBs)																											
Aroclor 1016 in mg/kg																											
Aroclor 1221 in mg/kg																											
Aroclor 1232 in mg/kg																											
Aroclor 1242 in mg/kg																											
Aroclor 1248 in mg/kg																											
Aroclor 1254 in mg/kg																											
Aroclor 1260 in mg/kg																											
Total PCBs (Sum of Aroclors) in mg/kg	10	10																									

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-B052 12/23/13 (7 ft) SAT	BAST-B052 FD 12/23/13 (7 ft) SAT	BAST-B053 1/2/14 (10 ft) SAT	BAST-B054 12/23/13 (7 ft) SAT	BAST-B055 1/2/14 (10 ft) SAT	BAST-B056 1/27/14 (4 ft)	BAST-B057 1/27/14 (7 ft) SAT	BAST-B058 1/27/14 (4 ft)	BAST-B059 1/27/14 (4 ft)	BAST-B060 1/27/14 (4 ft)	BAST-B061 1/27/14 (4 ft)	BAST-B062 1/27/14 (4 ft) SAT	BAST-B063 1/27/14 (4 ft) SAT	BAST-B064 1/27/14 (4 ft) SAT	BAST-B065 1/27/14 (3.5 ft)	BAST-B065 FD 1/27/14 (3.5 ft)	BAST-B066 1/28/14 (7 ft) SAT	BAST-B067 2/11/14 (5 ft)	BAST-B068 2/11/14 (5 ft)	BAST-B069 2/11/14 (5 ft)	BAST-B070 2/13/14 (4 ft)	BAST-B072 2/20/14 (6 ft)	BAST-B072 FD 2/20/14 (6 ft)	BAST-B073 2/20/14 (7 ft) SAT	BAST-B074 2/21/14 (7 ft) SAT
			Bottom Samples in Place																								
Total Petroleum Hydrocarbons (TPH)																											
Gasoline Range Hydrocarbons in mg/kg	100	100			2 U		2 U												2 U	4.4	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	50 U	50 U	50 U	290	50 U												50 U	91	50 U	50 U	68	50 U	50 U	50 U	50 U
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	250 U	250 U
Bunker C 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									
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	415	ND	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	ND	216	ND	ND	193	ND	ND	ND	ND
Metals																											
Antimony in mg/kg	1,400	1,400	1 U	1 U																							
Arsenic in mg/kg	20	20	2.99	3.44								5.18					1 U	1 U						4.93	4.62		
Barium in mg/kg	700,000	700,000																									
Beryllium in mg/kg	7,000	7,000																									
Cadmium in mg/kg	3,500	3,500	1 U	1 U								1 U					1 U	1 U						1 U	1 U		
Chromium (Total) in mg/kg	5,300,000	5,300,000																									
Copper in mg/kg	36	36	6.32	6.11								19.6					15.6	14.9						6.4	5.94		
Lead in mg/kg	81	1,000	2.22	2.39								5.68					3.22	2.47						1.79	1.75		
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 U								**0.13**					0.1 U	0.1 U						0.1 U	0.1 U		
Nickel in mg/kg	48	48	12	12.9								16.8					11.5	11.3						9.75	9.27		
Selenium in mg/kg	18,000	18,000																									
Silver in mg/kg	18,000	18,000																									
Thallium in mg/kg	35	35																									
Zinc in mg/kg	85	100	11.2	11.8								45.6					71.6	66.7						10.9	10.1		
Polycyclic Aromatic Hydrocarbons (PAHs)																											
Acenaphthene in mg/kg	210,000	210,000	0.027	0.025	0.01 U	0.17	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.057	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.015	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene 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	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	0.01 U	0.01 U	0.01 U	0.01 U	0.1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.025 J	0.01 U	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			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.041	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzofuran in mg/kg	3,500	3,500																									
Fluoranthene in mg/kg	140,000	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	0.036	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	140,000	0.01 U	0.01 U	0.01 U	0.044	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.079	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.016	0.01 U	0.094	0.06	0.01 U	0.01 U	0.01 U	0.01	0.013	0.01 U
Phenanthrene 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	0.015	0.35	0.01 U	0.01 U	0.027	0.01 U	0.018 J	0.084 J	0.01 U	0.1	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	110,000	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.015	0.25	0.01 U	0.01 U	0.015	0.01 U	0.01 UJ	0.06 J	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
2-Methylnaphthalene in mg/kg	14,000	14,000																									
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.015	0.092	0.01 U	0.01 U	0.089	0.01 U	0.01 U	0.025	0.01 U	0.01 U	0.01 U	0.015	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.013	0.01 U
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	0.084	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.029 J	0.01 U	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	0.066	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.01 U	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	0.026	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	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	0.1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.034 J	0.01 U	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	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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.4	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.08	ND	ND	ND	ND	ND	0.0222	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOC)																											
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	660			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	2,300			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane in mg/kg	23,000	23,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene in mg/kg	180,000	180,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene in mg/kg					0.25 U		0.25 U												0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane in mg/kg	4.4	4.4			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500			0.25 U		0.25 U												0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane in mg/kg	160	160			0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	66			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene in mg/kg	320,000	320,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane in mg/kg	3,600	3,600			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene in mg/kg	24,000	24,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,2-Dichloropropane in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone in mg/kg	2,100,000	2,100,000			0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene in mg/kg	70,000	70,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone in mg/kg					0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	280,000			0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place																								
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-B052 12/23/13 (7 ft) SAT	BAST-B052 FD 12/23/13 (7 ft) SAT	BAST-B053 1/2/14 (10 ft) SAT	BAST-B054 12/23/13 (7 ft) SAT	BAST-B055 1/2/14 (10 ft) SAT	BAST-B056 1/27/14 (4 ft)	BAST-B057 1/27/14 (7 ft) SAT	BAST-B058 1/27/14 (4 ft)	BAST-B059 1/27/14 (4 ft)	BAST-B060 1/27/14 (4 ft)	BAST-B061 1/27/14 (4 ft)	BAST-B062 1/27/14 (4 ft) SAT	BAST-B063 1/27/14 (4 ft) SAT	BAST-B064 1/27/14 (4 ft) SAT	BAST-B065 1/27/14 (3.5 ft)	BAST-B065 FD 1/27/14 (3.5 ft)	BAST-B066 1/28/14 (7 ft) SAT	BAST-B067 2/11/14 (5 ft)	BAST-B068 2/11/14 (5 ft)	BAST-B069 2/11/14 (5 ft)	BAST-B070 2/13/14 (4 ft)	BAST-B072 2/20/14 (6 ft)	BAST-B072 FD 2/20/14 (6 ft)	BAST-B073 2/20/14 (7 ft) SAT	BAST-B074 2/21/14 (7 ft) SAT
Acetone in mg/kg	3,200,000	3,200,000			0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene in mg/kg	2,400	2,400			0.03 U		0.03 U												0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	2,100	2,100			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	17,000	17,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	4,900	4,900			0.5 U		0.5 U												0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride in mg/kg	1,900	1,900			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	70,000	70,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg					0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	4,200	4,200			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg					0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane in mg/kg	1,600	1,600			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane in mg/kg	35,000	35,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	700,000	700,000			0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	350,000	350,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene in mg/kg	1,700	1,700			0.25 U		0.25 U												0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene in mg/kg	350,000	350,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	21,000	21,000			0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene in mg/kg	350,000	350,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	350,000	350,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene in mg/kg	700,000	700,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	350,000	350,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	21,000			0.025 U		0.025 U												0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	280,000	280,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	70,000			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg					0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene (TCE) in mg/kg	1,800	1,800			0.03 U		0.03 U												0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000			0.5 U		0.5 U												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride in mg/kg	88	88			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	49	2.5			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
o-Xylene in mg/kg	80	4.1			0.05 U		0.05 U												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene in mg/kg	70,000	70,000																		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Polychlorinated Biphenyls (PCBs)																											
Aroclor 1016 in mg/kg																											
Aroclor 1221 in mg/kg																											
Aroclor 1232 in mg/kg																											
Aroclor 1242 in mg/kg																											
Aroclor 1248 in mg/kg																											
Aroclor 1254 in mg/kg																											
Aroclor 1260 in mg/kg																											
Total PCBs (Sum of Aroclors) in mg/kg	10	10																									

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place				Sidewall Samples in Place																		
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-B075 2/21/14 (7 ft) SAT	BAST-B076 2/21/14 (7 ft) SAT	BAST-B077 2/21/14 (8 ft) SAT	BAST-B078 2/24/14 (4 ft)	BAST-S013 10/21/13 (3 ft)	BAST-S014 10/21/13 (3 ft)	BAST-S015 10/21/13 (3 ft)	BAST-S016 10/18/13 (3 ft)	BAST-S022 10/22/13 (3 ft)	BAST-S024 10/22/13 (3 ft) SAT	BAST-S025 10/18/13 (3 ft)	BAST-S026 10/23/13 (3 ft)	BAST-S027 10/23/13 (3 ft)	BAST-S028 10/23/13 (3 ft)	BAST-S029 10/23/13 (3 ft)	BAST-S033 10/25/13 (3 ft) SAT	BAST-S034 10/23/13 (3 ft)	BAST-S034A 11/1/13 (3 ft) SAT	BAST-S035 11/1/13 (3 ft) SAT	BAST-S036 11/1/13 (3 ft) SAT	BAST-S041 12/23/13 (3 ft)	BAST-S042 12/23/13 (5 ft) SAT	BAST-S043 12/30/13 (3 ft)
Total Petroleum Hydrocarbons (TPH)																									
Gasoline Range Hydrocarbons in mg/kg	100	100	2 U	2 U	2 U	2 U									2 U	2 U	2 U								2 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
Oil Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U	250 U	250 U																	250 U	250 U	1,700
Bunker C in mg/kg	2,000	2,000					250 U	250 U	250 U	250 U	250 U	650	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	2,000	ND	ND	ND	ND	250 U	250 U	250 U	250 U	250 U	650	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	ND	ND	1,720
Metals																									
Antimony in mg/kg	1,400	1,400								1 U															
Arsenic in mg/kg	20	20		1 U					1 U	17								1.69 J	4.03						3.05
Barium in mg/kg	700,000	700,000																							
Beryllium in mg/kg	7,000	7,000																							
Cadmium in mg/kg	3,500	3,500		1 U					1 U	1 U								1 U	1 U						1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																							
Copper in mg/kg	36	36		3.92					13.5	**52.9**								4.54 J	25.4						9.53
Lead in mg/kg	81	1,000		1.33					2.16	10.1								1.85 J	3.27						97.6
Mercury in mg/kg	0.1	0.1		0.1 U					0.1 U	**0.11**								0.1 U	0.1 U						**0.18**
Nickel in mg/kg	48	48		10.7					11.1	40.6								6.7	24.6						9.33
Selenium in mg/kg	18,000	18,000																							
Silver in mg/kg	18,000	18,000																							
Thallium in mg/kg	35	35																							
Zinc in mg/kg	85	100		7.99					57.7 J	64.5								20.8	38.1						94.5
Polycyclic Aromatic Hydrocarbons (PAHs)																									
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.034	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.017	0.1 U
Acenaphthylene 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	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 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	0.01 U	0.01 U	0.01 U	0.01 U	0.6	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.44	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012	0.014	0.01	0.01 U	0.01 U	0.48
Dibenzofuran in mg/kg	3,500	3,500																							
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.045	0.01 U	0.01 U	0.01 U	0.017	0.01 U	1.9	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.07	0.026	0.013	0.01 U	0.01 U	0.1 U
Fluorene in mg/kg	140,000	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	0.13	0.01 U	0.01 U	0.01 U	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	0.1 U
Phenanthrene 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	1.5	0.022	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.072	0.01 U	0.034	0.01 U	0.01 U	0.1 U
Pyrene in mg/kg	110,000	110,000	0.01 U	0.01 U	0.01 U	0.051	0.01 U	0.01 U	0.01 U	0.019	0.01 U	1.9	0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.073	0.025	0.024	0.01 U	0.01 U	0.24
2-Methylnaphthalene in mg/kg	14,000	14,000																							
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	2.5	0.01 U	0.019	0.023	0.01 U	0.01 U	0.1 U	0.01 U	0.015	0.01 U	0.01 U	0.01	0.01 U	0.023	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Benz(a)anthracene in mg/kg			0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.78	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.032	0.01	0.013	0.01 U	0.01 U	0.1 U
Benzo(a)pyrene in mg/kg			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	0.61	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.024	0.013	0.01 U	0.01 U	0.01 U	0.25
Benzo(b)fluoranthene 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	0.76	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.029	0.015	0.013	0.01 U	0.01 U	0.1
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	0.27	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Chrysene in mg/kg			0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.97	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.036	0.011	0.017	0.01 U	0.01 U	0.19
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	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U	0.01 U	0.01 U	0.011 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.35	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.015	0.01 U	0.01 U	0.01 U	0.01 U	0.16
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	ND	0.0191	ND	ND	ND	ND	ND	**0.841**	ND	ND	ND	ND	ND	ND	ND	0.0337	0.0171	0.00927	ND	ND	0.293
Volatile Organic Compounds (VOC)																									
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	660	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	2,300	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,1-Dichloroethane in mg/kg	23,000	23,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,1-Dichloroethene in mg/kg	180,000	180,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,1-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,2,3-Trichlorobenzene in mg/kg			0.25 U	0.25 U	0.25 U	0.25 U									0.25 U	0.25 U	0.25 U								0.25 U
1,2,3-Trichloropropane in mg/kg	4.4	4.4	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500	0.25 U	0.25 U	0.25 U	0.25 U									0.25 U	0.25 U	0.25 U								0.25 U
1,2,4-Trimethylbenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,2-Dibromo-3-chloropropane in mg/kg	160	160	0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	66	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,2-Dichlorobenzene in mg/kg	320,000	320,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,2-Dichloropropane in mg/kg	3,600	3,600	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,3-Dichlorobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,3-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
1,4-Dichlorobenzene in mg/kg	24,000	24,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
2,2-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
2-Butanone in mg/kg	2,100,000	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
2-Chlorotoluene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
2-Hexanone in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
4-Chlorotoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	280,000	0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place				Sidewall Samples in Place																		
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-B075 2/21/14 (7 ft) SAT	BAST-B076 2/21/14 (7 ft) SAT	BAST-B077 2/21/14 (8 ft) SAT	BAST-B078 2/24/14 (4 ft)	BAST-S013 10/21/13 (3 ft)	BAST-S014 10/21/13 (3 ft)	BAST-S015 10/21/13 (3 ft)	BAST-S016 10/18/13 (3 ft)	BAST-S022 10/22/13 (3 ft)	BAST-S024 10/22/13 (3 ft) SAT	BAST-S025 10/18/13 (3 ft)	BAST-S026 10/23/13 (3 ft)	BAST-S027 10/23/13 (3 ft)	BAST-S028 10/23/13 (3 ft)	BAST-S029 10/23/13 (3 ft)	BAST-S033 10/25/13 (3 ft) SAT	BAST-S034 10/23/13 (3 ft)	BAST-S034A 11/1/13 (3 ft) SAT	BAST-S035 11/1/13 (3 ft) SAT	BAST-S036 11/1/13 (3 ft) SAT	BAST-S041 12/23/13 (3 ft)	BAST-S042 12/23/13 (5 ft) SAT	BAST-S043 12/30/13 (3 ft)
Acetone in mg/kg	3,200,000	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
Benzene in mg/kg	2,400	2,400	0.03 U	0.03 U	0.03 U	0.03 U									0.03 U	0.03 U	0.03 U								0.03 U
Bromobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Bromodichloromethane in mg/kg	2,100	2,100	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Bromoform in mg/kg	17,000	17,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Bromomethane in mg/kg	4,900	4,900	0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
Carbon tetrachloride in mg/kg	1,900	1,900	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Chlorobenzene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Chloroethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
Chloroform in mg/kg	4,200	4,200	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Chloromethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
cis-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Dibromochloromethane in mg/kg	1,600	1,600	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Dibromomethane in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Dichlorodifluoromethane in mg/kg	700,000	700,000	0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
Ethylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Hexachlorobutadiene in mg/kg	1,700	1,700	0.25 U	0.25 U	0.25 U	0.25 U									0.25 U	0.25 U	0.25 U								0.25 U
Isopropylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Methylene chloride in mg/kg	21,000	21,000	0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
n-Propylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
p-Isopropyltoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
sec-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Styrene in mg/kg	700,000	700,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
tert-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	21,000	0.025 U	0.025 U	0.025 U	0.025 U									0.025 U	0.025 U	0.025 U								0.025 U
Toluene in mg/kg	280,000	280,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
trans-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Trichloroethene (TCE) in mg/kg	1,800	1,800	0.03 U	0.03 U	0.03 U	0.03 U									0.03 U	0.03 U	0.03 U								0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U									0.5 U	0.5 U	0.5 U								0.5 U
Vinyl chloride in mg/kg	88	88	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
m,p-Xylenes in mg/kg	49	2.5	0.1 U	0.1 U	0.1 U	0.1 U									0.1 U	0.1 U	0.1 U								0.1 U
o-Xylene in mg/kg	80	4.1	0.05 U	0.05 U	0.05 U	0.05 U									0.05 U	0.05 U	0.05 U								0.05 U
Naphthalene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	1.2									0.05 U	0.05 U	0.05 U								
Polychlorinated Biphenyls (PCBs)																									
Aroclor 1016 in mg/kg																									
Aroclor 1221 in mg/kg																									
Aroclor 1232 in mg/kg																									
Aroclor 1242 in mg/kg																									
Aroclor 1248 in mg/kg																									
Aroclor 1254 in mg/kg																									
Aroclor 1260 in mg/kg																									
Total PCBs (Sum of Aroclors) in mg/kg	10	10																							

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place																								
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-S044 12/30/13 (5 ft) SAT	BAST-S047 12/30/13 (3 ft)	BAST-S048 12/30/13 (5 ft) SAT	BAST-S049 1/2/14 (8 ft) SAT	BAST-S052 1/7/14 (8 ft) SAT	BAST-S053 1/7/14 (5 ft) SAT	BAST-S054 1/7/14 (8 ft) SAT	BAST-S056 1/20/14 (3 ft) SAT	BAST-S064 1/21/14 (6 ft)	BAST-S068 1/28/14 (4 ft)	BAST-S070 2/11/14 (3 ft)	BAST-S071 2/11/14 (3 ft)	BAST-S072 2/13/14 (3 ft)	BAST-S074 2/13/14 (3 ft)	BAST-S076 2/20/14 (4 ft)	BAST-S077 2/20/14 (4 ft)	BAST-S078 2/20/14 (4 ft)	BAST-S079 2/21/14 (4 ft)	BAST-S080 2/21/14 (4 ft)	BAST-S081 2/21/14 (4 ft)	BAST-S083 2/21/14 (4 ft)	BAST-S084 2/21/14 (4 ft)	BAST-S085 2/21/14 (4 ft)	BAST-S086 2/21/14 (4 ft)	BAST-S087 2/24/14 (2 ft)
Total Petroleum Hydrocarbons (TPH)																											
Gasoline Range Hydrocarbons in mg/kg	100	100	3	2 U	2 U	2 U	2 U	2 U	2 U		2 U	11	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	50 U	1,300	50 U	50 U	50 U	50 U	50 U	50 U	500	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
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	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
Bunker C in mg/kg	2,000	2,000																									
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,420	ND	ND	ND	ND	ND	ND	625	ND	ND	ND	ND	ND	ND	ND	ND
Metals																											
Antimony in mg/kg	1,400	1,400																									
Arsenic in mg/kg	20	20							5.48											5.16				4.26			
Barium in mg/kg	700,000	700,000																									
Beryllium in mg/kg	7,000	7,000																									
Cadmium in mg/kg	3,500	3,500							1 U											1 U				1 U			
Chromium (Total) in mg/kg	5,300,000	5,300,000																									
Copper in mg/kg	36	36							4.01											14.3				33.4			
Lead in mg/kg	81	1,000							1.99											2.93				27			
Mercury in mg/kg	0.1	0.1							0.1 U											0.1 U				0.1 U			
Nickel in mg/kg	48	48							10.7											16.8				17.9			
Selenium in mg/kg	18,000	18,000																									
Silver in mg/kg	18,000	18,000																									
Thallium in mg/kg	35	35																									
Zinc in mg/kg	85	100							8.61											22.4				50.1			
Polycyclic Aromatic Hydrocarbons (PAHs)																											
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.01 U	0.074	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.013	0.039	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			0.01 U	0.01 U	0.01 U	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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.015	0.01 U	0.01 U	0.01 U	0.021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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			0.01 U	0.012	0.01 U	0.01 U	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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.02
Dibenzofuran in mg/kg	3,500	3,500																									
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.014	0.01 U	0.03	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	0.01 U	0.034	0.01 U	0.01 U	0.039
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.019	0.01 U	0.01 U	0.01 U	0.47	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.041	0.086	0.027	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			0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.026	0.01 U	0.014	0.01 U	0.27	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.081	0.01	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.031
Pyrene in mg/kg	110,000	110,000	0.01 U	0.01 U	0.01 U	0.01 U	0.034	0.017	0.01 U	0.027	0.01 U	0.03	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.036	0.01 U	0.01 U	0.045
2-Methylnaphthalene in mg/kg	14,000	14,000																									
Naphthalene in mg/kg	70,000	70,000	0.045	0.01 U	0.01 U	0.01 U	0.015	0.016	0.01 U	0.01 U	0.01 U	0.041	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.053	0.029	0.033	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017
Benz(a)anthracene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.015	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	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.022
Benzo(a)pyrene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.015	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	0.01 U	0.01 U	0.01 U	0.021	0.01 U	0.01 U	0.028
Benzo(b)fluoranthene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.014	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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.028	0.01 U	0.01 U	0.034
Benzo(k)fluoranthene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	0.011
Chrysene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.021	0.015	0.01 U	0.016	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.022	0.01 U	0.01 U	0.032
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	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	0.013	0.01 U	0.01 U	0.020 J
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	ND	ND	0.0198	0.00935	ND	0.0167	ND	0.00764	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0288	ND	ND	0.0375
Volatile Organic Compounds (VOC)																											
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane in mg/kg	23,000	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene in mg/kg	180,000	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene in mg/kg			0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane in mg/kg	4.4	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane in mg/kg	160	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene in mg/kg	320,000	320,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane in mg/kg	3,600	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene in mg/kg	24,000	24,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,2-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone in mg/kg	2,100,000	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Sidewall Samples in Place																								
			BAST-S044 12/30/13 (5 ft) SAT	BAST-S047 12/30/13 (3 ft)	BAST-S048 12/30/13 (5 ft) SAT	BAST-S049 1/2/14 (8 ft) SAT	BAST-S052 1/7/14 (8 ft) SAT	BAST-S053 1/7/14 (5 ft) SAT	BAST-S054 1/7/14 (8 ft) SAT	BAST-S056 1/20/14 (3 ft) SAT	BAST-S064 1/21/14 (6 ft)	BAST-S068 1/28/14 (4 ft)	BAST-S070 2/11/14 (3 ft)	BAST-S071 2/11/14 (3 ft)	BAST-S072 2/13/14 (3 ft)	BAST-S074 2/13/14 (3 ft)	BAST-S076 2/20/14 (4 ft)	BAST-S077 2/20/14 (4 ft)	BAST-S078 2/20/14 (4 ft)	BAST-S079 2/21/14 (4 ft)	BAST-S080 2/21/14 (4 ft)	BAST-S081 2/21/14 (4 ft)	BAST-S083 2/21/14 (4 ft)	BAST-S084 2/21/14 (4 ft)	BAST-S085 2/21/14 (4 ft)	BAST-S086 2/21/14 (4 ft)	BAST-S087 2/24/14 (2 ft)
Acetone in mg/kg	3,200,000	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene in mg/kg	2,400	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	2,100	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	17,000	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	4,900	4,900	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride in mg/kg	1,900	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	4,200	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane in mg/kg	1,600	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	700,000	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene in mg/kg	1,700	1,700	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	21,000	21,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene in mg/kg	700,000	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	280,000	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene (TCE) in mg/kg	1,800	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride in mg/kg	88	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	49	2.5	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
o-Xylene in mg/kg	80	4.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene in mg/kg	70,000	70,000									0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Polychlorinated Biphenyls (PCBs)																											
Aroclor 1016 in mg/kg																											
Aroclor 1221 in mg/kg																											
Aroclor 1232 in mg/kg																											
Aroclor 1242 in mg/kg																											
Aroclor 1248 in mg/kg																											
Aroclor 1254 in mg/kg																											
Aroclor 1260 in mg/kg																											
Total PCBs (Sum of Aroclors) in mg/kg	10	10																									

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.
Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.
SAT = Sample of saturated soil; samples without this designation are unsaturated soil.
J = Analyte was positively identified. The reported result is an estimate.
U = Analyte was not detected at or above the reported result.
UJ = Analyte was not detected at or above the reported estimate.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place								Inaccessible Soil at the Edge of or Beneath Warehouse																
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-S088 2/25/14 (4 ft)	BAST-S089 2/25/14 (4 ft)	BAST-S091 2/25/14 (4 ft)	BAST-S092 2/25/14 (4 ft)	BAST-S093 2/25/14 (4 ft)	BAST-S093 FD 2/25/14 (4 ft)	BAST-S094 3/4/14 (4 ft)	BAST-S095 3/4/14 (4 ft)	BAST-EPH-03 10/21/13 (2 ft) SAT	BAST-EPH-04 10/21/13 (2 ft) SAT	BAST-S001 10/10/13 (2 ft)	BAST-S002 10/10/13 (2 ft) SAT	BAST-S003 10/17/13 (3.5 ft)	BAST-S004 10/17/13 (3.5 ft)	BAST-S005 10/17/13 (3.5 ft)	BAST-S006 10/17/13 (3.5 ft)	BAST-S007 10/17/13 (3.5 ft) SAT	BAST-S007 FD 10/17/13 (3.5 ft) SAT	BAST-S008 10/18/13 (3.5 ft) SAT	BAST-S009 10/18/13 (3.5 ft) SAT	BAST-S010 10/21/13 (3.5 ft) SAT	BAST-S010 FD 10/21/13 (3.5 ft) SAT	BAST-S037 12/23/13 (3 ft) SAT	BAST-S038 12/23/13 (5 ft) SAT	BAST-S039 12/23/13 (3 ft)
Total Petroleum Hydrocarbons (TPH)																											
Gasoline Range Hydrocarbons in mg/kg	100	100	2 U	2 U	2 U	2 U	2 U	2 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															810	50 U	50 U
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
Bunker C in mg/kg	2,000	2,000											**2,300**	250 U	250 U	250 U	250 U	250 U	**9,300**	**9,700**	250 U	610	810	800			
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	ND	ND	ND	ND	ND			**2,300**	250 U	250 U	250 U	250 U	250 U	**9,300**	**9,700**	250 U	610	810	800	935	ND	ND
Metals																											
Antimony in mg/kg	1,400	1,400																1 U							1 U		
Arsenic in mg/kg	20	20	2.28				5.62											1 U					2.81		4.23		
Barium in mg/kg	700,000	700,000																									
Beryllium in mg/kg	7,000	7,000																									
Cadmium in mg/kg	3,500	3,500	1 U				1 U											1 U					1 U		1 U		
Chromium (Total) in mg/kg	5,300,000	5,300,000																									
Copper in mg/kg	36	36	3.96				12.4											4.08					6.76		4.6		
Lead in mg/kg	81	1,000	1.45				3.22			6.57								1.73					1.51		2.6		
Mercury in mg/kg	0.1	0.1	0.1 U				0.1 U											0.1 U					0.1 U		0.1 U		
Nickel in mg/kg	48	48	7.93				13.7											14.1					9.28		10		
Selenium in mg/kg	18,000	18,000																									
Silver in mg/kg	18,000	18,000																									
Thallium in mg/kg	35	35																									
Zinc in mg/kg	85	100	9.27 J				22.1											21.4					11.5 J		8.81		
Polycyclic Aromatic Hydrocarbons (PAHs)																											
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		5.6	6	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.63	0.77	0.01 U	0.051	0.039	0.037	0.097	0.018	0.01 U
Acenaphthylene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.2 U	0.2 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 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	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		4	6.6	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.62	0.64	0.01 U	0.036	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		2.6	4.3	0.044	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.17	0.2	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzofuran in mg/kg	3,500	3,500																									
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02		2.3	3.3	0.01 U	0.025	0.01 U	0.01 U	0.01 U	0.01 U	0.25	0.23	0.01 U	0.022	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		12	7.4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	1.3	1.6	0.01 U	0.08	0.079	0.085	0.01 U	0.012	0.01 U
Phenanthrene in mg/kg			0.019	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.014		28	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	0.056	0.071	0.077	0.01 U	0.035	0.01 U
Pyrene in mg/kg	110,000	110,000	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017		16	35	0.01 U	0.05	0.01 U	0.01 U	0.011	0.012	2.0	2.2	0.01 U	0.13	0.01 U	0.01 U	0.01 U	0.025	0.01 U
2-Methylnaphthalene in mg/kg	14,000	14,000																									
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		2	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.019
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		4.9	9.3	0.01 U	0.041	0.01 U	0.01 U	0.01 U	0.01 U	0.58 J	0.85 J	0.01 U	0.039	0.01 U	0.01 U	0.01 U	0.01	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		3.6	6.3	0.01 U	0.029	0.01 U	0.01 U	0.01 U	0.01 U	0.35	0.36	0.01 U	0.029	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		1.8	2	0.011	0.031	0.01 U	0.01 U	0.01 U	0.01 U	0.17	0.21	0.01 U	0.015	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		0.2	0.23	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.024	0.028	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		8.7	12	0.01 U	0.053	0.01 U	0.01 U	0.01 U	0.011	0.98	1.1	0.01 U	0.07	0.01 U	0.01 U	0.01 U	0.011	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		0.61	0.98	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.061	0.07	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		0.7	1	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.046	0.055	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	0.4	7.9	ND	ND	ND	ND	ND	ND	ND		4.51	7.77	0.00815	0.0397	ND	ND	ND	0.00761	0.448	0.492	ND	0.0366	ND	ND	ND	0.00811	ND
Volatile Organic Compounds (VOC)																											
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,1,2,2-Tetrachloroethane in mg/kg	660	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,1,2-Trichloroethane in mg/kg	2,300	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,1-Dichloroethane in mg/kg	23,000	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,1-Dichloroethene in mg/kg	180,000	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,1-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,2,3-Trichlorobenzene in mg/kg			0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U																			
1,2,3-Trichloropropane in mg/kg	4.4	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U																			
1,2,4-Trimethylbenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,2-Dibromo-3-chloropropane in mg/kg	160	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
1,2-Dibromoethane (EDB) in mg/kg	66	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,2-Dichlorobenzene in mg/kg	320,000	320,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,2-Dichloropropane in mg/kg	3,600	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,3-Dichlorobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,3-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
1,4-Dichlorobenzene in mg/kg	24,000	24,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
2,2-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
2-Butanone in mg/kg	2,100,000	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
2-Chlorotoluene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
2-Hexanone in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
4-Chlorotoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
4-Methyl-2-pentanone in mg/kg	280,000	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place								Inaccessible Soil at the Edge of or Beneath Warehouse																
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-S088 2/25/14 (4 ft)	BAST-S089 2/25/14 (4 ft)	BAST-S091 2/25/14 (4 ft)	BAST-S092 2/25/14 (4 ft)	BAST-S093 2/25/14 (4 ft)	BAST-S093 FD 2/25/14 (4 ft)	BAST-S094 3/4/14 (4 ft)	BAST-S095 3/4/14 (4 ft)	BAST-EPH-03 10/21/13 (2 ft) SAT	BAST-EPH-04 10/21/13 (2 ft) SAT	BAST-S001 10/10/13 (2 ft)	BAST-S002 10/10/13 (2 ft) SAT	BAST-S003 10/17/13 (3.5 ft)	BAST-S004 10/17/13 (3.5 ft)	BAST-S005 10/17/13 (3.5 ft)	BAST-S006 10/17/13 (3.5 ft)	BAST-S007 10/17/13 (3.5 ft) SAT	BAST-S007 FD 10/17/13 (3.5 ft) SAT	BAST-S008 10/18/13 (3.5 ft) SAT	BAST-S009 10/18/13 (3.5 ft) SAT	BAST-S010 10/21/13 (3.5 ft) SAT	BAST-S010 FD 10/21/13 (3.5 ft) SAT	BAST-S037 12/23/13 (3 ft) SAT	BAST-S038 12/23/13 (5 ft) SAT	BAST-S039 12/23/13 (3 ft)
Acetone in mg/kg	3,200,000	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
Benzene in mg/kg	2,400	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U																			
Bromobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Bromodichloromethane in mg/kg	2,100	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Bromoform in mg/kg	17,000	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Bromomethane in mg/kg	4,900	4,900	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
Carbon tetrachloride in mg/kg	1,900	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Chlorobenzene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Chloroethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
Chloroform in mg/kg	4,200	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Chloromethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
cis-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Dibromochloromethane in mg/kg	1,600	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Dibromomethane in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Dichlorodifluoromethane in mg/kg	700,000	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
Ethylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Hexachlorobutadiene in mg/kg	1,700	1,700	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U																			
Isopropylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Methylene chloride in mg/kg	21,000	21,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
n-Propylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
p-Isopropyltoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
sec-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Styrene in mg/kg	700,000	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
tert-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Tetrachloroethene (PCE) in mg/kg	21,000	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U																			
Toluene in mg/kg	280,000	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
trans-1,2-Dichloroethene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
trans-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Trichloroethene (TCE) in mg/kg	1,800	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U																			
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U																			
Vinyl chloride in mg/kg	88	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
m,p-Xylenes in mg/kg	49	2.5	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U																			
o-Xylene in mg/kg	80	4.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Naphthalene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U																			
Polychlorinated Biphenyls (PCBs)																											
Aroclor 1016 in mg/kg																											
Aroclor 1221 in mg/kg																											
Aroclor 1232 in mg/kg																											
Aroclor 1242 in mg/kg																											
Aroclor 1248 in mg/kg																											
Aroclor 1254 in mg/kg																											
Aroclor 1260 in mg/kg																											
Total PCBs (Sum of Aroclors) in mg/kg	10	10																									

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Inaccessible Soil at the Edge of or Beneath Warehouse												Overexcavated Samples												
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-S040 12/23/13 (5 ft) SAT	BAST-S051 1/7/14 (8 ft) SAT	BAST-S057 1/21/14 (5 ft) SAT	BAST-S058 1/21/14 (8 ft) SAT	BAST-S059 1/21/14 (7 ft) SAT	BAST-S060 1/21/14 (8 ft) SAT	BAST-S061 1/21/14 (5 ft)	BAST-S062 1/21/14 (8 ft) SAT	BAST-S063 1/21/14 (9 ft) SAT	BAST-S065 1/21/14 (8 ft) SAT	BAST-S066 1/21/14 (3 ft) SAT	BAST-S075 2/17/14 (4 ft)	BAST-B009 10/17/13 (5 ft) OverEx SAT	BAST-B071 2/13/14 (4 ft) OverEx	BAST-EPH-01 10/21/13 (2 ft) OverEx	BAST-EPH-02 10/21/13 (2 ft) OverEx	BAST-S011 10/21/13 (3 ft) OverEx SAT	BAST-S012 10/21/13 (3 ft) OverEx SAT	BAST-S017 10/21/13 (3 ft) OverEx	BAST-S018 10/21/13 (3 ft) OverEx	BAST-S019 10/22/13 (3 ft) OverEx	BAST-S020 10/22/13 (3 ft) OverEx	BAST-S021 10/22/13 (3 ft) OverEx	BAST-S023 10/22/13 (3 ft) OverEx SAT	BAST-S030 10/25/13 (3 ft) OverEx SAT
Total Petroleum Hydrocarbons (TPH)																											
Gasoline Range Hydrocarbons in mg/kg	100	100		**2,100**	2 U	2 U	**250**	2 U	2 U	2 U	2 U	**150**	2 U	69		2 U											
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	50 U	**2,800**	50 U	50 U	1,100	50 U	50 U	50 U	50 U	250	50 U	**6,600**		**6,500**											
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	1,200	**3,800**		250 U											
Bunker C in mg/kg	2,000	2,000													250 U				**2,600**	250 U	250 U	250 U	250 U	250 U	820	**28,000**	**22,000**
Total TPHs in mg/kg	2,000	2,000	ND	**2,920**	ND	ND	1,220	ND	ND	ND	ND	375	1,220	**10,400**	250 U	**6,620**			**2,600**	250 U	250 U	250 U	250 U	250 U	820	**28,000**	**22,000**
Metals																											
Antimony in mg/kg	1,400	1,400													1 U												
Arsenic in mg/kg	20	20			1.94					7.72					1 U	4.4									1 U		7.31 J
Barium in mg/kg	700,000	700,000																									
Beryllium in mg/kg	7,000	7,000																									
Cadmium in mg/kg	3,500	3,500			1 U					1 U					1 U	1 U									1 U		1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																									
Copper in mg/kg	36	36			7.76					28.6					14.5	12									17.4		11.3 J
Lead in mg/kg	81	1,000			2.06					5.79					2.04	2.35									483		2 J
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
Nickel in mg/kg	48	48			8.43					21.8					12	14									12.9		9.76
Selenium in mg/kg	18,000	18,000																									
Silver in mg/kg	18,000	18,000																									
Thallium in mg/kg	35	35																									
Zinc in mg/kg	85	100			11.2					34.2					22.3	18.3									78.8		13.4
Polycyclic Aromatic Hydrocarbons (PAHs)																											
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.6	0.01 U	0.01 U	0.15	0.01 U	0.01 U	0.01 U	0.01 U	0.03	0.021	2.5	0.01 U	0.27	0.76	0.51	0.14	0.01 U	0.01 U	0.01 U	0.014	0.013	0.03	1 U	0.045
Acenaphthylene 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	0.018	0.5 U	0.01 U	0.01 U	0.2 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	1 U	0.01 U
Anthracene in mg/kg	1,100,000	1,100,000	0.01 U	0.081	0.01 U	0.01 U	0.079	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.041	4.4	0.01 U	0.01 U	1.2	0.68	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.063	1 U	0.01 U
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.038	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.061	1.3	0.01 U	0.01 U	0.6	0.25	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.033	1 U	0.01 U
Dibenzofuran in mg/kg	3,500	3,500																									
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.047	0.01 U	0.023	0.46	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.052	1.4	0.01 U	0.063	0.63	0.33	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.049	1 U	0.01
Fluorene in mg/kg	140,000	140,000	0.01 U	0.21	0.01 U	0.01 U	0.11	0.01 U	0.01 U	0.01 U	0.01 U	0.052	0.028	3.5	0.01 U	1.6	1.5	0.85	0.01 U	0.01 U	0.01 U	0.01 U	0.019	0.036	0.032	1 U	0.01 U
Phenanthrene in mg/kg			0.01 U	0.29	0.01 U	0.01 U	0.045	0.01 U	0.01 U	0.01 U	0.01 U	0.06	0.13	15	0.01 U	0.01 U	3.7	1.7	0.01 U	0.01 U	0.01	0.01 U	0.025	0.072	0.2	1 U	0.01 U
Pyrene in mg/kg	110,000	110,000	0.01 U	0.064	0.01 U	0.022	0.43	0.01 U	0.01 U	0.01 U	0.01 U	0.015	0.17	9.5	0.01 U	0.2	4.4	2.4	0.024	0.01 U	0.014	0.01 U	0.01	0.041	0.22	1 U	0.053
2-Methylnaphthalene in mg/kg	14,000	14,000																									
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.01 U	0.01 U	0.015	0.5 U	0.01 U	0.01 U	0.31	0.2 U	0.01 U	0.01 U	0.033	0.012	0.049	0.049	0.02	1 U	0.01 U
Benz(a)anthracene in mg/kg			0.01 U	0.018	0.01 U	0.011	0.24	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.057	4.2	0.01 U	0.01 U	1.3	0.67	0.015	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.083	1 U	0.019
Benzo(a)pyrene in mg/kg			0.01 U	0.012	0.01 U	0.01 U	0.12	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.049	2.7	0.01 U	0.01 U	0.7	0.32	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.048	1 U	0.01 U
Benzo(b)fluoranthene in mg/kg			0.01 U	0.014	0.01 U	0.01 U	0.18	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.042	0.88	0.01 U	0.01 U	0.44	0.22	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.03	1 U	0.01 U
Benzo(k)fluoranthene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.057	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012	0.5 U	0.01 U	0.01 U	0.2 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	1 U	0.01 U
Chrysene in mg/kg			0.01 U	0.028	0.01 U	0.011	0.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.088	3.9	0.01 U	0.11	2.5	1.3	0.021	0.01 U	0.01 U	0.01 U	0.01 U	0.02	0.1	1 U	0.038
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	0.5 U	0.01 U	0.01 U	0.2 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	1 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	0.038	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.033	0.5 U	0.01 U	0.01 U	0.2 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.014	1 U	0.01 U
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	0.017	ND	0.00821	0.175	ND	ND	ND	ND	ND	0.0648	3.32	ND	0.0851	0.929	0.452	0.00871	ND	ND	ND	ND	0.0083	0.0627	ND	0.00928
Volatile Organic Compounds (VOC)																											
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,1,2,2-Tetrachloroethane in mg/kg	660	660		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,1,2-Trichloroethane in mg/kg	2,300	2,300		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,1-Dichloroethane in mg/kg	23,000	23,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,1-Dichloroethene in mg/kg	180,000	180,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,1-Dichloropropene in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,2,3-Trichlorobenzene in mg/kg				0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U		0.25 U											
1,2,3-Trichloropropane in mg/kg	4.4	4.4		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U		0.25 U											
1,2,4-Trimethylbenzene in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.055		0.05 U											
1,2-Dibromo-3-chloropropane in mg/kg	160	160		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
1,2-Dibromoethane (EDB) in mg/kg	66	66		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,2-Dichlorobenzene in mg/kg	320,000	320,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,2-Dichloropropane in mg/kg	3,600	3,600		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,3-Dichlorobenzene in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,3-Dichloropropane in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
1,4-Dichlorobenzene in mg/kg	24,000	24,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
2,2-Dichloropropane in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
2-Butanone in mg/kg	2,100,000	2,100,000		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
2-Chlorotoluene in mg/kg	70,000	70,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
2-Hexanone in mg/kg				0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
4-Chlorotoluene in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
4-Methyl-2-pentanone in mg/kg	280,000	280,000		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Inaccessible Soil at the Edge of or Beneath Warehouse												Overexcavated Samples												
			BAST-S040 12/23/13 (5 ft) SAT	BAST-S051 1/7/14 (8 ft) SAT	BAST-S057 1/21/14 (5 ft) SAT	BAST-S058 1/21/14 (8 ft) SAT	BAST-S059 1/21/14 (7 ft) SAT	BAST-S060 1/21/14 (8 ft) SAT	BAST-S061 1/21/14 (5 ft)	BAST-S062 1/21/14 (8 ft) SAT	BAST-S063 1/21/14 (9 ft) SAT	BAST-S065 1/21/14 (8 ft) SAT	BAST-S066 1/21/14 (3 ft) SAT	BAST-S075 2/17/14 (4 ft)	BAST-B009 10/17/13 (5 ft) OverEx SAT	BAST-B071 2/13/14 (4 ft) OverEx	BAST-EPH-01 10/21/13 (2 ft) OverEx	BAST-EPH-02 10/21/13 (2 ft) OverEx	BAST-S011 10/21/13 (3 ft) OverEx SAT	BAST-S012 10/21/13 (3 ft) OverEx SAT	BAST-S017 10/21/13 (3 ft) OverEx	BAST-S018 10/21/13 (3 ft) OverEx	BAST-S019 10/22/13 (3 ft) OverEx	BAST-S020 10/22/13 (3 ft) OverEx	BAST-S021 10/22/13 (3 ft) OverEx	BAST-S023 10/22/13 (3 ft) OverEx SAT	BAST-S030 10/25/13 (3 ft) OverEx SAT
Acetone in mg/kg	3,200,000	3,200,000		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
Benzene in mg/kg	2,400	2,400		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U		0.03 U											
Bromobenzene in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Bromodichloromethane in mg/kg	2,100	2,100		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Bromoform in mg/kg	17,000	17,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Bromomethane in mg/kg	4,900	4,900		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
Carbon tetrachloride in mg/kg	1,900	1,900		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Chlorobenzene in mg/kg	70,000	70,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Chloroethane in mg/kg				0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
Chloroform in mg/kg	4,200	4,200		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Chloromethane in mg/kg				0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
cis-1,3-Dichloropropene in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Dibromochloromethane in mg/kg	1,600	1,600		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Dibromomethane in mg/kg	35,000	35,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Dichlorodifluoromethane in mg/kg	700,000	700,000		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
Ethylbenzene in mg/kg	350,000	350,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Hexachlorobutadiene in mg/kg	1,700	1,700		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U		0.25 U											
Isopropylbenzene in mg/kg	350,000	350,000		0.05 U	0.05 U	0.05 U	0.082	0.05 U	0.05 U	0.05 U	0.05 U	0.064	0.05 U	0.48		0.05 U											
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Methylene chloride in mg/kg	21,000	21,000		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
n-Propylbenzene in mg/kg	350,000	350,000		0.05 U	0.05 U	0.05 U	0.28	0.05 U	0.05 U	0.05 U	0.05 U	0.42	0.05 U	1.7		0.05 U											
p-Isopropyltoluene in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
sec-Butylbenzene in mg/kg	350,000	350,000		0.05 U	0.05 U	0.05 U	0.26	0.05 U	0.05 U	0.05 U	0.05 U	0.2	0.05 U	1.4		0.05 U											
Styrene in mg/kg	700,000	700,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
tert-Butylbenzene in mg/kg	350,000	350,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.055		0.05 U											
Tetrachloroethene (PCE) in mg/kg	21,000	21,000		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U		0.025 U											
Toluene in mg/kg	280,000	280,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
trans-1,2-Dichloroethene in mg/kg	70,000	70,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
trans-1,3-Dichloropropene in mg/kg				0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Trichloroethene (TCE) in mg/kg	1,800	1,800		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U		0.03 U											
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U											
Vinyl chloride in mg/kg	88	88		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
m,p-Xylenes in mg/kg	49	2.5		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											
o-Xylene in mg/kg	80	4.1		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U											
Naphthalene in mg/kg	70,000	70,000			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.64		0.05 U											
Polychlorinated Biphenyls (PCBs)																											
Aroclor 1016 in mg/kg																											
Aroclor 1221 in mg/kg																											
Aroclor 1232 in mg/kg																											
Aroclor 1242 in mg/kg																											
Aroclor 1248 in mg/kg																											
Aroclor 1254 in mg/kg																											
Aroclor 1260 in mg/kg																											
Total PCBs (Sum of Aroclors) in mg/kg	10	10																									

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Overexcavated Samples												
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-S031 10/25/13 (3 ft) OverEx SAT	BAST-S032 10/25/13 (3 ft) OverEx SAT	BAST-S045 12/30/13 (3 ft) OverEx	BAST-S046 12/30/13 (5 ft) OverEx SAT	BAST-S050 1/3/14 (8 ft) OverEx SAT	BAST-S055 1/20/14 (3 ft) OverEx SAT	BAST-S067 1/28/14 (4 ft) OverEx	BAST-S069 2/11/14 (3 ft) OverEx	BAST-S069 FD 2/11/14 (3 ft) OverEx	BAST-S073 2/13/14 (3 ft) OverEx	BAST-S082 2/21/14 (4 ft) OverEx	BAST-S090 2/25/14 (4 ft) OverEx	BCAST-SUMP-1 10/8/13 OverEx
Total Petroleum Hydrocarbons (TPH)															
Gasoline Range Hydrocarbons in mg/kg	100	100			2 U	**120**	**660**		97	2 U	2 U	2 U	2 U	14	
Diesel Range Hydrocarbons in mg/kg	2,000	2,000			50 U	510	1,200	50 U	**4,500**	50 U	50 U	**9,600**	50 U	**2,100** x	
Oil Range Hydrocarbons in mg/kg	2,000	2,000			250 U	250 U	250 U	**13,000**	440 x	250 U	250 U	250 U	250 U	1,500	
Bunker C in mg/kg	2,000	2,000	**15,000**	250 U											**140,000**
Total TPHs in mg/kg	2,000	2,000	**15,000**	250 U	ND	635	1,320	**13,000**	**4,940**	ND	ND	**9,720**	ND	**3,600**	**140,000**
Metals															
Antimony in mg/kg	1,400	1,400													
Arsenic in mg/kg	20	20								2.06	10				1.71
Barium in mg/kg	700,000	700,000													12.1
Beryllium in mg/kg	7,000	7,000													
Cadmium in mg/kg	3,500	3,500								1 U	1 U				1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000													7.29
Copper in mg/kg	36	36								22.3	**40.1**				12.8
Lead in mg/kg	81	1,000								4.62	7.56				30.4
Mercury in mg/kg	0.1	0.1								**0.11** J	0.1 UJ				0.1 U
Nickel in mg/kg	48	48								19.4	28.7				13.2
Selenium in mg/kg	18,000	18,000													1 U
Silver in mg/kg	18,000	18,000													1 U
Thallium in mg/kg	35	35													
Zinc in mg/kg	85	100								86.2	45.9				25.2
Polycyclic Aromatic Hydrocarbons (PAHs)															
Acenaphthene in mg/kg	210,000	210,000	0.043	0.048	0.01 U	0.01 U	0.28	0.01 U	0.15	0.01 U	0.01 U	0.25	0.01 U	0.5 U	
Acenaphthylene in mg/kg			0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.5 U	
Anthracene in mg/kg	1,100,000	1,100,000	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.56	
Benzo(g,h,i)perylene in mg/kg			0.06	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	0.56	
Dibenzofuran in mg/kg	3,500	3,500													
Fluoranthene in mg/kg	140,000	140,000	0.026	0.018	0.01 U	0.024	0.029	0.01 U	0.045	0.01 U	0.01 U	0.05	0.01 U	1.3	
Fluorene in mg/kg	140,000	140,000	0.01 U	0.027	0.01 U	0.01 U	0.048	0.01 U	1.5	0.01 U	0.01 U	1.8	0.01 U	0.5 U	
Phenanthrene in mg/kg			0.025	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	1	0.01 U	0.5 U	
Pyrene in mg/kg	110,000	110,000	0.081	0.023	0.01 U	0.038	0.031	0.033	0.16	0.01 U	0.01 U	0.17	0.01 U	2.6	
2-Methylnaphthalene in mg/kg	14,000	14,000													
Naphthalene in mg/kg	70,000	70,000	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	0.5 U	
Benz(a)anthracene in mg/kg			0.022	0.01	0.01 U	0.015	0.01 U	0.014	0.034	0.01 U	0.01 U	0.018	0.01 U	1.4	
Benzo(a)pyrene in mg/kg			0.037	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	0.01 U	1.2	
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	1.1	
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	0.5 U	
Chrysene in mg/kg			0.042	0.015	0.01 U	0.028	0.01 U	0.023	0.11	0.01 U	0.01 U	0.074	0.01 U	1.5	
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	0.5 U	
Indeno(1,2,3-cd)pyrene in mg/kg			0.036	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.51 J	
Total cPAHs TEQ in mg/kg	0.4	7.9	0.0447	0.00815	ND	0.0228	ND	0.00863	0.0115	ND	ND	0.085	ND	1.57	
Volatile Organic Compounds (VOC)															
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1,2,2-Tetrachloroethane in mg/kg	660	660			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1,2-Trichloroethane in mg/kg	2,300	2,300			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1-Dichloroethane in mg/kg	23,000	23,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1-Dichloroethene in mg/kg	180,000	180,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,1-Dichloropropene in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2,3-Trichlorobenzene in mg/kg					0.25 U	0.25 U	0.25 U		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
1,2,3-Trichloropropane in mg/kg	4.4	4.4			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500			0.25 U	0.25 U	0.25 U		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
1,2,4-Trimethylbenzene in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dibromo-3-chloropropane in mg/kg	160	160			0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
1,2-Dibromoethane (EDB) in mg/kg	66	66			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dichlorobenzene in mg/kg	320,000	320,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dichloropropane in mg/kg	3,600	3,600			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,3-Dichlorobenzene in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,3-Dichloropropane in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
1,4-Dichlorobenzene in mg/kg	24,000	24,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
2,2-Dichloropropane in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
2-Butanone in mg/kg	2,100,000	2,100,000			0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
2-Chlorotoluene in mg/kg	70,000	70,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
2-Hexanone in mg/kg					0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
4-Chlorotoluene in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
4-Methyl-2-pentanone in mg/kg	280,000	280,000			0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	

Table 7 - Excavation Verification Soil Quality Data for Bunker C ASTs Interim Action Area

K-C Worldwide Site Upland Area 110207

			Overexcavated Samples												
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BAST-S031 10/25/13 (3 ft) OverEx SAT	BAST-S032 10/25/13 (3 ft) OverEx SAT	BAST-S045 12/30/13 (3 ft) OverEx	BAST-S046 12/30/13 (5 ft) OverEx SAT	BAST-S050 1/3/14 (8 ft) OverEx SAT	BAST-S055 1/20/14 (3 ft) OverEx SAT	BAST-S067 1/28/14 (4 ft) OverEx	BAST-S069 2/11/14 (3 ft) OverEx	BAST-S069 FD 2/11/14 (3 ft) OverEx	BAST-S073 2/13/14 (3 ft) OverEx	BAST-S082 2/21/14 (4 ft) OverEx	BAST-S090 2/25/14 (4 ft) OverEx	BCAST-SUMP-1 10/8/13 OverEx
Acetone in mg/kg	3,200,000	3,200,000			0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Benzene in mg/kg	2,400	2,400			0.03 U	0.03 U	0.03 U		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Bromobenzene in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Bromodichloromethane in mg/kg	2,100	2,100			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Bromoform in mg/kg	17,000	17,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Bromomethane in mg/kg	4,900	4,900			0.5 U	0.5 U	0.5 U		0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	
Carbon tetrachloride in mg/kg	1,900	1,900			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Chlorobenzene in mg/kg	70,000	70,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Chloroethane in mg/kg					0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Chloroform in mg/kg	4,200	4,200			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Chloromethane in mg/kg					0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
cis-1,3-Dichloropropene in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Dibromochloromethane in mg/kg	1,600	1,600			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Dibromomethane in mg/kg	35,000	35,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Dichlorodifluoromethane in mg/kg	700,000	700,000			0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Ethylbenzene in mg/kg	350,000	350,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Hexachlorobutadiene in mg/kg	1,700	1,700			0.25 U	0.25 U	0.25 U		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
Isopropylbenzene in mg/kg	350,000	350,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Methylene chloride in mg/kg	21,000	21,000			0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
n-Propylbenzene in mg/kg	350,000	350,000			0.05 U	0.05 U	0.05 U		0.073	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
p-Isopropyltoluene in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
sec-Butylbenzene in mg/kg	350,000	350,000			0.05 U	0.05 U	0.052		0.088	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Styrene in mg/kg	700,000	700,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
tert-Butylbenzene in mg/kg	350,000	350,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Tetrachloroethene (PCE) in mg/kg	21,000	21,000			0.025 U	0.025 U	0.025 U		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	
Toluene in mg/kg	280,000	280,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
trans-1,2-Dichloroethene in mg/kg	70,000	70,000			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
trans-1,3-Dichloropropene in mg/kg					0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Trichloroethene (TCE) in mg/kg	1,800	1,800			0.03 U	0.03 U	0.03 U		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000			0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Vinyl chloride in mg/kg	88	88			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
m,p-Xylenes in mg/kg	49	2.5			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	
o-Xylene in mg/kg	80	4.1			0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Naphthalene in mg/kg	70,000	70,000								0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
Polychlorinated Biphenyls (PCBs)															
Aroclor 1016 in mg/kg															0.1 U
Aroclor 1221 in mg/kg															0.1 U
Aroclor 1232 in mg/kg															0.1 U
Aroclor 1242 in mg/kg															0.1 U
Aroclor 1248 in mg/kg															0.1 U
Aroclor 1254 in mg/kg															0.1 U
Aroclor 1260 in mg/kg															0.1 U
Total PCBs (Sum of Aroclors) in mg/kg	10	10													ND

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 8 - Excavation Verification Soil Quality Data for CN-B-2 Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place																			
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	CNB2-B01 3/3/14 (4 ft) SAT	CNB2-B02 3/3/14 (4 ft) SAT	CNB2-B03 3/3/14 (8 ft) SAT	CNB2-B03 FD 3/3/14 (8 ft) SAT	CNB2-B04 3/3/14 (8 ft) SAT	CNB2-B10 3/7/14 (11 ft) SAT	CNB2-B10 FD 3/7/14 (11 ft) SAT	CNB2-B14 3/14/14 (15 ft) SAT	CNB2-B15 3/15/14 (18 ft) SAT	CNB2-B16 3/15/14 (18 ft) SAT	CNB2-B17 3/15/14 (18 ft) SAT	CNB2-B18 3/15/14 (18 ft) SAT	CNB2-B19 3/15/14 (18 ft) SAT	CNB2-B21 3/15/14 (16 ft) SAT	CNB2-B24 3/19/14 (16 ft) SAT	CNB2-B24 FD 3/19/14 (16 ft) SAT	CNB2-B25 3/19/14 (18 ft) SAT	CNB2-B26 3/20/14 (4 ft) SAT	CNB2-B27 3/20/14 (4 ft) SAT	CNB2-B28 3/20/14 (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		200 U	200 U	200 U	200 U	200 U	250 U	250 U	250 U	50 U	50 U	50 U
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		1,000 U	1,000 U	1,000 U	1,000 U	1,000 U	1,250 U	1,250 U	1,250 U	250 U	250 U	250 U
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals																						
Arsenic in mg/kg	20	20			3.61	3.36		3.94	5.04	1.59	12.6	13.7	1 U	12.5	1 U	**25.2**	1 U	1 U	14.7	2.16	5.14	2.02
Cadmium in mg/kg	3,500	3,500			1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Copper in mg/kg	36	36			7.57	6.83		16	17.2	4.68	13.5	11.4	12.9	12.4	1 U	21.2	1 U	1 U	8.83	10.4	14.3	8.87
Lead in mg/kg	81	1,000			3.57	2.12		5.19	5.68	2	19.5	65.8	25.4	114	1 U	10.6	27.6	20.6	8	3.38	23.3	2.94
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	0.1 U	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	48			11.1	11.3		16.1	17.6	16.4	1 U	6.89	1 U	7.15	1 U	12.2	9.12	7.83	7.94	20.9	16.8	10.4
Zinc in mg/kg	85	100			14.3	15.8 J		27.4	28.7	10.7	25.2	73.2	1 U	**103**	6.37	51.8	40 J	55.8	**102**	13.7 J	**216**	13.7 J
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	210,000	0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.021	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	0.11	0.017
Acenaphthylene 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	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	0.91	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	0.01	0.019	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	1.1	0.01 U
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.015	0.012	0.03	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	3.9	0.035
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.018	0.01 U	0.01 U	0.049	0.052 J	0.086 J	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.018	8.2	0.022
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	0.38	0.011
Phenanthrene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.031	0.038 J	0.085 J	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.012	5	0.014
Pyrene in mg/kg	110,000	110,000	0.01 U	0.015	0.01 U	0.01 U	0.061	0.057 J	0.11 J	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.017	9.9	0.021
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.032	0.019 J	0.049 J	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	0.34	0.019
Benz(a)anthracene in mg/kg			0.01 U	0.012	0.01 U	0.01 U	0.019	0.026	0.045	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	3.6	0.033
Benzo(a)pyrene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.021 J	0.044 J	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	4.7	0.049
Benzo(b)fluoranthene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.025	0.027 J	0.055 J	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.013	6	0.081
Benzo(k)fluoranthene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	1.9	0.022
Chrysene in mg/kg			0.01 U	0.019	0.01 U	0.01 U	0.029	0.029 J	0.055 J	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.011	5.1	0.053
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	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	0.85	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.012	0.032	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	4	0.043
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	0.00839	ND	ND	0.0241	0.0288	0.0603	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00841	6.39	0.0679
Polychlorinated Biphenyls (PCBs)																						
Aroclor 1016 in mg/kg																						
Aroclor 1221 in mg/kg																						
Aroclor 1232 in mg/kg																						
Aroclor 1242 in mg/kg																						
Aroclor 1248 in mg/kg																						
Aroclor 1254 in mg/kg																						
Aroclor 1260 in mg/kg																						
Total PCBs (Sum of Aroclors) in mg/kg	10	10																				

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 8 - Excavation Verification Soil Quality Data for CN-B-2 Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Sidewall Samples in Place																			
			CNB2-S01 3/3/14 (3 ft)	CNB2-S02 3/3/14 (3 ft)	CNB2-S03 3/3/14 (4 ft) SAT	CNB2-S04 3/3/14 (3 ft)	CNB2-S05 3/3/14 (6 ft) SAT	CNB2-S06 3/3/14 (3 ft)	CNB2-S07 3/3/14 (6 ft) SAT	CNB2-S08 3/3/14 (3 ft)	CNB2-S09 3/3/14 (6 ft) SAT	CNB2-S11 3/3/14 (3 ft)	CNB2-S12 3/3/14 (3 ft)	CNB2-S13 3/15/14 (4 ft) SAT	CNB2-S26 3/15/14 (8 ft) SAT	CNB2-S27 3/15/14 (12 ft) SAT	CNB2-S28 3/15/14 (4 ft) SAT	CNB2-S29 3/15/14 (8 ft) SAT	CNB2-S30 3/15/14 (12 ft) SAT	CNB2-S31 3/15/14 (4 ft) SAT	CNB2-S32 3/15/14 (8 ft) SAT	CNB2-S33 3/15/14 (12 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	50 U	200 U	50 U	50 U	50 U	50 U	50 U	50 U
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	250 U	1,000 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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals																						
Arsenic in mg/kg	20	20					3.35							4.67	3.28	1 U	6.23	3.23	3.04	8.07	4.82	3.19
Cadmium in mg/kg	3,500	3,500					1 U							1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Copper in mg/kg	36	36					5.14							15.6	5.59	28	29.5	5.03	5.56	**36.8**	14.1	5.11
Lead in mg/kg	81	1,000					2.14							2.29	1.62	24.6	5.68	1.46	1.56	8.07	2.34	1.65
Mercury in mg/kg	0.1	0.1					0.1 U							0.1 U	0.1 U	0.1 U	**0.15**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	48					9.27							17.3	10	6.86	25.1	11.3	11.3	28.3	15.5	10.3
Zinc in mg/kg	85	100					10.4 J							28.7	11.1	16.4	39.5	10.5	11.8	47.9	23.5	11.4
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	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	0.05 U	0.01 U	0.01 U	0.01 U	0.023	0.011	0.01 U
Acenaphthylene 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	0.05 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	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.011	0.01 U	0.018	0.01 U	0.01 U	0.05 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			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.021	0.011	0.01 U	0.027	0.01 U	0.01 U	0.05 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	140,000	0.024	0.01 U	0.017	0.026	0.01 U	0.032	0.01 U	0.069	0.042	0.01 U	0.052	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.024	0.01 U	0.01 U
Fluorene in mg/kg	140,000	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	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U
Phenanthrene in mg/kg			0.019	0.01 U	0.012	0.019	0.01 U	0.015	0.01 U	0.073	0.036	0.01 U	0.044	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.01 U
Pyrene in mg/kg	110,000	110,000	0.029	0.01 U	0.019	0.027	0.01 U	0.034	0.01 U	0.074	0.042	0.01 U	0.04	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01 U
Naphthalene in mg/kg	70,000	70,000	0.015	0.01 U	0.011	0.011	0.01 U	0.01 U	0.01 U	0.027	0.012	0.01 U	0.026	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.022	0.01 U	0.01 U
Benz(a)anthracene in mg/kg			0.013 J	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.037	0.019	0.01 U	0.046	0.01 U	0.01 U	0.05 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 J	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.035	0.017	0.01 U	0.04	0.01 U	0.01 U	0.05 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			0.013 J	0.01 U	0.01 U	0.013	0.01 U	0.02	0.01 U	0.042	0.021	0.01 U	0.062	0.01 U	0.01 U	0.05 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	0.016	0.01 U	0.01 U	0.028	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg			0.014 J	0.01 U	0.01 U	0.011	0.01 U	0.018	0.01 U	0.044	0.022	0.01 U	0.09	0.01 U	0.01 U	0.05 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	0.05 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	0.012	0.01 U	0.022	0.01	0.01 U	0.028	0.01 U	0.01 U	0.05 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	0.4	7.9	0.0142	ND	ND	0.00841	ND	0.0241	ND	0.0476	0.0232	ND	0.0578	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (PCBs)																						
Aroclor 1016 in mg/kg																						
Aroclor 1221 in mg/kg																						
Aroclor 1232 in mg/kg																						
Aroclor 1242 in mg/kg																						
Aroclor 1248 in mg/kg																						
Aroclor 1254 in mg/kg																						
Aroclor 1260 in mg/kg																						
Total PCBs (Sum of Aroclors) in mg/kg	10	10																				

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 8 - Excavation Verification Soil Quality Data for CN-B-2 Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Sidewall Samples in Place																
			CNB2-S34 3/15/14 (4 ft) SAT	CNB2-S35 3/15/14 (8 ft) SAT	CNB2-S36 3/15/14 (12 ft) SAT	CNB2-S37 3/15/14 (4 ft) SAT	CNB2-S38 3/15/14 (8 ft) SAT	CNB2-S39 3/15/14 (12 ft) SAT	CNB2-S40 3/15/14 (4 ft) SAT	CNB2-S41 3/15/14 (8 ft) SAT	CNB2-S42 3/15/14 (12 ft) SAT	CNB2-S43 3/15/14 (4 ft) SAT	CNB2-S44 3/15/14 (8 ft) SAT	CNB2-S45 3/15/14 (12 ft) SAT	CNB2-S49 3/19/14 (12 ft) SAT	CNB2-S50 3/20/14 (3 ft)	CNB2-S51 3/20/14 (3 ft)	CNB2-S52 3/20/14 (3 ft)	CNB2-S53 3/20/14 (3 ft)
Total Petroleum Hydrocarbons (TPH)																			
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	50 U	50 U	320 x	50 U	50 U	50 U	50 U	50 U	200 U	50 U	50 U	200 U	250 U	50 U	50 U	50 U	50 U
Oil Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U	1,500	250 U	250 U	250 U	250 U	250 U	1,000 U	250 U	250 U	1,000 U	1,250 U	250 U	250 U	250 U	250 U
Total TPHs in mg/kg	2,000	2,000	ND	ND	1,820	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals																			
Arsenic in mg/kg	20	20	1.43	3.52	5.21 J	5.64	3.28	7.53	3.22	3.31	1 U	3.45	3.07	1 U	8.89	8.28	1.93	4.96	4.49
Cadmium in mg/kg	3,500	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Copper in mg/kg	36	36	10.9	4.78	**77.6**	26	5.12	**37.2**	9.67	4.94	35.7	14	5.6	15.9	15.2	**37.1**	9.53	22.7	11.9
Lead in mg/kg	81	1,000	1.87	1.55	121	4.15	1.59	8.24	1.99	1.62	16.7	2.25	1.71	15.9	13.2	7.64	3.12	10	4.27
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	**0.13**	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	48	23.6	10.5	9.45 J	22.6	10.4	29.6	12.8	9.84	11.2 J	16.3	11.3	1 U	6	25	11.2	22.2	16.4
Zinc in mg/kg	85	100	13.9	10.4	58.3	35.9	11.2	45	18.1	10.9	17 J	23.9	12	17.1	19.5 J	40.8	15.7 J	39.9	5.2 J
Polycyclic Aromatic Hydrocarbons (PAHs)																			
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.3 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.12
Acenaphthylene in mg/kg			0.01 U	0.01 U	0.3 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 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	0.3 U	0.057	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.015
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01 U	0.54	0.034	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.62	0.059	0.01 U	0.01 U	0.018	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.017
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.3 U	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.088
Phenanthrene in mg/kg			0.01 U	0.01 U	0.3 U	0.042	0.01 U	0.01 U	0.013	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.093
Pyrene in mg/kg	110,000	110,000	0.01 U	0.01 U	0.68	0.046	0.01 U	0.01 U	0.016	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.013
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.3 U	0.023	0.01 U	0.01 U	0.016	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.032
Benz(a)anthracene in mg/kg			0.01 U	0.01 U	0.34	0.088	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 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	0.54	0.071	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 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	0.68	0.099	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 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	0.3 U	0.043	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg			0.01 U	0.01 U	0.51	0.19	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 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	0.3 U	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 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	0.54	0.041	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U	0.05 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	0.73	0.101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (PCBs)																			
Aroclor 1016 in mg/kg																			
Aroclor 1221 in mg/kg																			
Aroclor 1232 in mg/kg																			
Aroclor 1242 in mg/kg																			
Aroclor 1248 in mg/kg																			
Aroclor 1254 in mg/kg																			
Aroclor 1260 in mg/kg																			
Total PCBs (Sum of Aroclors) in mg/kg	10	10																	

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 8 - Excavation Verification Soil Quality Data for CN-B-2 Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Overexcavated Samples																			
			CN-2E 1/15/14 (5-6 ft) OverEx SAT	CN-2E 1/15/14 (9-10 ft) OverEx SAT	CN-2E 1/15/14 (10-11 ft) OverEx SAT	CN-2N 1/15/14 (5-6 ft) OverEx SAT	CN-2N 1/15/14 (10-11 ft) OverEx SAT	CN-2N 1/15/14 (11-12 ft) OverEx SAT	CN-2S 1/15/14 (5-6 ft) OverEx SAT	CN-2S 1/15/14 (9-10 ft) OverEx SAT	CN-2S 1/15/14 (11-12 ft) OverEx SAT	CN-2W 1/15/14 (5-6 ft) OverEx SAT	CN-2W 1/15/14 (9-10 ft) OverEx SAT	CN-2W 1/15/14 (10-11 ft) OverEx SAT	CNB2-B05 3/3/14 (7 ft) OverEx SAT	CNB2-B06 3/3/14 (7 ft) OverEx SAT	CNB2-B07 3/3/14 (4 ft) OverEx SAT	CNB2-B08 3/7/14 (12 ft) OverEx SAT	CNB2-B09 3/7/14 (11 ft) OverEx SAT	CNB2-B11 3/7/14 (11 ft) OverEx SAT	CNB2-B12 3/7/14 (11 ft) OverEx SAT	CNB2-B13 3/7/14 (11 ft) OverEx SAT
Total Petroleum Hydrocarbons (TPH)																						
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	500 U	500 U	500 U	50 U	50 U	50 U	50 U	50 U	500 U	50 U	500 U	50 U	50 U	50 U	50 U	50 U	500 U	50 U	50 U	50 U
Oil Range Hydrocarbons in mg/kg	2,000	2,000	**120,000**	**33,000**	**170,000**	**5,900**	**5,200**	250 U	250 U	**9,400**	**260,000**	250 U	**86,000**	**4,600**	1,800	600	250 U	**2,500**	**51,000**	250 U	1,800	**13,000**
Total TPHs in mg/kg	2,000	2,000	**120,000**	**33,200**	**170,000**	**5,920**	**5,220**	ND	ND	**9,420**	**260,000**	ND	**86,200**	**4,620**	1,820	625	ND	**2,520**	**51,200**	ND	1,820	**13,000**
Metals																						
Arsenic in mg/kg	20	20																6.32	1 U	8.04	6.68	**20.6**
Cadmium in mg/kg	3,500	3,500																1 U	1 U	1 U	1 U	1 U
Copper in mg/kg	36	36																**56.5**	17	**38.5**	20.2	**87**
Lead in mg/kg	81	1,000																161	33.6	5.83	46.4	62.7
Mercury in mg/kg	0.1	0.1																**0.14**	0.1 U	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	48																18.2	4.45	10	1 U	**48.8**
Zinc in mg/kg	85	100																39.7	8.06	5.22	18.7	**256**
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	210,000													0.078	0.062	0.01 U	0.25	0.5 U	0.05 U	0.05 U	0.5 U
Acenaphthylene in mg/kg															0.13	0.26	0.01 U	0.29	0.5 U	0.05 U	0.05 U	0.59
Anthracene in mg/kg	1,100,000	1,100,000													0.17	0.26	0.01 U		0.5 U	0.05 U	0.05 U	0.88
Benzo(g,h,i)perylene in mg/kg															0.6	0.91	0.01 U	2.7	0.5 U	0.05 U	0.05 U	2.4
Fluoranthene in mg/kg	140,000	140,000													1.1	2.9	0.01	8.5	0.53	0.05 U	0.05 U	6.8
Fluorene in mg/kg	140,000	140,000													0.11	0.14	0.01 U	0.38	0.5 U	0.05 U	0.05 U	0.5 U
Phenanthrene in mg/kg															1.1	1.5	0.01 U	5.4	0.5 U	0.05 U	0.05 U	4.7
Pyrene in mg/kg	110,000	110,000													1.3	2.8	0.01 U	8.6	0.89	0.05 U	0.05 U	8.2
Naphthalene in mg/kg	70,000	70,000													0.37	0.15	0.015	0.13	0.5 U	0.05 U	0.076	0.5 U
Benz(a)anthracene in mg/kg															0.64	0.94	0.01 U	3.7	1.1	0.05 U	0.05 U	3.1
Benzo(a)pyrene in mg/kg															0.74	1.2	0.01 U	3.9	0.5 U	0.05 U	0.05 U	3.6
Benzo(b)fluoranthene in mg/kg															1	1.7	0.01 U	4.3	0.5 U	0.05 U	0.05 U	4.2
Benzo(k)fluoranthene in mg/kg															0.34	0.49	0.01 U		0.5 U	0.05 U	0.05 U	1.5
Chrysene in mg/kg															0.85	1.5	0.01 U	3.8	1.4	0.05 U	0.05 U	3.8
Dibenzo(a,h)anthracene in mg/kg															0.11	0.19	0.01 U		0.5 U	0.05 U	0.05 U	0.54
Indeno(1,2,3-cd)pyrene in mg/kg															0.59	0.99	0.01 U	2.8	0.5 U	0.05 U	0.05 U	2.5
Total cPAHs TEQ in mg/kg	0.4	7.9													1.02	1.65	ND	5.21	0.474	ND	ND	4.82
Polychlorinated Biphenyls (PCBs)																						
Aroclor 1016 in mg/kg													0.1 U									
Aroclor 1221 in mg/kg													0.1 U									
Aroclor 1232 in mg/kg													0.1 U									
Aroclor 1242 in mg/kg													0.1 U									
Aroclor 1248 in mg/kg													0.1 U									
Aroclor 1254 in mg/kg													0.1 U									
Aroclor 1260 in mg/kg													0.1 U									
Total PCBs (Sum of Aroclors) in mg/kg	10	10													ND									

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 8 - Excavation Verification Soil Quality Data for CN-B-2 Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Overexcavated Samples																			
			CNB2-B20 3/15/14 (16 ft) OverEx SAT	FD 3/15/14 (16 ft) OverEx SAT	CNB2-B22 3/15/14 (14 ft) OverEx SAT	CNB2-B23 3/15/14 (14 ft) OverEx SAT	CNB2-S10 3/3/14 (6 ft) OverEx SAT	CNB2-S14 3/7/14 (6 ft) OverEx SAT	CNB2-S15 3/7/14 (10 ft) OverEx SAT	CNB2-S16 3/7/14 (6 ft) OverEx SAT	CNB2-S17 3/7/14 (10 ft) OverEx SAT	CNB2-S18 3/7/14 (6 ft) OverEx SAT	CNB2-S19 3/7/14 (10 ft) OverEx SAT	CNB2-S20 3/7/14 (6 ft) OverEx SAT	CNB2-S21 3/7/14 (10 ft) OverEx SAT	CNB2-S22 3/7/14 (6 ft) OverEx SAT	CNB2-S23 3/7/14 (10 ft) OverEx SAT	CNB2-S24 3/7/14 (6 ft) OverEx SAT	CNB2-S25 3/7/14 (10 ft) OverEx SAT	CNB2-S46 3/15/14 (4 ft) OverEx SAT	CNB2-S47 3/15/14 (8 ft) OverEx SAT	CNB2-S48 3/15/14 (12 ft) OverEx SAT
Total Petroleum Hydrocarbons (TPH)																						
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	200 U	200 U	200 U	**38,000** x	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	660 x
Oil Range Hydrocarbons in mg/kg	2,000	2,000	1,000 U	1,000 U	1,000 U	**120,000**	250 U	250 U	**16,000**	250 U	**18,000**	250 U	250 U	250 U	250 U	**3,700**	250 U	**9,800**	**4,900**	250 U	250 U	**3,200**
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	**158,000**	ND	ND	**16,000**	ND	**18,000**	ND	ND	ND	ND	**3,720**	ND	**9,820**	**4,920**	ND	ND	**3,860**
Metals																						
Arsenic in mg/kg	20	20	10.5 J	6.95 J	1 U	1 U	5.53	5.85	**58**	6.32	11.3	5.77	6.92	4.23	**56**	**20.5**	**24.9**	14.8	**38.8**	4.01	4.47	**23.5**
Cadmium in mg/kg	3,500	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Copper in mg/kg	36	36	**123**	**136**	11	4.62	22.2	24	**156**	25.9	**132**	25	**40.8**	18.2	**153**	**95.5**	**193**	**154**	**104**	12.3	7.27	**53.3**
Lead in mg/kg	81	1,000	156	152	21.1	25.4	9.56	4.22	201	5.72	175	5.74	11.9	4.14	192	183	119	258	161	2	1.91	65
Mercury in mg/kg	0.1	0.1	**0.13**	**0.14**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.14**	0.1 U	0.1 U	0.1 U	0.1 U	0.1	0.1 U	**0.19**	0.1 U	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	48	7.85	7.52 J	8.85	1 U	18.5	19.6	31.7	21.5	11.4	21.8	14.9	25.6	42.7	14.8	29	23.6	16.5	14.5	11.6	12.7
Zinc in mg/kg	85	100	5.4 J	8.48 J	10.4	1 U	31.4 J	32.8	**502**	35.9	**147**	36.5	72.4	40.6	**703**	**120**	74.1	**411**	**145**	22.1	14.9	94.6
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	210,000	0.05 U	0.05 U	0.05 U	0.3 U	0.01 U	0.01 U	5 U	0.01 U	5 U	0.01 U	0.1 U	0.01 U	0.05 U	0.5 U	0.01 U	0.5 U	0.05 U	0.01 U	0.01 U	0.04 U
Acenaphthylene in mg/kg			0.05 U	0.05 U	0.05 U	0.3 U	0.01 U	0.01 U	5 U	0.01 U	5 U	0.01 U	0.15	0.01 U	0.25	0.56	0.01 U	0.5 U	0.05 U	0.01 U	0.01 U	0.04 U
Anthracene in mg/kg	1,100,000	1,100,000	0.05 U	0.05 U	0.05 U	0.3 U	0.01 U	0.01 U	5 U	0.01 U	5 U	0.01 U	0.21	0.01 U	0.26	0.5 U	0.01 U	0.5 U	0.05 U	0.01 U	0.01 U	0.04 U
Benzo(g,h,i)perylene in mg/kg			0.05 U	0.05 U	0.05 U	0.79	0.01 U	0.01 U	6.7	0.01 U	5.5	0.01 U	0.72	0.011	2.3	3.2	0.01 U	2.2 J	0.13	0.01 U	0.01 U	0.075
Fluoranthene in mg/kg	140,000	140,000	0.05 U	0.05 U	0.05 U	0.77	0.01 U	0.01 U	9	0.021	8	0.027	2	0.027	2.7	1.2	0.01 U	0.5 U	0.16	0.01 U	0.01 U	0.1
Fluorene in mg/kg	140,000	140,000	0.05 U	0.05 U	0.05 U	0.47	0.01 U	0.01 U	5 U	0.01 U	5 U	0.01 U	0.11	0.01 U	0.058	0.5 U	0.01 U	0.5 U	0.05 U	0.01 U	0.01 U	0.04 U
Phenanthrene in mg/kg			0.05 U	0.05 U	0.05 U	0.3 U	0.01 U	0.01 U	5 U	0.018	5 U	0.018	1.5	0.025	0.9	0.5 U	0.01 U	0.5 U	0.054	0.01 U	0.01 U	0.042
Pyrene in mg/kg	110,000	110,000	0.05 U	0.05 U	0.05 U	2.7	0.01 U	0.01 U	11	0.02	9.5	0.028	2.1	0.027	3	1.8	0.01 U	0.72	0.2	0.01 U	0.01 U	0.13
Naphthalene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.3 U	0.01 U	0.01 U	5 U	0.016	5 U	0.023	0.1 U	0.01 U	0.11	0.5 U	0.01 U	0.5 U	0.05 U	0.01 U	0.01 U	0.04 U
Benz(a)anthracene in mg/kg			0.05 U	0.05 U	0.05 U	1.8	0.01 U	0.01 U	5	0.01 U	5 U	0.01 U	0.81	0.013	2	1.3	0.01 U	0.5 U	0.079	0.01 U	0.01 U	0.07
Benzo(a)pyrene in mg/kg			0.05 U	0.05 U	0.05 U	1.6	0.01 U	0.01 U	8.1	0.01 U	6.4	0.01 U	1	0.018	3	4.3	0.01 U	1.1 J	0.092	0.01 U	0.01 U	0.071
Benzo(b)fluoranthene in mg/kg			0.05 U	0.05 U	0.05 U	1.9	0.01 U	0.01 U	9.7	0.01 U	7.7	0.01 U	1.3	0.02	3.4	4.3	0.01 U	1.6 J	0.15	0.01 U	0.01 U	0.11
Benzo(k)fluoranthene in mg/kg			0.05 U	0.05 U	0.05 U	0.3 U	0.01 U	0.01 U	5 U	0.01 U	5 U	0.01 U	0.38	0.01 U	1.1	1.5	0.01 U	0.5 UJ	0.057	0.01 U	0.01 U	0.04 U
Chrysene in mg/kg			0.05 U	0.05 U	0.05 U	5.3	0.01 U	0.01 U	7.1	0.01 U	6.1	0.01 U	1.1	0.018	2.5	1.8	0.01 U	0.68	0.13	0.01 U	0.01 U	0.096
Dibenzo(a,h)anthracene in mg/kg			0.05 U	0.05 U	0.05 U	1.4	0.01 U	0.01 U	5 U	0.01 U	5 U	0.01 U	0.13	0.01 U	0.47	0.68	0.01 U	0.58 J	0.05 U	0.01 U	0.01 U	0.04 U
Indeno(1,2,3-cd)pyrene in mg/kg			0.05 U	0.05 U	0.05 U	0.5	0.01 U	0.01 U	6.2	0.01 U	5.3	0.01 U	0.72	0.01	2.4	3.3	0.01 U	1.7 J	0.11	0.01 U	0.01 U	0.078
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	ND	2.23	ND	ND	**10.8**	ND	**8.51**	ND	1.35	0.0235	3.96	5.43	ND	1.54 J	0.135	ND	ND	0.102
Polychlorinated Biphenyls (PCBs)																						
Aroclor 1016 in mg/kg							0.02 U															
Aroclor 1221 in mg/kg							0.02 U															
Aroclor 1232 in mg/kg							0.02 U															
Aroclor 1242 in mg/kg							0.02 U															
Aroclor 1248 in mg/kg							0.02 U															
Aroclor 1254 in mg/kg							0.02 U															
Aroclor 1260 in mg/kg							0.02 U															
Total PCBs (Sum of Aroclors) in mg/kg	10	10					ND															

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 9 - Excavation Verification Soil Quality Data for GF-11 Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	Bottom Samples in Place			Sidewall Samples in Place							Pre-Excavation Characterization Samples											
		GF11-B01 10/11/13 (3 ft)	GF11-B02 10/11/13 (3 ft)	GF11-B02 FD 10/11/13 (3 ft)	GF11-S01 10/11/13 (1.5 ft)	GF11-S02 10/11/13 (1.5 ft)	GF11-S03 10/11/13 (1.5 ft)	GF11-S04 10/11/13 (1.5 ft)	GF11-S05 10/11/13 (1.5 ft)	GF11-S06 10/11/13 (1.5 ft)	GF11-S07 10/11/13 (1.5 ft)	GF11-TP1-B 8/22/13 (3 ft)	GF11-TP1-S 8/22/13 (0-3 ft)	GF11-TP2-B 8/22/13 (3 ft)	GF11-TP2-S 8/22/13 (0-3 ft)	GF11-TP3-B 8/22/13 (3 ft)	GF11-TP3-S 8/22/13 (0-3 ft)	GF11-TP4-B 8/22/13 (3 ft)	GF11-TP4-S 8/22/13 (0-3 ft)	GF11-TP5-B 8/22/13 (3 ft)	GF11-TP5-S 8/22/13 (0-3 ft)	GF11-TP6-B 8/22/13 (3 ft)	GF11-TP6-S 8/22/13 (0-3 ft)
Metals																							
Arsenic in mg/kg	20	1 U	4.65	5.16	3.81	5.3	8.74	6.26	6.11	3.39	2.9	2.78	3.6	2.92	4.17	3.39	6.34	2.8	4.36	2.73	3.56	13.6	9.87
Cadmium in mg/kg	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000											6.02	13.4	15.9	10.3	10.9	22.8	12.5	13.1	12.3	11.3	13.7	13.6
Copper in mg/kg	36	3.12 J	22 J	31.6 J	31.8 J	29.2 J	32.9 J	30.3 J	26.3 J	**36.2 J**	**99.2 J**	5.36	18.2	17.4	16.7	11.9	**52.8**	17	**40.3**	28.3	18.9	**39.7**	24.7
Lead in mg/kg	1,000	40.1	15.6	24.7	44.4	448	32.8	28.1	58	59	169	22.2	12.5	16.4	17.7	7.91	14.2	2.4	120	9.06	30.3	40.8	34.9
Mercury in mg/kg	0.1	**0.33**	0.1	**0.43**	0.1 U	0.1 U	**0.11**	**0.16**	**0.5**	**0.39**	**0.11**	0.1 U	0.1 U	0.1 U	0.1 U	**0.3**	**0.36**	0.1 U	**0.15**	0.1 U	**0.14**	0.1 U	0.1 U
Nickel in mg/kg	48	1 U	6.86	7.92	15.6	17.5	15.9	12.8	9.23	13.5	17.3	11.2	17.2	12.4	11.6	12.4	20	12.5	32.3	14.3	13.9	16.8	14.1
Zinc in mg/kg	100	1.33 J	17.5 J	22 J	35.9 J	39.1 J	63.3 J	43.6 J	18.2 J	45.6 J	**126 J**	18.4	34.1	25.6	24.4	22	50.2	25.9	81.4	25.7	32.3	81.6	64.6
Polycyclic Aromatic Hydrocarbons (PAHs)																							
Acenaphthene in mg/kg	210,000	1.6	3.9	3.8	0.01 U	0.01 U	0.01 U	0.01 U	0.034	0.018	0.11												
Acenaphthylene in mg/kg		0.018	0.16	0.15	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.045												
Anthracene in mg/kg	1,100,000	0.012	4.4	4.3	0.013	0.01 U	0.019	0.01 U	0.034	0.013	0.037												
Benzo(g,h,i)perylene in mg/kg		0.023	0.38	0.39	0.027	0.028	0.04	0.019	0.034	0.054	0.11												
Fluoranthene in mg/kg	140,000	0.065	39	38	0.06	0.036	0.13	0.048	0.17	0.083	0.075												
Fluorene in mg/kg	140,000	0.45	6.7	6.5	0.01 U	0.01 U	0.01 U	0.01 U	0.022	0.01 U	0.15												
Phenanthrene in mg/kg		0.041	40	39	0.053	0.026	0.062	0.026	0.13	0.042	0.022												
Pyrene in mg/kg	110,000	0.081	28	27	0.059	0.038	0.13	0.047	0.17	0.098	0.12												
Naphthalene in mg/kg	70,000	0.023	0.017	0.021	0.016	0.01	0.018	0.01 U	0.018	0.013	0.01 U												
Benz(a)anthracene in mg/kg		0.024	5.2	5.1	0.028	0.022	0.057	0.02	0.057	0.044	0.12												
Benzo(a)pyrene in mg/kg		0.024	1.2	1.2	0.03	0.023	0.048	0.019	0.046	0.051	0.17												
Benzo(b)fluoranthene in mg/kg		0.037	2.6	2.5	0.042	0.03	0.08	0.037	0.074	0.085	0.16												
Benzo(k)fluoranthene in mg/kg		0.011	0.73	0.8	0.011	0.011	0.027	0.012	0.026	0.027	0.053												
Chrysene in mg/kg		0.036	5.1	4.9	0.037	0.036	0.085	0.027	0.079	0.083	0.19												
Dibenzo(a,h)anthracene in mg/kg		0.01 U	0.13	0.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.015	0.033												
Indeno(1,2,3-cd)pyrene in mg/kg		0.021	0.5	0.51	0.025	0.019	0.04	0.018	0.036	0.052	0.096												
Total cPAHs TEQ in mg/kg	7.9	0.0342	2.17	2.15	0.0415	0.0321	0.0698	0.0285	0.0666	0.0741	0.218												

Notes

All soils in this excavation are unsaturated. Concentrations shaded and bolded indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

Table 10 - Excavation Verification Soil Quality Data for Heavy Duty Shop Sump Area

K-C Worldwide Site Upland Area 110207

		Bottom Sample in Place	Sidewall Samples in Place			
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	HDS-EX-BTM 9/12/13 (4 ft)	HDS-EX-ESW 9/12/13 (2 ft)	HDS-EX-NSW 9/12/13 (2 ft)	HDS-EX-SSW 9/12/13 (2 ft)	HDS-EX-WSW 9/12/13 (2 ft)
Total Petroleum Hydrocarbons (TPH)						
Gasoline Range Hydrocarbons in mg/kg	100	2 U	2 U	2 U	2 U	2 U
Diesel Range Hydrocarbons in mg/kg	2,000	50 U	50 U	50 U	50 U	50 U
Oil Range Hydrocarbons in mg/kg	2,000	250 U	250 U	250 U	250 U	250 U
Total TPHs in mg/kg	2,000	ND	ND	ND	ND	ND
Metals						
Antimony in mg/kg	1,400	1 U	1 U	1.51	1 U	1 U
Arsenic in mg/kg	20	7.79	4.05	13.2	4.02	6.09
Beryllium in mg/kg	7,000	1 U	1 U	1 U	1 U	1 U
Cadmium in mg/kg	3,500	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	11.3	9.07	12.4	10.6	9.45
Copper in mg/kg	36	16.1	12.2	19.6	12.1	21.4
Lead in mg/kg	1,000	53.2	26	62.5	5.3	17.1
Mercury in mg/kg	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	17.2 J	12.9 J	17 J	14.3 J	13 J
Selenium in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U
Silver in mg/kg	18,000	1 U	1 U	1 U	1 U	1 U
Thallium in mg/kg	35	1 U	1 U	1 U	1 U	1 U
Zinc in mg/kg	100	45.6	27.8	**114**	23.7	48.6
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene in mg/kg	210,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Acenaphthylene in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Anthracene in mg/kg	1,100,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Benzo(g,h,i)perylene in mg/kg		0.03 U	0.072	0.03 U	0.03 U	0.03 U
Dibenzofuran in mg/kg	3,500	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Fluoranthene in mg/kg	140,000	0.048	0.53	0.03 U	0.03 U	0.03 U
Fluorene in mg/kg	140,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Phenanthrene in mg/kg		0.057	0.053	0.03 U	0.03 U	0.03 U
Pyrene in mg/kg	110,000	0.078	0.5	0.03 U	0.03 U	0.03 U
2-Methylnaphthalene in mg/kg	15	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Naphthalene in mg/kg	70,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Benz(a)anthracene in mg/kg		0.03	0.0041	0.0062	0.002 U	0.012
Benzo(a)pyrene in mg/kg		0.036	0.0054	0.0083	0.0023	0.014
Benzo(b)fluoranthene in mg/kg		0.046	0.0075	0.011	0.0034 J	0.017
Benzo(k)fluoranthene in mg/kg		0.017	0.0026	0.0031	0.002 U	0.005
Chrysene in mg/kg		0.042	0.0059	0.0097	0.0026	0.017
Dibenzo(a,h)anthracene in mg/kg		0.0078	0.002 U	0.002 U	0.002 U	0.0027
Indeno(1,2,3-cd)pyrene in mg/kg		0.028	0.0052	0.0071	0.0021	0.011
Total cPAHs TEQ in mg/kg	7.9	0.0493	0.0075	0.0112	0.00318	0.0189

Table 10 - Excavation Verification Soil Quality Data for Heavy Duty Shop Sump Area

K-C Worldwide Site Upland Area 110207

		Bottom Sample in Place	Sidewall Samples in Place			
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	HDS-EX-BTM 9/12/13 (4 ft)	HDS-EX-ESW 9/12/13 (2 ft)	HDS-EX-NSW 9/12/13 (2 ft)	HDS-EX-SSW 9/12/13 (2 ft)	HDS-EX-WSW 9/12/13 (2 ft)
Other Semivolatiles						
1,2,4-Trichlorobenzene in mg/kg	4,500	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
1,2-Dichlorobenzene in mg/kg	320,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
1,3-Dichlorobenzene in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
1,4-Dichlorobenzene in mg/kg	24,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2,4,5-Trichlorophenol in mg/kg	350,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
2,4,6-Trichlorophenol in mg/kg	3,500	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
2,4-Dichlorophenol in mg/kg	11,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
2,4-Dimethylphenol in mg/kg	70,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
2,4-Dinitrophenol in mg/kg	7,000	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
2-Chloronaphthalene in mg/kg	280,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2-Chlorophenol in mg/kg	18,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
2-Methylphenol in mg/kg	180,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
2-Nitroaniline in mg/kg	35,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2-Nitrophenol in mg/kg		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
3 & 4 Methylphenol in mg/kg	175000	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
3-Nitroaniline in mg/kg		3 U	3 U	3 U	3 U	3 U
4,6-Dinitro-2-methylphenol in mg/kg		0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
4-Bromophenyl phenyl ether in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
4-Chloro-3-methylphenol in mg/kg		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
4-Chloroaniline in mg/kg	660	3 U	3 U	3 U	3 U	3 U
4-Chlorophenyl phenyl ether in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
4-Nitroaniline in mg/kg		3 U	3 U	3 U	3 U	3 U
4-Nitrophenol in mg/kg		0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
Benzoic acid in mg/kg	14,000,000	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Benzyl alcohol in mg/kg	350,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzyl butyl phthalate in mg/kg	69,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bis(2-chloro-1-methylethyl) ether in mg/kg	1,900	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bis(2-chloroethoxy)methane in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bis(2-chloroethyl) ether in mg/kg	120	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bis(2-ethylhexyl) phthalate in mg/kg	9,400	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
Carbazole in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Diethyl phthalate in mg/kg	2,800,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Dimethyl phthalate in mg/kg		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Di-n-butyl phthalate in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Di-n-octyl phthalate in mg/kg	35,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Hexachlorobenzene in mg/kg	82	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Hexachlorobutadiene in mg/kg	1,700	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Hexachlorocyclopentadiene in mg/kg	21,000	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Hexachloroethane in mg/kg	2,500	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Isophorone in mg/kg	140,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Nitrobenzene in mg/kg	7,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
N-Nitroso-di-n-propylamine in mg/kg	19	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
N-Nitrosodiphenylamine in mg/kg	27,000	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Pentachlorophenol in mg/kg	330	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Phenol in mg/kg	1,100,000	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
2,4-Dinitrotoluene in mg/kg	420	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2,6-Dinitrotoluene in mg/kg	88	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U

Table 10 - Excavation Verification Soil Quality Data for Heavy Duty Shop Sump Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	Bottom Sample in Place: HDS-EX-BTM 9/12/13 (4 ft)	Sidewall Samples in Place: HDS-EX-ESW 9/12/13 (2 ft)	HDS-EX-NSW 9/12/13 (2 ft)	HDS-EX-SSW 9/12/13 (2 ft)	HDS-EX-WSW 9/12/13 (2 ft)
Volatile Organic Compounds (VOC)						
1,1,1,2-Tetrachloroethane in mg/kg	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane in mg/kg	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene in mg/kg	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene in mg/kg		0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane in mg/kg	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trimethylbenzene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane in mg/kg	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane in mg/kg	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3,5-Trimethylbenzene in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,2-Dichloropropane in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone in mg/kg	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone in mg/kg		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone in mg/kg	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene in mg/kg	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	4,900	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride in mg/kg	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane in mg/kg	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane in mg/kg	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Isopropylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	21,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene in mg/kg	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene (TCE) in mg/kg	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride in mg/kg	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	49	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
o-Xylene in mg/kg	80	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Polychlorinated Biphenyls (PCBs)						
Aroclor 1016 in mg/kg		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor 1221 in mg/kg		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor 1232 in mg/kg		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor 1242 in mg/kg		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor 1248 in mg/kg		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor 1254 in mg/kg		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aroclor 1260 in mg/kg		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total PCBs (Sum of Aroclors) in mg/kg	10	ND	ND	ND	ND	ND

Notes

All soils in this excavation are unsaturated. Concentrations shaded and bolded indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

Table 11 - Excavation Verification Soil Quality Data for Hydraulic Barker Vault Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Bottom Samples in Place		Sidewall Samples in Place				Pre-Ex Character-ization
			BV-B01 1/17/14 (8 ft) SAT	BV-B02 1/17/14 (8 ft) SAT	BV-S01 1/17/14 (6 ft)	BV-S02 1/17/14 (6 ft)	BV-S03 1/17/14 (6 ft)	BV-S04 1/17/14 (6 ft)	XY Area Vt-TP1 9/3/13 (2 ft) OverEx
Total Petroleum Hydrocarbons (TPH)									
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	73	50 U	50 U	50 U	50 U	50 U	750 x
Oil Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U	250 U	250 U	250 U	450	**7,900**
Total TPHs in mg/kg	2,000	2,000	198	ND	ND	ND	ND	475	**8,650**
Metals									
Arsenic in mg/kg	20	20		2.12					1.53
Barium in mg/kg	700,000	700,000							25.1
Cadmium in mg/kg	3,500	3,500		1 U					1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000							10.2
Copper in mg/kg	36	36		18.7					16.1
Lead in mg/kg	81	1,000		9.37					3.28
Mercury in mg/kg	0.1	0.1		0.1 U					0.1 U
Nickel in mg/kg	48	48		18.5					25.5
Zinc in mg/kg	85	100		33.9 J					40.5
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.024	0.01 U	0.01 U	0.039	
Acenaphthylene in mg/kg			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	1,100,000	0.01 U	0.01 U	0.044	0.01 U	0.01 U	0.057	
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01	0.027	0.01 U	0.01 U	0.027	
Fluoranthene in mg/kg	140,000	140,000	0.033	0.03	0.16	0.013	0.01 U	0.36	
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.021	0.01 U	0.01 U	0.04	
Phenanthrene in mg/kg			0.021 J	0.016	0.18	0.01 U	0.01 U	0.21	
Pyrene in mg/kg	110,000	110,000	0.031	0.03	0.17	0.015	0.01 U	0.31	
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.021	0.01 U	0.01 U	0.019	
Benz(a)anthracene in mg/kg			0.01 U	0.012	0.066	0.01 U	0.01 U	0.065	
Benzo(a)pyrene in mg/kg			0.01 U	0.013	0.051	0.01 U	0.01 U	0.052	
Benzo(b)fluoranthene in mg/kg			0.013	0.016	0.055	0.01 U	0.01 U	0.062	
Benzo(k)fluoranthene in mg/kg			0.01 U	0.01 U	0.026	0.01 U	0.01 U	0.02	
Chrysene in mg/kg			0.012	0.015	0.081	0.01 U	0.01 U	0.08	
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	
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U	0.01 U	0.019 J	0.01 U	0.01 U	0.031 J	
Total cPAHs TEQ in mg/kg	0.4	7.9	0.00842	0.0175	0.0689	ND	ND	0.0711	
Polychlorinated Biphenyls (PCBs)									
Aroclor 1016 in mg/kg									0.1 U
Aroclor 1221 in mg/kg									0.1 U
Aroclor 1232 in mg/kg									0.1 U
Aroclor 1242 in mg/kg									0.1 U
Aroclor 1248 in mg/kg									0.1 U
Aroclor 1254 in mg/kg									0.1 U
Aroclor 1260 in mg/kg									0.1 U
Total PCBs (Sum of Aroclors) in mg/kg	10	10							ND

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 12 - Excavation Verification Soil Quality Data for Naval Reserve Parcel UST Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place						Sidewall Samples in Place													
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	NRU-B01 1/22/14 (14 ft) SAT	NRU-B02 1/22/14 (14 ft) SAT	NRU-B03 1/23/14 (14 ft) SAT	NRU-B04 1/24/14 (14 ft) SAT	NRU-B06 1/30/14 (14 ft) SAT	NRU-B07 1/30/14 (14 ft) SAT	NRU-S01 1/23/14 (4 ft)	NRU-S02 1/23/14 (8 ft)	NRU-S03 1/22/14 (12 ft) SAT	NRU-S04 1/24/14 (4 ft)	NRU-S04 FD 1/24/14 (4 ft)	NRU-S05 1/24/14 (8 ft)	NRU-S06 1/23/14 (12 ft) SAT	NRU-S07 1/23/14 (4 ft)	NRU-S08 1/23/14 (8 ft)	NRU-S09 1/22/14 (12 ft) SAT	NRU-S10 1/24/14 (4 ft)	NRU-S11 1/24/14 (8 ft)	NRU-S12 1/22/14 (12 ft) SAT	NRU-S13 1/23/14 (4 ft)
Total Petroleum Hydrocarbons (TPH)																						
Gasoline Range Hydrocarbons in mg/kg	100	100					2 U	2 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	100	50 U	50 U	50 U	150	50 U	50 U	50 U	50 U	50 U	72	50 U
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	250 U	250 U	250 U	250 U	300	250 U	250 U	250 U
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	ND	ND	ND	ND	ND	225	ND	ND	ND	275	ND	ND	ND	325	ND	197	ND
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	210,000	0.082	0.076	0.087	0.01 U	0.04 U	0.01 U	0.057	0.019	0.17	0.01 UJ	0.85 J	0.027	0.17	0.046	0.01 U	0.3	0.01 U	0.018	0.096	0.017
Acenaphthylene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.04 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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
Anthracene in mg/kg	1,100,000	1,100,000	0.01 U	0.036	0.01 U	0.01 U	0.04 U	0.01 U	0.035	0.011	0.082	0.012 J	0.32 J	0.031	0.084	0.055	0.01 U	0.02	0.01 U	0.011	0.038	0.019
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.03	0.017	0.016	0.12	0.02	0.065	0.038	0.014	0.038	0.056	0.1 J	0.24 J	0.17	0.01 U	0.01 U	0.027	0.035	0.019	0.038
Dibenzofuran in mg/kg	3,500	3,500																				
Fluoranthene in mg/kg	140,000	140,000	0.054	0.12	0.072	0.057	0.24	0.051	0.21	0.14	0.11	0.15 J	0.57 J	0.31 J	0.53 J	0.36	0.01 U	0.051	0.05	0.09	0.097	0.11
Fluorene in mg/kg	140,000	140,000	0.01 U	0.096	0.077	0.01 U	0.04 U	0.01 U	0.04	0.01 U	0.17	0.01 UJ	0.49 J	0.017	0.1	0.034	0.01 U	0.11	0.01 U	0.01 U	0.057	0.018
Phenanthrene in mg/kg			0.031	0.23	0.06	0.042	0.15	0.027	0.14	0.027	0.036	0.043 J	0.084 J	0.09	0.24 J	0.23	0.01 U	0.018	0.022	0.032	0.036	0.048
Pyrene in mg/kg	110,000	110,000	0.052	0.11	0.069	0.054	0.26	0.056	0.22	0.13	0.14	0.17 J	0.62 J	0.3 J	0.57 J	0.39	0.01 U	0.049	0.054	0.098	0.11	0.13
2-Methylnaphthalene in mg/kg	14,000	14,000																				
Naphthalene in mg/kg	70,000	70,000	0.029	0.033	0.016	0.025	0.045	0.016	0.025	0.047	0.033	0.01 UJ	0.061 J	0.018	0.033	0.045	0.01 U	0.02	0.01 U	0.01 U	0.02	0.018
Benz(a)anthracene in mg/kg			0.01 U	0.04	0.018	0.014	0.11	0.017	0.083	0.041	0.029	0.064 J	0.18 J	0.13 J	0.28 J	0.16	0.01 U	0.012	0.024	0.032	0.033	0.046
Benzo(a)pyrene in mg/kg			0.01 U	0.044	0.023	0.019	0.2	0.02	0.099	0.055	0.021	0.062 J	0.12 J	0.16 J	0.4 J	0.23	0.01 U	0.01 U	0.035	0.047	0.028	0.057
Benzo(b)fluoranthene in mg/kg			0.01	0.054	0.031	0.026	0.25	0.029	0.12	0.063	0.023	0.08 J	0.14 J	0.18 J	0.44 J	0.3	0.01 U	0.01 U	0.045	0.053	0.031	0.065
Benzo(k)fluoranthene in mg/kg			0.01 U	0.02	0.011	0.01 U	0.081	0.01 U	0.04	0.021	0.01 U	0.03	0.037	0.068 J	0.19 J	0.089	0.01 U	0.01 U	0.013	0.016	0.011	0.024
Chrysene in mg/kg			0.013	0.051	0.027	0.02	0.24	0.022	0.11	0.046	0.042	0.073 J	0.22 J	0.16 J	0.36 J	0.22	0.01 U	0.015	0.031	0.041	0.048	0.066
Dibenzo(a,h)anthracene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.04 U	0.01 U	0.019	0.01 U	0.01 U	0.011	0.015	0.017 J	0.06	0.04	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	0.029	0.017	0.014	0.12	0.016	0.065	0.039	0.011	0.038	0.038	0.1 J	0.26 J	0.17	0.01 U	0.01 U	0.026	0.033	0.015	0.033
Total cPAHs TEQ in mg/kg	0.4	7.9	0.00813	0.0593	0.0315	0.0256	0.261	0.0274	0.133	0.0724	0.0287	0.085	0.163	0.211	0.527	0.308	ND	0.00835	0.0466	0.0613	0.038	0.075
Volatile Organic Compounds (VOC)																						
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000					0.2 U	0.05 U														
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000					0.2 U	0.05 U														
1,1,2,2-Tetrachloroethane in mg/kg	660	660					0.2 U	0.05 U														
1,1,2-Trichloroethane in mg/kg	2,300	2,300					0.2 U	0.05 U														
1,1-Dichloroethane in mg/kg	23,000	23,000					0.2 U	0.05 U														
1,1-Dichloroethene in mg/kg	180,000	180,000					0.2 U	0.05 U														
1,1-Dichloropropene in mg/kg							0.2 U	0.05 U														
1,2,3-Trichlorobenzene in mg/kg							1 U	0.25 U														
1,2,3-Trichloropropane in mg/kg	4.4	4.4					0.2 U	0.05 U														
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500					1 U	0.25 U														
1,2,4-Trimethylbenzene in mg/kg							0.2 U	0.05 U														
1,2-Dibromo-3-chloropropane in mg/kg	160	160					2 U	0.5 U														
1,2-Dibromoethane (EDB) in mg/kg	66	66					0.2 U	0.05 U														
1,2-Dichlorobenzene in mg/kg	320,000	320,000					0.2 U	0.05 U														
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400					0.2 U	0.05 U														
1,2-Dichloropropane in mg/kg	3,600	3,600					0.2 U	0.05 U														
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000					0.2 U	0.05 U														
1,3-Dichlorobenzene in mg/kg							0.2 U	0.05 U														
1,3-Dichloropropane in mg/kg							0.2 U	0.05 U														
1,4-Dichlorobenzene in mg/kg	24,000	24,000					0.2 U	0.05 U														
2,2-Dichloropropane in mg/kg							0.2 U	0.05 U														
2-Butanone in mg/kg	2,100,000	2,100,000					2 U	0.5 U														
2-Chlorotoluene in mg/kg	70,000	70,000					0.2 U	0.05 U														
2-Hexanone in mg/kg							2 U	0.5 U														
4-Chlorotoluene in mg/kg							0.2 U	0.05 U														
4-Methyl-2-pentanone in mg/kg	280,000	280,000					2 U	0.5 U														
Acetone in mg/kg	3,200,000	3,200,000					2 U	0.5 U														
Benzene in mg/kg	2,400	2,400					0.12 U	0.03 U														
Bromobenzene in mg/kg							0.2 U	0.05 U														

Table 12 - Excavation Verification Soil Quality Data for Naval Reserve Parcel UST Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place						Sidewall Samples in Place													
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	NRU-B01 1/22/14 (14 ft) SAT	NRU-B02 1/22/14 (14 ft) SAT	NRU-B03 1/23/14 (14 ft) SAT	NRU-B04 1/24/14 (14 ft) SAT	NRU-B06 1/30/14 (14 ft) SAT	NRU-B07 1/30/14 (14 ft) SAT	NRU-S01 1/23/14 (4 ft)	NRU-S02 1/23/14 (8 ft)	NRU-S03 1/22/14 (12 ft) SAT	NRU-S04 1/24/14 (4 ft)	NRU-S04 FD 1/24/14 (4 ft)	NRU-S05 1/24/14 (8 ft)	NRU-S06 1/23/14 (12 ft) SAT	NRU-S07 1/23/14 (4 ft)	NRU-S08 1/23/14 (8 ft)	NRU-S09 1/22/14 (12 ft) SAT	NRU-S10 1/24/14 (4 ft)	NRU-S11 1/24/14 (8 ft)	NRU-S12 1/22/14 (12 ft) SAT	NRU-S13 1/23/14 (4 ft)
Bromodichloromethane in mg/kg	2,100	2,100					0.2 U	0.05 U														
Bromoform in mg/kg	17,000	17,000					0.2 U	0.05 U														
Bromomethane in mg/kg	4,900	4,900					2 U	0.5 U														
Carbon tetrachloride in mg/kg	1,900	1,900					0.2 U	0.05 U														
Chlorobenzene in mg/kg	70,000	70,000					0.2 U	0.05 U														
Chloroethane in mg/kg							2 U	0.5 U														
Chloroform in mg/kg	4,200	4,200					0.2 U	0.05 U														
Chloromethane in mg/kg							2 U	0.5 U														
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000					0.2 U	0.05 U														
cis-1,3-Dichloropropene in mg/kg							0.2 U	0.05 U														
Dibromochloromethane in mg/kg	1,600	1,600					0.2 U	0.05 U														
Dibromomethane in mg/kg	35,000	35,000					0.2 U	0.05 U														
Dichlorodifluoromethane in mg/kg	700,000	700,000					2 U	0.5 U														
Ethylbenzene in mg/kg	350,000	350,000					0.2 U	0.05 U														
Hexachlorobutadiene in mg/kg	1,700	1,700					1 U	0.25 U														
Isopropylbenzene in mg/kg	350,000	350,000					0.2 U	0.05 U														
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000					0.2 U	0.05 U														
Methylene chloride in mg/kg	21,000	21,000					2 U	0.5 U														
n-Propylbenzene in mg/kg	350,000	350,000					0.2 U	0.05 U														
p-Isopropyltoluene in mg/kg							0.2 U	0.05 U														
sec-Butylbenzene in mg/kg	350,000	350,000					0.2 U	0.05 U														
Styrene in mg/kg	700,000	700,000					0.2 U	0.05 U														
tert-Butylbenzene in mg/kg	350,000	350,000					0.2 U	0.05 U														
Tetrachloroethene (PCE) in mg/kg	21,000	21,000					0.1 U	0.025 U														
Toluene in mg/kg	280,000	280,000					0.2 U	0.05 U														
trans-1,2-Dichloroethene in mg/kg	70,000	70,000					0.2 U	0.05 U														
trans-1,3-Dichloropropene in mg/kg							0.2 U	0.05 U														
Trichloroethene (TCE) in mg/kg	1,800	1,800					0.12 U	0.03 U														
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000					2 U	0.5 U														
Vinyl chloride in mg/kg	88	88					0.2 U	0.05 U														
m,p-Xylenes in mg/kg	49	2.5					0.4 U	0.1 U														
o-Xylene in mg/kg	80	4.1					0.2 U	0.05 U														
Naphthalene in mg/kg	70,000	70,000																				

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 12 - Excavation Verification Soil Quality Data for Naval Reserve Parcel UST Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place																Overexcavated Samples		
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	NRU-S16 1/24/14 (12 ft) SAT	NRU-S17 1/24/14 (8 ft)	NRU-S18 1/24/14 (4 ft)	NRU-S19 1/24/14 (8 ft)	NRU-S20 1/24/14 (12 ft) SAT	NRU-S20 FD 1/24/14 (12 ft) SAT	NRU-S21 1/24/14 (4 ft)	NRU-S22 1/24/14 (8 ft)	NRU-S23 1/24/14 (12 ft) SAT	NRU-S24 1/30/14 (4 ft)	NRU-S25 1/30/14 (8 ft) SAT	NRU-S26 1/30/14 (12 ft) SAT	NRU-S27 1/30/14 (4 ft)	NRU-S27 FD 1/30/14 (4 ft)	NRU-S28 1/30/14 (8 ft) SAT	NRU-S29 1/30/14 (12 ft) SAT	NRU-B05 1/27/14 (16 ft) OverEx SAT	NRU-S14 1/23/14 (8 ft) OverEx	NRU-S15 1/23/14 (12 ft) OverEx SAT
Total Petroleum Hydrocarbons (TPH)																					
Gasoline Range Hydrocarbons in mg/kg	100	100										2 U	2 U	2 U	2 U	2 U	2 U	2 U	**130**		
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	50 U	50 U	50 U	320	50 U	65	50 U	50 U	50 U	50 U	50 U	50 U	50 U		50 U	50 U	1,300	**8,000**	**2,800**
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	250 U		250 U	250 U	770	**4,900**	1,600
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	445	ND	190	ND	ND	ND	ND	ND	ND	ND		ND	ND	**2,070**	**12,900**	**4,400**
Polycyclic Aromatic Hydrocarbons (PAHs)																					
Acenaphthene in mg/kg	210,000	210,000	0.063	0.09	0.01 U	0.04	0.025	0.035	0.01 U	0.012	0.021	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	1.3	7.9	2.9
Acenaphthylene 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	0.1 U	0.1 U	0.1 U
Anthracene in mg/kg	1,100,000	1,100,000	0.011	0.031	0.01 U	0.041	0.02	0.035	0.01 U	0.023	0.013	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	1.1	6.5	1.8
Benzo(g,h,i)perylene in mg/kg			0.029	0.022	0.01 U	0.077	0.018	0.02	0.01 U	0.044	0.017	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.15	0.84	0.28
Dibenzofuran in mg/kg	3,500	3,500																			
Fluoranthene in mg/kg	140,000	140,000	0.11	0.089	0.013	0.25	0.05 J	0.089 J	0.014	0.12	0.075	0.01 U	0.013	0.039	0.01 U		0.01	0.01 U	0.38	1.9	2
Fluorene in mg/kg	140,000	140,000	0.018	0.05	0.01 U	0.026	0.019	0.032	0.01 U	0.01	0.017	0.01 U	0.01 U	0.01	0.01 U		0.01 U	0.01 U	1.6	8.7	2.7
Phenanthrene in mg/kg			0.089	0.047	0.01 U	0.17	0.038	0.052	0.011	0.096	0.068	0.01 U	0.01 U	0.036	0.01 U		0.01 U	0.01 U	4	6.4	6.8
Pyrene in mg/kg	110,000	110,000	0.095	0.098	0.015	0.27	0.07 J	0.12 J	0.016	0.13	0.069	0.01 U	0.015	0.04	0.01 U		0.011	0.01 U	1.5	8	2.9
2-Methylnaphthalene in mg/kg	14,000	14,000																			
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.074	0.01 U	0.025	0.012	0.024	0.01 U	0.01 U	0.033	0.01 U	0.01 U	0.02	0.01 U		0.01 U	0.01 U	0.1 U	0.1 U	0.1 U
Benz(a)anthracene in mg/kg			0.032	0.028	0.01 U	0.098	0.023	0.037	0.01 U	0.06	0.023	0.01 U	0.01 U	0.014	0.01 U		0.01 U	0.01 U	0.56	3	0.99
Benzo(a)pyrene in mg/kg			0.044	0.035	0.01 U	0.13	0.023	0.032	0.01 U	0.073	0.024	0.01 U	0.01 U	0.012	0.01 U		0.01 U	0.01 U	0.3	1.6	0.59
Benzo(b)fluoranthene in mg/kg			0.058	0.056	0.011	0.16	0.025	0.039	0.011	0.087	0.033	0.01 U	0.01 U	0.015	0.01 U		0.01 U	0.01 U	0.18	0.86	0.56
Benzo(k)fluoranthene in mg/kg			0.017	0.017	0.01 U	0.055	0.01 U	0.012	0.01 U	0.027	0.011	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.1 U	0.12	0.15
Chrysene in mg/kg			0.047	0.031	0.01 U	0.14	0.032	0.05	0.01	0.082	0.03	0.01 U	0.01 U	0.016	0.01 U		0.01 U	0.01 U	0.84	4.5	1.2
Dibenzo(a,h)anthracene in mg/kg			0.01 U	0.01 U	0.01 U	0.021	0.01 U	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	0.01 U	0.1 U	0.26	0.1 U
Indeno(1,2,3-cd)pyrene in mg/kg			0.03	0.021	0.01 U	0.079	0.012	0.016	0.01 U	0.043	0.016	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.1 U	0.25	0.16
Total cPAHs TEQ in mg/kg	0.4	7.9	0.0587	0.048	0.00815	0.173	0.0303	0.0434	0.0082	0.0969	0.0331	ND	ND	0.0166	ND		ND	ND	0.397	2.09	0.793
Volatile Organic Compounds (VOC)																					
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,1,2,2-Tetrachloroethane in mg/kg	660	660										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,1,2-Trichloroethane in mg/kg	2,300	2,300										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,1-Dichloroethane in mg/kg	23,000	23,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,1-Dichloroethene in mg/kg	180,000	180,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,1-Dichloropropene in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,2,3-Trichlorobenzene in mg/kg												0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U			
1,2,3-Trichloropropane in mg/kg	4.4	4.4										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500										0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U			
1,2,4-Trimethylbenzene in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,2-Dibromo-3-chloropropane in mg/kg	160	160										0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
1,2-Dibromoethane (EDB) in mg/kg	66	66										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,2-Dichlorobenzene in mg/kg	320,000	320,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,2-Dichloropropane in mg/kg	3,600	3,600										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,3-Dichlorobenzene in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,3-Dichloropropane in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
1,4-Dichlorobenzene in mg/kg	24,000	24,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
2,2-Dichloropropane in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
2-Butanone in mg/kg	2,100,000	2,100,000										0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
2-Chlorotoluene in mg/kg	70,000	70,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
2-Hexanone in mg/kg												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
4-Chlorotoluene in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
4-Methyl-2-pentanone in mg/kg	280,000	280,000										0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
Acetone in mg/kg	3,200,000	3,200,000										0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
Benzene in mg/kg	2,400	2,400										0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.02 U		
Bromobenzene in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			

Table 12 - Excavation Verification Soil Quality Data for Naval Reserve Parcel UST Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place																Overexcavated Samples		
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	NRU-S16 1/24/14 (12 ft) SAT	NRU-S17 1/24/14 (8 ft)	NRU-S18 1/24/14 (4 ft)	NRU-S19 1/24/14 (8 ft)	NRU-S20 1/24/14 (12 ft) SAT	NRU-S20 FD 1/24/14 (12 ft) SAT	NRU-S21 1/24/14 (4 ft)	NRU-S22 1/24/14 (8 ft)	NRU-S23 1/24/14 (12 ft) SAT	NRU-S24 1/30/14 (4 ft)	NRU-S25 1/30/14 (8 ft) SAT	NRU-S26 1/30/14 (12 ft) SAT	NRU-S27 1/30/14 (4 ft)	NRU-S27 FD 1/30/14 (4 ft)	NRU-S28 1/30/14 (8 ft) SAT	NRU-S29 1/30/14 (12 ft) SAT	NRU-B05 1/27/14 (16 ft) OverEx SAT	NRU-S14 1/23/14 (8 ft) OverEx	NRU-S15 1/23/14 (12 ft) OverEx SAT
Bromodichloromethane in mg/kg	2,100	2,100										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Bromoform in mg/kg	17,000	17,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Bromomethane in mg/kg	4,900	4,900										0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
Carbon tetrachloride in mg/kg	1,900	1,900										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Chlorobenzene in mg/kg	70,000	70,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Chloroethane in mg/kg												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
Chloroform in mg/kg	4,200	4,200										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Chloromethane in mg/kg												0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
cis-1,3-Dichloropropene in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Dibromochloromethane in mg/kg	1,600	1,600										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Dibromomethane in mg/kg	35,000	35,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Dichlorodifluoromethane in mg/kg	700,000	700,000										0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
Ethylbenzene in mg/kg	350,000	350,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.08		
Hexachlorobutadiene in mg/kg	1,700	1,700										0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U			
Isopropylbenzene in mg/kg	350,000	350,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Methylene chloride in mg/kg	21,000	21,000										0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
n-Propylbenzene in mg/kg	350,000	350,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
p-Isopropyltoluene in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
sec-Butylbenzene in mg/kg	350,000	350,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Styrene in mg/kg	700,000	700,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
tert-Butylbenzene in mg/kg	350,000	350,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Tetrachloroethene (PCE) in mg/kg	21,000	21,000										0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U			
Toluene in mg/kg	280,000	280,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U		
trans-1,2-Dichloroethene in mg/kg	70,000	70,000										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
trans-1,3-Dichloropropene in mg/kg												0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Trichloroethene (TCE) in mg/kg	1,800	1,800										0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U			
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000										0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
Vinyl chloride in mg/kg	88	88										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
m,p-Xylenes in mg/kg	49	2.5										0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U			
o-Xylene in mg/kg	80	4.1										0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			
Naphthalene in mg/kg	70,000	70,000														0.05 U					

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.
Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.
SAT = Sample of saturated soil; samples without this designation are unsaturated soil.
J = Analyte was positively identified. The reported result is an estimate.
U = Analyte was not detected at or above the reported result.
UJ = Analyte was not detected at or above the reported estimate.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 13 - Excavation Verification Soil Quality Data for Naval Reserve Parcel South Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place										Sidewall Samples in Place											
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	NRS-B01 2/12/14 (13 ft) SAT	NRS-B01 FD 2/12/14 (13 ft) SAT	NRS-B02 2/12/14 (13 ft) SAT	NRS-B03 2/12/14 (13 ft) SAT	NRS-B04 2/12/14 (13 ft) SAT	NRS-B05 2/12/14 (13 ft) SAT	NRS-B06 2/12/14 (13 ft) SAT	NRS-B07 2/12/14 (13 ft) SAT	NRS-B08 2/12/14 (13 ft) SAT	NRS-B09 2/18/14 (10 ft) SAT	NRS-S01 2/11/14 (8 ft)	NRS-S02 2/11/14 (11 ft) SAT	NRS-S03 2/11/14 (8 ft)	NRS-S04 2/11/14 (11 ft) SAT	NRS-S05 2/11/14 (8 ft)	NRS-S06 2/11/14 (11 ft) SAT	NRS-S09 2/11/14 (8 ft)	NRS-S10 2/11/14 (11 ft) SAT	NRS-S11 2/11/14 (8 ft) SAT	NRS-S12 2/12/14 (11 ft) SAT	NRS-S13 2/12/14 (8 ft) SAT	NRS-S14 2/12/14 (11 ft) SAT
Total Petroleum Hydrocarbons (TPH)																								
Gasoline Range Hydrocarbons in mg/kg	100	100	2 U	2 U	2 U	34	2 U	2 U	2 U	2 U	2 U	2 U	2 U	4.1	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	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
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	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Bunker C in mg/kg	2,000	2,000																						
Total TPHs in mg/kg	2,000	2,000	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	20	4.74						3.72								14.5			4.18				
Cadmium in mg/kg	3,500	3,500	1 U						1 U								1 U			1 U				
Copper in mg/kg	36	36	17.8						8.72								15.5			11.4				
Lead in mg/kg	81	1,000	3.8						2.36								3.48			2.61				
Mercury in mg/kg	0.1	0.1	0.1 U						0.1 U								0.1 U			0.1 U				
Nickel in mg/kg	48	48	17						12.5								23.9			13.8				
Zinc in mg/kg	85	100	27.2						14.9								30.7			17.8				
Polycyclic Aromatic Hydrocarbons (PAHs)																								
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.011	0.074	0.049	0.01 U	0.01 U	0.01 U	3.3	0.01 U	0.044	0.28	0.01 U	0.016	0.01 U	0.045	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg			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	0.013	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 U	0.01 U	0.01 U
Anthracene in mg/kg	1,100,000	1,100,000	0.01 U	0.01 U	0.013	0.012	0.011	0.01 U	0.01 U	0.01 U	0.13	0.015	0.01 U	0.01 U	0.01 U	0.01 U	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			0.01 U	0.01 U	0.021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.044	0.01 U	0.01 U	0.01 U	0.01 U	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	140,000	0.024	0.035	0.068	0.078	0.035	0.017	0.016	0.05	0.12	0.12	0.023	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.033	0.01 U	0.01 U	0.01 U	0.01 U
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.012	0.033	0.049	0.01 U	0.01 U	0.01 U	1.4	0.011	0.012	0.21	0.01 U	0.023	0.01 U	0.026	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg			0.016	0.024	0.058	0.016	0.089	0.013	0.021	0.04	1.5	0.069	0.01 U	0.14	0.01 U	0.019	0.01 U	0.01 U	0.01 U	0.025	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene in mg/kg	110,000	110,000	0.024	0.035	0.077	0.07	0.029	0.016	0.015	0.05	0.078	0.11	0.024	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.035	0.01 U	0.01 U	0.01 U	0.01 U
Naphthalene in mg/kg	70,000	70,000	0.02	0.029	0.11	0.029	0.053	0.015	0.013	0.046	0.5	0.051	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.034	0.01 U	0.01 U	0.01 U	0.01 U
Benz(a)anthracene in mg/kg			0.01 U	0.01 U	0.018	0.017	0.01 U	0.01 U	0.01 U	0.011	0.014	0.038	0.01	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.015	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg			0.01 U	0.01 U	0.025	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.012	0.056	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg			0.01 U	0.01 U	0.028	0.015	0.01 U	0.01 U	0.01 U	0.015	0.016	0.074	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene in mg/kg			0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	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	0.01 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	0.027	0.014	0.01 U	0.01 U	0.01 U	0.013	0.014	0.058	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02	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
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.050 J	0.01 U	0.01 U	0.01 U	0.01 U	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	0.4	7.9	ND	ND	0.0332	0.00984	ND	ND	ND	0.0152	0.0166	0.0755	0.00805	ND	ND	ND	ND	ND	ND	0.0178	ND	ND	ND	ND
Volatile Organic Compounds (VOC)																								
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane in mg/kg	23,000	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene in mg/kg	180,000	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene in mg/kg			0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane in mg/kg	4.4	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane in mg/kg	160	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene in mg/kg	320,000	320,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane in mg/kg	3,600	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene in mg/kg	24,000	24,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,2-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone in mg/kg	2,100,000	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone in mg/kg	3,200,000	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table 13 - Excavation Verification Soil Quality Data for Naval Reserve Parcel South Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Bottom Samples in Place									
			NRS-B01 2/12/14 (13 ft) SAT	NRS-B01 FD 2/12/14 (13 ft) SAT	NRS-B02 2/12/14 (13 ft) SAT	NRS-B03 2/12/14 (13 ft) SAT	NRS-B04 2/12/14 (13 ft) SAT	NRS-B05 2/12/14 (13 ft) SAT	NRS-B06 2/12/14 (13 ft) SAT	NRS-B07 2/12/14 (13 ft) SAT	NRS-B08 2/12/14 (13 ft) SAT	NRS-B09 2/18/14 (10 ft) SAT
Benzene in mg/kg	2,400	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	2,100	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	17,000	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	4,900	4,900	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride in mg/kg	1,900	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	4,200	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Dibromochloromethane in mg/kg	1,600	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Dibromomethane in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	700,000	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene in mg/kg	1,700	1,700	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	21,000	21,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene in mg/kg	700,000	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	280,000	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Trichloroethene (TCE) in mg/kg	1,800	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride in mg/kg	88	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	49	2.5	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
o-Xylene in mg/kg	80	4.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.098	0.05 U
Polychlorinated Biphenyls (PCBs)												
Aroclor 1016 in mg/kg												
Aroclor 1221 in mg/kg												
Aroclor 1232 in mg/kg												
Aroclor 1242 in mg/kg												
Aroclor 1248 in mg/kg												
Aroclor 1254 in mg/kg												
Aroclor 1260 in mg/kg												
Total PCBs (Sum of Aroclors) in mg/kg	10	10										

Chemical Name	Sidewall Samples in Place											
	NRS-S01 2/11/14 (8 ft)	NRS-S02 2/11/14 (11 ft) SAT	NRS-S03 2/11/14 (8 ft)	NRS-S04 2/11/14 (11 ft) SAT	NRS-S05 2/11/14 (8 ft)	NRS-S06 2/11/14 (11 ft) SAT	NRS-S09 2/11/14 (8 ft)	NRS-S10 2/11/14 (11 ft) SAT	NRS-S11 2/11/14 (8 ft) SAT	NRS-S12 2/11/14 (11 ft) SAT	NRS-S13 2/12/14 (8 ft) SAT	NRS-S14 2/12/14 (11 ft) SAT
Benzene in mg/kg	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene in mg/kg	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene (TCE) in mg/kg	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	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
o-Xylene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene in mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Polychlorinated Biphenyls (PCBs)												
Aroclor 1016 in mg/kg												
Aroclor 1221 in mg/kg												
Aroclor 1232 in mg/kg												
Aroclor 1242 in mg/kg												
Aroclor 1248 in mg/kg												
Aroclor 1254 in mg/kg												
Aroclor 1260 in mg/kg												
Total PCBs (Sum of Aroclors) in mg/kg												

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.
Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.
SAT - Sample of saturated soil; samples without this designation are unsaturated soil.
J = Analyte was positively identified. The reported result is an estimate.
U = Analyte was not detected at or above the reported result.
UJ = Analyte was not detected at or above the reported estimate.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 13 - Excavation Verification Soil Quality Data for Naval Reserve Parcel South Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Sidewall Samples in Place														Overexcavated Samples						
			NRS-S15 2/12/14 (8 ft) SAT	NRS-S16 2/12/14 (11 ft) SAT	NRS-S17 2/12/14 (8 ft) SAT	NRS-S17 FD 2/12/14 (8 ft) SAT	NRS-S18 2/12/14 (11 ft) SAT	NRS-S19 2/12/14 (8 ft) SAT	NRS-S20 2/12/14 (11 ft) SAT	NRS-S23 2/12/14 (8 ft) SAT	NRS-S24 2/12/14 (11 ft) SAT	NRS-S25 2/12/14 (8 ft) SAT	NRS-S26 2/12/14 (11 ft) SAT	NRS-S27 2/18/14 (8 ft) SAT	NRS-S28 2/18/14 (8 ft) SAT	NRS-S29 2/19/14 (8 ft)	NRA1-PC1 1/6/14 (12 ft) OverEx	NRA1-PC2 1/6/14 (8 ft) OverEx	NRA1-PC3 1/6/14 (8 ft) OverEx	NRS-S07 2/11/14 (8 ft) OverEx	NRS-S08 2/11/14 (11 ft) OverEx SAT	NRS-S21 2/12/14 (8 ft) OverEx SAT	NRS-S22 2/12/14 (11 ft) OverEx SAT
Total Petroleum Hydrocarbons (TPH)																							
Gasoline Range Hydrocarbons in mg/kg	100	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.7	2 U	2 U	2 U	2 U	2 U	6.3	3.9	2 U	**240**	2 U	2 U	2 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	50 U	50 U	50 U	50 U	50 U	50 U		50 U	50 U	58 x	50 U	50 U	50 U
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	250 U	250 U		250 U	250 U	320	250 U	250 U	250 U
Bunker C in mg/kg	2,000	2,000															2,000						
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,000	ND	ND	378	ND	ND	ND
Metals																							
Arsenic in mg/kg	20	20			3.92	2.79											11	4.04	4.78				6.26
Cadmium in mg/kg	3,500	3,500			1 U	1 U											1 U	1 U	1 U				1 U
Copper in mg/kg	36	36			7	6.32											21.6	9.36	14.7				27
Lead in mg/kg	81	1,000			2.45	1.86											23.7	1.93	2.57				8.07
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
Nickel in mg/kg	48	48			11.2	10.7											16	11	13.9				21.2
Zinc in mg/kg	85	100			13.6	11.9											82.3	15.4 J	25.4				36.7
Polycyclic Aromatic Hydrocarbons (PAHs)																							
Acenaphthene in mg/kg	210,000	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	0.49	0.013	0.01 U	0.01 U	0.01 U	0.072	0.01 U
Acenaphthylene 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
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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.26	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U
Benzo(g,h,i)perylene 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	0.056	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.019	0.055	0.01 U	0.014	0.01 U	0.018	0.01 U	0.01 U	0.01 U	0.28	0.032	0.01 U	0.01 U	0.01 U	0.12	0.036
Fluorene in mg/kg	140,000	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	0.45	0.01 U	0.01 U	0.01 U	0.01 U	0.048	0.01 U
Phenanthrene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.018	0.041	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.87	0.01 U	0.01 U	0.01 U	0.01 U	0.16	0.023
Pyrene in mg/kg	110,000	110,000	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.018	0.06	0.01 U	0.014	0.01 U	0.02	0.01 U	0.01 U	0.01 U	0.45	0.029	0.01 U	0.01 U	0.01 U	0.091	0.035
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.076	0.01 U	0.026	0.01 U	0.01 U	0.019	0.01 U	0.01 U	0.01 U	0.023	0.01 U	0.01 U	0.01 U	0.15	0.015
Benz(a)anthracene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.16	0.011	0.01 U	0.01 U	0.01 U	0.01	0.011
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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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
Benzo(b)fluoranthene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.081	0.01 U	0.01 U	0.01 U	0.01 U	0.011	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	0.01 U	0.01 U	0.01 U	0.01 U	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
Chrysene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	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	0.01 U	0.27	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.015
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	0.017	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	0.036	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	ND	ND	ND	ND	0.014	ND	ND	ND	ND	ND	ND	ND	0.133	0.00822	ND	ND	ND	0.00865	0.00905
Volatile Organic Compounds (VOC)																							
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane in mg/kg	23,000	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene in mg/kg	180,000	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene in mg/kg			0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U				0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane in mg/kg	4.4	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U				0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane in mg/kg	160	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene in mg/kg	320,000	320,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane in mg/kg	3,600	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene in mg/kg	24,000	24,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
2,2-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone in mg/kg	2,100,000	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
Acetone in mg/kg	3,200,000	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U

Table 13 - Excavation Verification Soil Quality Data for Naval Reserve Parcel South Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place														Overexcavated Samples						
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	NRS-S15 2/12/14 (8 ft) SAT	NRS-S16 2/12/14 (11 ft) SAT	NRS-S17 2/12/14 (8 ft) SAT	NRS-S17 FD 2/12/14 (8 ft) SAT	NRS-S18 2/12/14 (11 ft) SAT	NRS-S19 2/12/14 (8 ft) SAT	NRS-S20 2/12/14 (11 ft) SAT	NRS-S23 2/12/14 (8 ft) SAT	NRS-S24 2/12/14 (11 ft) SAT	NRS-S25 2/12/14 (8 ft) SAT	NRS-S26 2/12/14 (11 ft) SAT	NRS-S27 2/18/14 (8 ft) SAT	NRS-S28 2/18/14 (8 ft) SAT	NRS-S29 2/19/14 (8 ft)	NRA1-PC1 1/6/14 (12 ft) OverEx	NRA1-PC2 1/6/14 (8 ft) OverEx	NRA1-PC3 1/6/14 (8 ft) OverEx	NRS-S07 2/11/14 (8 ft) OverEx	NRS-S08 2/11/14 (11 ft) OverEx SAT	NRS-S21 2/12/14 (8 ft) OverEx SAT	NRS-S22 2/12/14 (11 ft) OverEx SAT
Benzene in mg/kg	2,400	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.02 U	0.02 U	0.02 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	2,100	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	17,000	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	4,900	4,900	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride in mg/kg	1,900	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	4,200	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ				0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane in mg/kg	1,600	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ				0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	700,000	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.02 U	0.02 U	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene in mg/kg	1,700	1,700	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U				0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	21,000	21,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.077	0.05 U	0.05 U	0.05 U
Styrene in mg/kg	700,000	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.058	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U				0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	280,000	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.02 U	0.02 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ				0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene (TCE) in mg/kg	1,800	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U				0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride in mg/kg	88	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	49	2.5	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
o-Xylene in mg/kg	80	4.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U
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				
Total PCBs (Sum of Aroclors) in mg/kg	10	10															ND	ND	ND				

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT - Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 14 - Excavation Verification Soil Quality Data for Rail Car Dumper Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Bottom Samples in Place			Sidewall Samples in Place							Overexcavated Samples				
			RCD-B01 9/30/13 (3 ft)	RCD-B02A 10/4/13 (6 ft)	RCD-B03 9/30/13 (2 ft)	RCD-S01 9/30/13 (1.5 ft)	RCD-S02 9/30/13 (2 ft)	RCD-S02 9/30/13 (4 ft)	RCD-S03 9/30/13 (1 ft)	RCD-S03 FD 9/30/13 (1 ft)	RCD-S07 10/4/13 (1.5 ft)	RCD-S09 10/11/13 (2 ft)	RCD-B02 9/30/13 (4 ft) OverEx	RCD-S04 9/30/13 (1.5 ft) OverEx	RCD-S05 9/30/13 (2 ft) OverEx	RCD-S08 10/4/13 (2 ft) OverEx	RCD-SLAG-1 10/8/13 OverEx
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	50 U	50 U	
Oil Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U	1,700	250 U	250 U	250 U	250 U	1,400	250 U	250 U	**7,500**	420	250 U	250 U	
Total TPHs in mg/kg	2,000	2,000	ND	ND	1,720	ND	ND	ND	ND	1,420	ND	ND	**7,520**	445	ND	ND	
Metals																	
Arsenic in mg/kg	20	20	1.55	1.68	2.26	4.32	1.83	2.33	2.25	2.94	3.62	1.65	1.9	8.29	**24.4**	4.58	10.3
Barium in mg/kg	700,000	700,000															391
Cadmium in mg/kg	3,500	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000															24.4
Copper in mg/kg	36	36	10.7	11.5	11.6	16	10.8	9.89	12.7	16.1	23.7	8.27 J	10.1	27.5	**60**	**103**	**116**
Lead in mg/kg	81	1,000	1.86	1.98	4.25	43	6.47	9.22	10.2	14.1	16.2	1.62 J	2.62	19.2	54.3	47.4	485
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	**6**	**0.12**	**2.2**	0.1 U
Mercury in mg/L	0.1	0.1															0.1 U
Nickel in mg/kg	48	48	20.7	35.7	20.4	16.9	19.2	16.9	17.1	20.3	25.9	15.2	22.6	20.4	34.7	**50.5**	35.4
Selenium in mg/kg	18,000	18,000															1 U
Silver in mg/kg	18,000	18,000															1 U
Zinc in mg/kg	85	100	11.4	22.8	18.7	34.9	15.2	16.1	24.1	34.2	44.4	8.75	17.3	**157**	**118**	**144**	**118**
SPLP Metals																	
Barium in mg/L																	0.00915
Copper in mg/L																	0.005 U
Lead in mg/L																	0.005 U
Zinc in mg/L																	0.005 U
TCLP Metals																	
Arsenic in mg/L																	1 U
Barium in mg/L																	1 U
Cadmium in mg/L																	1 U
Chromium (Total) in mg/L																	1 U
Lead in mg/L																	1 U
Selenium in mg/L																	1 U
Silver in mg/L																	1 U
Polycyclic Aromatic Hydrocarbons (PAHs)																	
Acenaphthene in mg/kg	210,000	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	0.011	0.01 U	0.01 U	
Acenaphthylene 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	
Anthracene in mg/kg	1,100,000	1,100,000	0.01 U	0.01 U	0.01 U	0.022	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01 U	0.01 U	0.025	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.017	0.02	0.01 U	
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.012	0.039 J	0.01 U	0.01 U	0.01 U	0.032	0.01 U	0.01 U	0.01 U	0.067	0.023	0.01 U	
Fluorene in mg/kg	140,000	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	
Phenanthrene in mg/kg			0.01 U	0.01 U	0.015	0.012	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.01 U	0.043	0.01 U	0.01 U	
Pyrene in mg/kg	110,000	110,000	0.01 U	0.01 U	0.018	0.044	0.01 U	0.01 U	0.01 U	0.031	0.01 U	0.01 U	0.01 U	0.057	0.025	0.01 U	
Naphthalene in mg/kg	70,000	70,000	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	
Benz(a)anthracene in mg/kg			0.01 U	0.01 U	0.01 U	0.022	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.01 U	0.022	0.013	0.01 U	
Benzo(a)pyrene in mg/kg			0.01 U	0.01 U	0.01 U	0.021	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.019	0.015	0.01 U	
Benzo(b)fluoranthene in mg/kg			0.01 U	0.01 U	0.014	0.054 J	0.01 U	0.01 U	0.01 U	0.024	0.01 U	0.01 U	0.01 U	0.04	0.025	0.01 U	
Benzo(k)fluoranthene in mg/kg			0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	
Chrysene in mg/kg			0.01 U	0.01 U	0.013	0.04	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01 U	0.013	0.038	0.017	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	
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U	0.01 U	0.01 U	0.027	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.018	0.017	0.01 U	
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	0.00853	0.0339	ND	ND	ND	0.0181	ND	ND	0.00763	0.0291	0.0217	ND	
Polychlorinated Biphenyls (PCBs)																	
Aroclor 1016 in mg/kg			0.1 U	0.02 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.02 U	0.019 U	0.1 U	0.1 U	0.1 U	0.02 U	
Aroclor 1221 in mg/kg			0.1 U	0.02 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.02 U	0.019 U	0.1 U	0.1 U	0.1 U	0.02 U	
Aroclor 1232 in mg/kg			0.1 U	0.02 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.02 U	0.019 U	0.1 U	0.1 U	0.1 U	0.02 U	
Aroclor 1242 in mg/kg			0.1 U	0.02 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.02 U	0.019 U	0.1 U	0.1 U	0.1 U	0.02 U	
Aroclor 1248 in mg/kg			0.1 U	0.02 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.02 U	0.019 U	0.1 U	0.1 U	0.1 U	0.02 U	
Aroclor 1254 in mg/kg			0.1 U	0.02 U	0.1 U	0.1 U	0.13	0.1 U	0.1 U	0.1 U	0.02 U	0.019 U	0.15	0.1 U	0.1 U	0.02 U	
Aroclor 1260 in mg/kg			0.1 U	0.02 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.02 U	0.019 U	0.1 U	0.1 U	0.1 U	0.02 U	
Total PCBs (Sum of Aroclors) in mg/kg	10	10	ND	ND	ND	ND	0.43	ND	ND	ND	ND	ND	0.45	ND	ND	ND	

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

Table 15 - Excavation Verification Soil Quality Data for Proposed Confirmational Monitoring Wells, REC2-MW-5 (near Diesel AST) Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Bottom Samples in Place: DAST-B01 9/27/13 (3 ft) SAT	DAST-B02 9/27/13 (3 ft) SAT	DAST-B04 9/27/13 (3 ft) SAT	DAST-B05 9/27/13 (3 ft) SAT	DAST-B06 9/27/13 (3 ft) SAT	DAST-B07 9/27/13 (3 ft) SAT	DAST-B10 10/11/13 (4 ft) SAT	Sidewall Samples in Place: DAST-S01 9/27/13 (2 ft)	DAST-S03 9/27/13 (2 ft) SAT	DAST-S04 9/27/13 (2 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
Oil Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U	890	290	250 U	250 U	250 U	250 U	250 U	250 U
Bunker C in mg/kg	2,000	2,000										
Total TPHs in mg/kg	2,000	2,000	ND	ND	915	315	ND	ND	ND	ND	ND	ND
Metals												
Arsenic in mg/kg	20	20	9.25	4.17	3.43	3.07	4.27	6.23	8.39	5.28	3.57	3.51
Cadmium in mg/kg	3,500	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000										
Copper in mg/kg	36	36	30.9	20.7	**43.3**	31	**41.6**	**56.9**	35.3 J	**39.3**	15.5	**43.7**
Lead in mg/kg	81	1,000	8.32	12.1	31.9	39.7	35.5	34	26.9 J	27.9	8.5	14.9
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 U	0.1 U	**0.14**	**0.17**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	48	28.1	23.2	18.1	14.5	18.4	25.1	16.8	22.6	14.1	18.5
Zinc in mg/kg	85	100	43.9 J	99 J	70.9 J	45.3 J	43.7 J	**525** J	62.7	94.1 J	23.1 J	54.4 J
Polycyclic Aromatic Hydrocarbons (PAHs)												
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.028	0.01 U	0.01 U	0.011	0.01 U	0.01 U
Acenaphthylene in mg/kg			0.01 U	0.01 U	0.01 U	0.018	0.022	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	0.017	0.013	0.026	0.011	0.01 U	0.018	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01 U	0.18	0.05	0.094	0.059	0.01 U	0.021	0.013	0.01 U
Fluoranthene in mg/kg	140,000	140,000	0.015	0.01 U	0.039	0.065	0.14	0.025	0.017	0.056	0.012	0.01 U
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg			0.01 U	0.014	0.019	0.037	0.08	0.027	0.016	0.064	0.01 U	0.01 U
Pyrene in mg/kg	110,000	110,000	0.017	0.01 U	0.039	0.072	0.15	0.024	0.018	0.056	0.012	0.01 U
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.012	0.01 U	0.018	0.028	0.01 U	0.012	0.01 U	0.01 U	0.01 U
Benz(a)anthracene in mg/kg			0.01 U	0.01 U	0.02	0.034	0.066	0.016	0.01 U	0.023	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg			0.01 U	0.01 U	0.039	0.034	0.063	0.018	0.01 U	0.019	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg			0.01 U	0.01 U	0.096	0.08	0.17	0.046	0.011	0.027	0.016	0.01 U
Benzo(k)fluoranthene in mg/kg			0.01 U	0.01 U	0.023	0.026	0.044	0.01	0.01 U	0.011	0.01 U	0.01 U
Chrysene in mg/kg			0.01 U	0.01 U	0.038	0.059	0.12	0.023	0.01 U	0.029	0.01	0.01 U
Dibenzo(a,h)anthracene in mg/kg			0.01 U	0.01 U	0.023	0.012	0.024	0.01	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	0.12	0.051	0.099	0.049	0.01 U	0.018	0.012	0.01 U
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	0.0676	0.0549	0.105	0.0313	0.00815	0.0277	0.0094	ND
Polychlorinated Biphenyls (PCBs)												
Aroclor 1016 in mg/kg			0.1 U	0.1 U	0.1 U	1 U	10 U	0.1 U	0.019 U	1 U	0.02 U	0.1 U
Aroclor 1221 in mg/kg			0.1 U	0.1 U	0.1 U	1 U	10 U	0.1 U	0.019 U	1 U	0.02 U	0.1 U
Aroclor 1232 in mg/kg			0.1 U	0.1 U	0.1 U	1 U	10 U	0.1 U	0.019 U	1 U	0.02 U	0.1 U
Aroclor 1242 in mg/kg			0.1 U	0.1 U	0.1 U	1 U	10 U	0.1 U	0.019 U	1 U	0.02 U	0.1 U
Aroclor 1248 in mg/kg			0.1 U	0.1 U	0.1 U	1 U	10 U	0.1 U	0.019 U	1 U	0.02 U	0.1 U
Aroclor 1254 in mg/kg			0.1 U	0.1 U	0.11	1.1	0.97	1.1	0.04	1.2	0.02 U	0.24
Aroclor 1260 in mg/kg			0.1 U	0.1 U	0.15	1.5	1.1	0.79	0.074	1.4	0.02 U	0.26
Total PCBs (Sum of Aroclors) in mg/kg	10	10	ND	ND	0.51	2.6	2.07	2.14	0.161	5.1	ND	0.75

Chemical Name	Sidewall Samples in Place: DAST-S05 9/27/13 (2 ft)	DAST-S06 9/27/13 (2 ft)	DAST-S07 9/27/13 (2 ft)	DAST-S08 9/27/13 (2 ft)	DAST-S09 9/27/13 (2 ft)	DAST-S10 9/27/13 (2 ft)	DAST-S11 10/11/13 (2 ft)	Overexcavated Samples: DAST-B03 9/27/13 (3 ft) OverEx SAT	DAST-B08 9/27/13 (3 ft) OverEx SAT	DAST-B03 FD 9/27/13 (3 ft) OverEx SAT	DAST-S02 9/27/13 (2 ft) OverEx SAT	D-AST-TP1 8/30/13 (1 ft) OverEx
Total Petroleum Hydrocarbons (TPH)												
Diesel Range Hydrocarbons in mg/kg	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	
Oil Range Hydrocarbons in mg/kg	250 U	250 U	250 U	250 U	250 U	790	250 U	710	250 U	250 U	250 U	
Bunker C in mg/kg												250 U
Total TPHs in mg/kg	ND	ND	ND	ND	ND	815	ND	735	ND	ND	ND	250 U
Metals												
Arsenic in mg/kg	7.39	7.4	3.53	4.96	7.29	4.92	6.12	14.7	8.49 J	13.7 J	6.3	1.74
Cadmium in mg/kg	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.05	2.19	1 U	1 U
Chromium (Total) in mg/kg												9.95
Copper in mg/kg	**42.8**	32.2	31.4	**47.7**	29.2	**36.1**	28.9 J	**72.6**	**55.7**	**64.4**	**50**	14.7
Lead in mg/kg	45.9	24	10.3	21	24.1	64.5	84.6 J	94.5	28.1	39.1	61.5	7.35
Mercury in mg/kg	**0.31**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.25**	**0.17**	0.1	0.1	**0.17**	0.1 U
Nickel in mg/kg	19.3	26.1	24.1	43.5	23.8	15.6	5.12	23.2	21.4	21.5	20.7	14.1
Zinc in mg/kg	63.8 J	89.8 J	**104** J	**456** J	46.6 J	78.9 J	19.7	**144** J	91	**110**	74.5 J	26.4
Polycyclic Aromatic Hydrocarbons (PAHs)												
Acenaphthene in mg/kg	0.1	0.12	0.089	0.01 U	0.017	0.043	0.071	0.1 U	0.01 UJ	0.026 J	0.03	
Acenaphthylene in mg/kg	0.01 U	0.1 U	0.01 U	0.01 U	0.012	0.042	0.026	0.1 U	0.01 U	0.01	0.015	
Anthracene in mg/kg	0.19	0.2	0.01 U	0.01 U	0.039	0.11	0.058	0.1 U	0.01 UJ	0.074 J	0.04	
Benzo(g,h,i)perylene in mg/kg	0.1	0.37	0.01	0.019	0.11	0.13	0.21	0.1	0.031 J	0.19 J	0.092	
Fluoranthene in mg/kg	0.51	0.99	0.016	0.035	0.11	0.34	0.18	0.1 U	0.037 J	0.76 J	0.16	
Fluorene in mg/kg	0.16	0.13	0.02	0.01 U	0.014	0.051	0.058	0.1 U	0.01 UJ	0.024 J	0.026	
Phenanthrene in mg/kg	0.63	0.9	0.012	0.03	0.12	0.099	0.098	0.1 U	0.019 J	0.32 J	0.13	
Pyrene in mg/kg	0.41	1.2	0.017	0.03	0.11	0.29	0.16	0.14	0.036 J	0.69 J	0.16	
Naphthalene in mg/kg	0.091	0.11	0.97	0.017	0.01 U	0.024	0.027	0.1 U	0.011	0.017	0.016	
Benz(a)anthracene in mg/kg	0.22	0.58	0.012	0.016	0.046	0.098	0.059	0.1 U	0.031 J	0.52 J	0.08	
Benzo(a)pyrene in mg/kg	0.16	0.62	0.013	0.018	0.04	0.088	0.053	0.11	0.04 J	0.38 J	0.087	
Benzo(b)fluoranthene in mg/kg	0.22	0.67	0.018	0.029	0.057	0.22	0.21	0.15	0.089 J	0.63 J	0.13	
Benzo(k)fluoranthene in mg/kg	0.098	0.24	0.01 U	0.01 U	0.022	0.21	0.061	0.1 U	0.021 J	0.19 J	0.038	
Chrysene in mg/kg	0.23	0.74	0.013	0.024	0.067	0.17	0.11	0.1 U	0.048 J	0.64 J	0.11	
Dibenzo(a,h)anthracene in mg/kg	0.029	0.1 U	0.01 U	0.01 U	0.01	0.023	0.045	0.1 U	0.01 UJ	0.073 J	0.021	
Indeno(1,2,3-cd)pyrene in mg/kg	0.12	0.39	0.01	0.018	0.054	0.12	0.18	0.1 U	0.028 J	0.23 J	0.093	
Total cPAHs TEQ in mg/kg	0.231	0.82	0.0181	0.0255	0.0596	0.157	0.11	0.146	0.0579	0.551	0.124	
Polychlorinated Biphenyls (PCBs)												
Aroclor 1016 in mg/kg	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	0.019 U	0.1 U	0.1	0.1	1 U	0.1 U
Aroclor 1221 in mg/kg	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	0.019 U	0.1 U	0.1	0.1	1 U	0.1 U
Aroclor 1232 in mg/kg	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	0.019 U	0.1 U	0.1	0.1	1 U	0.1 U
Aroclor 1242 in mg/kg	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	0.019 U	0.1 U	0.1	0.1	1 U	0.1 U
Aroclor 1248 in mg/kg	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	0.019 U	0.1 U	0.1	0.1	1 U	0.1 U
Aroclor 1254 in mg/kg	0.77	0.1 U	0.1 U	0.1 U	0.11	1.7	0.59	3.9	0.29	0.4	6.3	0.1 U
Aroclor 1260 in mg/kg	0.78	0.1 U	0.1 U	0.1 U	0.1 U	2	0.6	4.2	0.31	0.34	6.5	0.1 U
Total PCBs (Sum of Aroclors) in mg/kg	1.8	ND	ND	ND	0.41	6.2	1.24	8.35	0.85	0.99	**15.3**	ND

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

Table 16 - Excavation Verification Soil Quality Data for SHB-MW-1 Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place				Sidewall Samples in Place						Overexcavated		Pre-Excavation Characterization Samples		
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	SHB-B01 3/6/14 (5 ft)	SHB-B01 FD 3/6/14 (5 ft)	SHB-B02 3/6/14 (5 ft)	SHB-B03 3/6/14 (5 ft)	SHB-S01 3/6/14 (3 ft)	SHB-S02 3/6/14 (3 ft)	SHB-S04 3/6/14 (3 ft)	SHB-S05 3/6/14 (3 ft)	SHB-S06 3/6/14 (3 ft)	SHB-S07 3/11/14 (3 ft)	SHB-1N 1/15/14 (2.5-3.5 ft) OverEx	SHB-S03 3/6/14 (3 ft) OverEx	SHB-1E 1/15/14 (2.5-3.5 ft)	SHB-1S 1/15/14 (2.5-3.5 ft)	SHB-1W 1/15/14 (2.5-3.5 ft)
Total Petroleum Hydrocarbons (TPH)																	
Gasoline Range Hydrocarbons in mg/kg	100	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U			2 U			
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	50 U	50 U	50 U	50 U	87	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
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	300	530	**4,300**	250 U	250 U	250 U
Total TPHs in mg/kg	2,000	2,000	ND	ND	ND	ND	212	ND	ND	ND	ND	325	555	**4,320**	ND	ND	ND
Metals																	
Arsenic in mg/kg	20	20	4.37	5.6	12.7	5.33	8.74	2.95	9.13	7.94	6.47			10.2			
Cadmium in mg/kg	3,500	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U			1 U			
Copper in mg/kg	36	36	12.7	20	10	12.1	16.7	**58.7**	**45.4**	**65.1**	15.4	28	**562**	**50.7**	8.86	21.4	16.9
Lead in mg/kg	81	1,000	3.37 J	5.54 J	9.41	3.7	6.45	45	22.8	25.7	13.6			138			
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.12**	0.1 U	0.1 U	0.1 U			**1.5**			
Nickel in mg/kg	48	48	11.6	13.9	11.9	9.76	10.2	19.7	24.8	23.5	18.1			23.5			
Zinc in mg/kg	85	100	77.8	85.6	18.3	30.2	52.8	**186**	90.2	86.7	**229**			92.6			
Polycyclic Aromatic Hydrocarbons (PAHs)																	
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.01 U	0.01 U	0.01 U			0.01 U			
Acenaphthylene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.096	0.01 U	0.01 U	0.01 U			0.011			
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	0.18	0.01 U	0.015	0.01 U			0.01			
Benzo(g,h,i)perylene in mg/kg			0.014	0.01 U	0.01 U	0.01 U	0.024	0.37	0.055	0.044	0.012			0.039			
Fluoranthene in mg/kg	140,000	140,000	0.034 J	0.011 J	0.01 U	0.01 U	0.01	0.72	0.11	0.15	0.011			0.033			
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.07	0.01 U	0.01 U	0.01 U			0.01 U			
Phenanthrene in mg/kg			0.019	0.01 U	0.01 U	0.01 U	0.01 U	0.65	0.049	0.068	0.01 U			0.026			
Pyrene in mg/kg	110,000	110,000	0.04 J	0.011 J	0.01 U	0.01 U	0.01	0.67	0.1	0.12	0.012			0.038			
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.024	0.01 U	0.01 U	0.01 U			0.063			
Benz(a)anthracene in mg/kg			0.011	0.01 U	0.01 U	0.01 U	0.011	0.37	0.044	0.059	0.01 U			0.025			
Benzo(a)pyrene in mg/kg			0.016	0.01 U	0.01 U	0.01 U	0.016	0.44	0.064	0.066	0.012			0.01 U			
Benzo(b)fluoranthene in mg/kg			0.018	0.011	0.01 U	0.01 U	0.02	0.61	0.11	0.085	0.016			0.01 U			
Benzo(k)fluoranthene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.23	0.03	0.034	0.01 U			0.01 U			
Chrysene in mg/kg			0.014	0.01 U	0.01 U	0.01 U	0.027	0.52	0.076	0.07	0.011			0.03			
Dibenzo(a,h)anthracene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.082	0.011	0.01 U	0.01 U			0.01 U			
Indeno(1,2,3-cd)pyrene in mg/kg			0.013	0.01 U	0.01 U	0.01 U	0.019	0.39	0.056	0.045	0.012			0.01 U			
Total cPAHs TEQ in mg/kg	0.4	7.9	0.0213	0.00815	ND	ND	0.0223	0.613	0.0899	0.0895	0.0164			0.0098			
Volatile Organic Compounds (VOC)																	
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,1,2,2-Tetrachloroethane in mg/kg	660	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,1,2-Trichloroethane in mg/kg	2,300	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,1-Dichloroethane in mg/kg	23,000	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,1-Dichloroethene in mg/kg	180,000	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,1-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,2,3-Trichlorobenzene in mg/kg			0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U			0.25 U			
1,2,3-Trichloropropane in mg/kg	4.4	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U			0.25 U			
1,2,4-Trimethylbenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,2-Dibromo-3-chloropropane in mg/kg	160	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			
1,2-Dibromoethane (EDB) in mg/kg	66	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,2-Dichlorobenzene in mg/kg	320,000	320,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,2-Dichloropropane in mg/kg	3,600	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,3-Dichlorobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,3-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
1,4-Dichlorobenzene in mg/kg	24,000	24,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
2,2-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
2-Butanone in mg/kg	2,100,000	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			

Table 16 - Excavation Verification Soil Quality Data for SHB-MW-1 Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place				Sidewall Samples in Place						Overexcavated		Pre-Excavation Characterization Samples		
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	SHB-B01 3/6/14 (5 ft)	SHB-B01 FD 3/6/14 (5 ft)	SHB-B02 3/6/14 (5 ft)	SHB-B03 3/6/14 (5 ft)	SHB-S01 3/6/14 (3 ft)	SHB-S02 3/6/14 (3 ft)	SHB-S04 3/6/14 (3 ft)	SHB-S05 3/6/14 (3 ft)	SHB-S06 3/6/14 (3 ft)	SHB-S07 3/11/14 (3 ft)	SHB-1N 1/15/14 (2.5-3.5 ft) OverEx	SHB-S03 3/6/14 (3 ft) OverEx	SHB-1E 1/15/14 (2.5-3.5 ft)	SHB-1S 1/15/14 (2.5-3.5 ft)	SHB-1W 1/15/14 (2.5-3.5 ft)
2-Chlorotoluene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
2-Hexanone in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			
4-Chlorotoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
4-Methyl-2-pentanone in mg/kg	280,000	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			
Acetone in mg/kg	3,200,000	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			
Benzene in mg/kg	2,400	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U			0.03 U			
Bromobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Bromodichloromethane in mg/kg	2,100	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Bromoform in mg/kg	17,000	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Bromomethane in mg/kg	4,900	4,900	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ			0.5 UJ			
Carbon tetrachloride in mg/kg	1,900	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Chlorobenzene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Chloroethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			
Chloroform in mg/kg	4,200	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Chloromethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
cis-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Dibromochloromethane in mg/kg	1,600	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Dibromomethane in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Dichlorodifluoromethane in mg/kg	700,000	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			
Ethylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Hexachlorobutadiene in mg/kg	1,700	1,700	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U			0.25 U			
Isopropylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Methylene chloride in mg/kg	21,000	21,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			
n-Propylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
p-Isopropyltoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
sec-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Styrene in mg/kg	700,000	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
tert-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Tetrachloroethene (PCE) in mg/kg	21,000	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U			0.025 U			
Toluene in mg/kg	280,000	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
trans-1,2-Dichloroethene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
trans-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Trichloroethene (TCE) in mg/kg	1,800	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U			0.03 U			
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U			
Vinyl chloride in mg/kg	88	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
m,p-Xylenes in mg/kg	49	2.5	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			
o-Xylene in mg/kg	80	4.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			
Naphthalene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U			

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.
Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.
SAT = Sample of saturated soil; samples without this designation are unsaturated soil.
J = Analyte was positively identified. The reported result is an estimate.
U = Analyte was not detected at or above the reported result.
UJ = Analyte was not detected at or above the reported estimate.

Table 17 - Excavation Verification Soil Quality Data for UST 29/Latex Spill Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place															Sidewall Samples in Place						
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	UST29-B01 12/23/13 (5 ft)	UST29-B02 12/23/13 (5 ft)	UST29-B03 12/23/13 (5 ft)	UST29-B04 12/23/13 (5 ft)	UST29-B05 12/23/13 (5 ft)	UST29-B06 12/23/13 (5 ft)	UST29-B06 FD 12/23/13 (5 ft)	UST29-B08 1/2/14 (15 ft) SAT	UST29-B10 1/3/14 (15 ft) SAT	UST29-B12 1/6/14 (17 ft) SAT	UST29-B13 1/7/14 (16 ft) SAT	UST29-B14 1/8/14 (17 ft) SAT	UST29-B15 1/8/14 (17 ft) SAT	UST29-B15 FD 1/8/14 (17 ft) SAT	UST29-B16 1/8/14 (17 ft) SAT	UST29-S01 12/23/13 (3 ft)	UST29-S01 FD 12/23/13 (3 ft)	UST29-S02 12/23/13 (3 ft)	UST29-S03 12/23/13 (3 ft)	UST29-S04 12/23/13 (3 ft)	UST29-S05 12/23/13 (3 ft)	UST29-S06 12/23/13 (3 ft)
Total Petroleum Hydrocarbons (TPH)																								
Gasoline Range Hydrocarbons in mg/kg	100	100	2.6	2 U	2 U	2 U	2 U	2 U	2 U	4.7	2 U	2 U	2 U	2 U	7.4 J	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	50 U	50 U	50 U	50 U	50 U	50 U	82 x	50 U	91	73 x	50 U	50 U	50 U	50 U
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	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	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	207	ND	216	198	ND	ND	ND	ND
Metals																								
Arsenic in mg/kg	20	20		2.4				1.94		4.76								4.84	3.74					4.24
Cadmium in mg/kg	3,500	3,500		1 U				1 U		1 U								1 U	1 U					1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																						
Copper in mg/kg	36	36		9.8				10		12.8								9.87 J	5.59 J					17.3
Lead in mg/kg	81	1,000		2.99				2.29		5.16								7.79 J	2.08 J					13.7
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
Nickel in mg/kg	48	48		17.2				23		13.2								14.1	12.6					15.1
Selenium in mg/kg	18,000	18,000																						
Silver in mg/kg	18,000	18,000																						
Zinc in mg/kg	85	100		14				17.8		18.9								24.9 J	8.57 J					49
TCLP Metals																								
Arsenic in mg/L																								
Barium in mg/L																								
Cadmium in mg/L																								
Chromium (Total) in mg/L																								
Lead in mg/L																								
Mercury in mg/L																								
Selenium in mg/L																								
Silver in mg/L																								
Conventional Chemistry Parameters																								
Formaldehyde in mg/kg	700,000	700,000	2.6 U	2.2 U	0.94 J	2.4 U	2.5 U	2.6	2.3 J	3.7	5.2	2.7						2.2 U	2.2 U	2.4 U	2.4 U	1.3 J	2.4 U	2.5 U
Total Solids in percent			78	89.9	79.1	83	80.3	87.7	86.3	78.8	82.2	78.2						91.1	91.5	83.5	83.7	88.3	83.7	80.4
Polycyclic Aromatic Hydrocarbons (PAHs)																								
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.026	0.018	0.013	0.01 U	0.01 U	0.01 U	0.014	0.04	0.01 U	0.043	0.018 J	0.01 U	0.66	0.01	0.01 U	0.028	0.01 U
Acenaphthylene 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	0.1 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	0.019	0.013	0.01 U	0.01 U	0.01 U	0.01 U	0.027	0.01 U	0.01 U	0.01 U	0.01	0.01 U	0.01 U	0.01 U	0.052 J	0.01 UJ	1.4	0.05	0.01 U	0.071	0.01 U
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.012	0.024	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.023	0.011	0.01	0.021	0.048 J	0.01 UJ	0.86	0.11	0.01 U	0.052	0.018
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.074	0.044	0.01 U	0.038	0.021 J	0.01 UJ	0.085 J	0.01 U	0.01 U	0.027	0.1	0.075	0.053	0.098	0.24 J	0.031 J	4.2	0.15	0.01 U	0.23	0.03
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.019	0.01 U	0.045	0.021 J	0.01 UJ	0.65	0.016	0.01 U	0.031	0.01 U
Phenanthrene in mg/kg			0.01 U	0.052	0.034	0.01 U	0.018	0.014	0.01	0.051 J	0.01 U	0.01 U	0.014	0.077	0.044 J	0.021 J	0.059	0.22 J	0.025 J	5.5	0.16	0.01 U	0.22	0.014
Pyrene in mg/kg	110,000	110,000	0.01	0.071	0.049	0.01 U	0.029	0.017	0.01 U	0.087 J	0.01 U	0.01 U	0.028	0.1	0.078	0.055	0.1	0.28 J	0.036 J	5.5	0.17	0.01 U	0.22	0.031
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.049 J	0.01 J	0.06	0.019	0.01 U	0.01 U	0.062	0.067 J	0.023 J	0.026	0.014 J	0.01 UJ	0.43	0.013	0.01 U	0.01 U	0.01 U
Benz(a)anthracene in mg/kg			0.01 U	0.031	0.023	0.01 U	0.018	0.01 U	0.01 U	0.01 J	0.01 U	0.01 U	0.012	0.023	0.015	0.014	0.029	0.14 J	0.018 J	2.3	0.042	0.01 U	0.096	0.022
Benzo(a)pyrene in mg/kg			0.01 U	0.022	0.021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012	0.024	0.01	0.01 U	0.025	0.1 J	0.011 J	1.8	0.06	0.01 U	0.083	0.023
Benzo(b)fluoranthene in mg/kg			0.013	0.029	0.039	0.01 U	0.024	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.015	0.034	0.014	0.014	0.028	0.14 J	0.014 J	2.1	0.067	0.01 U	0.1	0.037
Benzo(k)fluoranthene 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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.044 J	0.01 UJ	0.64	0.018	0.01 U	0.032	0.013
Chrysene in mg/kg			0.01 U	0.036	0.032	0.01 U	0.035	0.01 U	0.01 U	0.01 J	0.01 U	0.01 U	0.017	0.036	0.016	0.014	0.043	0.15 J	0.018 J	2.8	0.072	0.01 U	0.11	0.027
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	0.014 J	0.01 UJ	0.24	0.015	0.01 U	0.013	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U	0.012	0.022	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.02	0.055 J	0.01 UJ	0.93	0.098	0.01 U	0.053	0.016
Total cPAHs TEQ in mg/kg	0.4	7.9	0.00835	0.0306	0.0313	ND	0.0117	ND	ND	0.0081	ND	ND	0.0164	0.0329	0.0146	0.00944	0.0341	0.141	0.0159	2.45	0.0847	ND	0.114	0.0326
Volatile Organic Compounds (VOC)																								
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane in mg/kg	23,000	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene in mg/kg	180,000	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene in mg/kg			0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane in mg/kg	4.4	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.089	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane in mg/kg	160	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene in mg/kg	320,000	320,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane in mg/kg	3,600	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Table 17 - Excavation Verification Soil Quality Data for UST 29/Latex Spill Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Bottom Samples in Place															Sidewall Samples in Place						
			UST29-B01 12/23/13 (5 ft)	UST29-B02 12/23/13 (5 ft)	UST29-B03 12/23/13 (5 ft)	UST29-B04 12/23/13 (5 ft)	UST29-B05 12/23/13 (5 ft)	UST29-B06 12/23/13 (5 ft)	UST29-B06 FD 12/23/13 (5 ft)	UST29-B08 1/2/14 (15 ft) SAT	UST29-B10 1/3/14 (15 ft) SAT	UST29-B12 1/6/14 (17 ft) SAT	UST29-B13 1/7/14 (16 ft) SAT	UST29-B14 1/8/14 (17 ft) SAT	UST29-B15 1/8/14 (17 ft) SAT	UST29-B15 FD 1/8/14 (17 ft) SAT	UST29-B16 1/8/14 (17 ft) SAT	UST29-S01 12/23/13 (3 ft)	UST29-S01 FD 12/23/13 (3 ft)	UST29-S02 12/23/13 (3 ft)	UST29-S03 12/23/13 (3 ft)	UST29-S04 12/23/13 (3 ft)	UST29-S05 12/23/13 (3 ft)	UST29-S06 12/23/13 (3 ft)
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene in mg/kg	24,000	24,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dioxane in mg/kg	1312	1312	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
2,2-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone in mg/kg	2,100,000	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone in mg/kg	3,200,000	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene in mg/kg	2,400	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	2,100	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	17,000	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	4,900	4,900	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride in mg/kg	1,900	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	4,200	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane in mg/kg	1,600	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	700,000	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.28	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene in mg/kg	1,700	1,700	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	21,000	21,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	1.2 UJ	0.97 UJ	1.2 U	1.2 U	0.91 U	0.95 U	1.2 U
n-Propylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene in mg/kg	700,000	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	280,000	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene (TCE) in mg/kg	1,800	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl acetate in mg/kg	3,500,000	3,500,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Vinyl chloride in mg/kg	88	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	2.5	49	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.66	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1.8	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
o-Xylene in mg/kg	4.1	80	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene in mg/kg	70,000	70,000																						
Polychlorinated Biphenyls (PCBs)																								
Aroclor 1016 in mg/kg																								
Aroclor 1221 in mg/kg																								
Aroclor 1232 in mg/kg																								
Aroclor 1242 in mg/kg																								
Aroclor 1248 in mg/kg																								
Aroclor 1254 in mg/kg																								
Aroclor 1260 in mg/kg																								
Total PCBs (Sum of Aroclors) in mg/kg	10	10																						

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil. Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil. SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate. U = Analyte was not detected at or above the reported result. UJ = Analyte was not detected at or above the reported estimate. x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 17 - Excavation Verification Soil Quality Data for UST 29/Latex Spill Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place																					
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	UST29-S07 12/23/13 (3 ft)	UST29-S08 12/30/13 (8 ft) SAT	UST29-S09 12/30/13 (8 ft) SAT	UST29-S10 12/30/13 (8 ft) SAT	UST29-S11 12/30/13 (8 ft) SAT	UST29-S12 1/3/14 (3 ft)	UST29-S13 1/3/14 (6 ft) SAT	UST29-S15 1/3/14 (3 ft)	UST29-S16 1/3/14 (6 ft) SAT	UST29-S17 1/3/14 (9 ft) SAT	UST29-S18 1/3/14 (3 ft)	UST29-S19 1/3/14 (6 ft) SAT	UST29-S20 1/3/14 (9 ft) SAT	UST29-S21 1/3/14 (3 ft)	UST29-S22 1/7/14 (9 ft) SAT	UST29-S29 1/8/14 (9 ft) SAT	UST29-S30 1/8/14 (6 ft) SAT	UST29-S31 1/8/14 (3 ft)	UST29-S32 1/8/14 (9 ft) SAT	UST29-S33 1/8/14 (6 ft) SAT	UST29-S34 1/8/14 (3 ft)	UST29-S37 1/9/14 (6 ft) SAT
Total Petroleum Hydrocarbons (TPH)																								
Gasoline Range Hydrocarbons in mg/kg	100	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.5	4.8	81	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	150 x	50 U	50 U	50 U	50 U	50 U
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	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	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	275	ND	ND	ND	ND	ND
Metals																								
Arsenic in mg/kg	20	20		3.85							1.93					1.33	6.65			9.68				5.43
Cadmium in mg/kg	3,500	3,500		1 U							1 U					1 U	1 U			1 U				1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																						
Copper in mg/kg	36	36		22							11.2					5.47	27			20				5.66
Lead in mg/kg	81	1,000		21.9							4.3					1.47	7.22			10.5				1.94
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
Nickel in mg/kg	48	48		20.6							11.9					8.34	19.5			12.9				11.5
Selenium in mg/kg	18,000	18,000																						
Silver in mg/kg	18,000	18,000																						
Zinc in mg/kg	85	100		64.8							18.6					13.3	32.5			28.8				9.84
TCLP Metals																								
Arsenic in mg/L																								
Barium in mg/L																								
Cadmium in mg/L																								
Chromium (Total) in mg/L																								
Lead in mg/L																								
Mercury in mg/L																								
Selenium in mg/L																								
Silver in mg/L																								
Conventional Chemistry Parameters																								
Formaldehyde in mg/kg	700,000	700,000	2.5 U	12	2.2 J	10	4.7	3.4	2.8	0.68 J	0.75 J	2.6	5.5	4.8	3.3	5.0								6.7
Total Solids in percent			79.8	79.9	81.1	81.3	80.5	87.5	80.3	89.4	89.6	79.2	80.5	78.2	87.0	94.0								83.5
Polycyclic Aromatic Hydrocarbons (PAHs)																								
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.058	0.016	0.07	0.01 U
Acenaphthylene 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	0.054	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	0.046	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.029	0.012	0.01 U	0.11	0.01 U
Benzo(g,h,i)perylene in mg/kg			0.015	0.012	0.01	0.01	0.014	0.01 U	0.01	0.029	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.021	0.011	0.01 U	0.065	0.01 U
Fluoranthene in mg/kg	140,000	140,000	0.036	0.094	0.01 U	0.017	0.017	0.02	0.027	0.072	0.016	0.022	0.026	0.019	0.044	0.01 U	0.016	0.01 U	0.037	0.01 U	0.084	0.011	0.31	0.01 U
Fluorene in mg/kg	140,000	140,000	0.01 U	0.085	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.042	0.01 U	0.064	0.01 U
Phenanthrene in mg/kg			0.016	0.26	0.01 U	0.01 U	0.01 U	0.023	0.019	0.027	0.012	0.01 U	0.01	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.078	0.01 U	0.48	0.01 U
Pyrene in mg/kg	110,000	110,000	0.037	0.097	0.011	0.017	0.017	0.027	0.028	0.069	0.015	0.02	0.024	0.017	0.044	0.01 U	0.017	0.01 U	0.034	0.01 U	0.077	0.01 U	0.38	0.01 U
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.044	0.01 U	0.01 U	0.01 U	0.01 U	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	0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.047	0.01 U
Benz(a)anthracene in mg/kg			0.019	0.023	0.01 U	0.012	0.013	0.01 U	0.012	0.046	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.01 U	0.018	0.011	0.028	0.01 U	0.15	0.01 U
Benzo(a)pyrene in mg/kg			0.019	0.018	0.01 U	0.013	0.016	0.01 U	0.012	0.046	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.02	0.01 U	0.11	0.01 U
Benzo(b)fluoranthene in mg/kg			0.026	0.022	0.012	0.017	0.02	0.011	0.015	0.061	0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.016	0.01 U	0.026	0.01 U	0.12	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	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.01 U	0.043	0.01 U
Chrysene in mg/kg			0.021	0.028	0.01 U	0.011	0.011	0.016	0.014	0.059	0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.034	0.01 U	0.2	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	0.019	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg			0.013	0.01 U	0.01 U	0.011	0.016	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	0.011	0.01	0.01 U	0.065	0.01 UJ
Total cPAHs TEQ in mg/kg	0.4	7.9	0.026	0.0243	0.00825	0.0181	0.022	0.00826	0.0163	0.0625	ND	ND	ND	ND	0.00976	ND	ND	ND	0.0171	0.00875	0.0282	ND	0.152	ND
Volatile Organic Compounds (VOC)																								
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane in mg/kg	23,000	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene in mg/kg	180,000	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene in mg/kg			0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane in mg/kg	4.4	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane in mg/kg	160	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene in mg/kg	320,000	320,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane in mg/kg	3,600	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Table 17 - Excavation Verification Soil Quality Data for UST 29/Latex Spill Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place																					
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	UST29-S07 12/23/13 (3 ft)	UST29-S08 12/30/13 (8 ft) SAT	UST29-S09 12/30/13 (8 ft) SAT	UST29-S10 12/30/13 (8 ft) SAT	UST29-S11 12/30/13 (8 ft) SAT	UST29-S12 1/3/14 (3 ft)	UST29-S13 1/3/14 (6 ft) SAT	UST29-S15 1/3/14 (3 ft)	UST29-S16 1/3/14 (6 ft) SAT	UST29-S17 1/3/14 (9 ft) SAT	UST29-S18 1/3/14 (3 ft)	UST29-S19 1/3/14 (6 ft) SAT	UST29-S20 1/3/14 (9 ft) SAT	UST29-S21 1/3/14 (3 ft)	UST29-S22 1/7/14 (9 ft) SAT	UST29-S29 1/8/14 (9 ft) SAT	UST29-S30 1/8/14 (6 ft) SAT	UST29-S31 1/8/14 (3 ft)	UST29-S32 1/8/14 (9 ft) SAT	UST29-S33 1/8/14 (6 ft) SAT	UST29-S34 1/8/14 (3 ft)	UST29-S37 1/9/14 (6 ft) SAT
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene in mg/kg	24,000	24,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dioxane in mg/kg	1312	1312	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
2,2-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone in mg/kg	2,100,000	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone in mg/kg	3,200,000	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene in mg/kg	2,400	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	2,100	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	17,000	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	4,900	4,900	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Carbon tetrachloride in mg/kg	1,900	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	4,200	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane in mg/kg	1,600	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	700,000	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene in mg/kg	1,700	1,700	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	21,000	21,000	1.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
n-Propylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene in mg/kg	700,000	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	280,000	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene (TCE) in mg/kg	1,800	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl acetate in mg/kg	3,500,000	3,500,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Vinyl chloride in mg/kg	88	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	2.5	49	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	0.23	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
o-Xylene in mg/kg	4.1	80	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene in mg/kg	70,000	70,000																						
Polychlorinated Biphenyls (PCBs)																								
Aroclor 1016 in mg/kg																								
Aroclor 1221 in mg/kg																								
Aroclor 1232 in mg/kg																								
Aroclor 1242 in mg/kg																								
Aroclor 1248 in mg/kg																								
Aroclor 1254 in mg/kg																								
Aroclor 1260 in mg/kg																								
Total PCBs (Sum of Aroclors) in mg/kg	10	10																						

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil. Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil. SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate. U = Analyte was not detected at or above the reported result. UJ = Analyte was not detected at or above the reported estimate. x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 17 - Excavation Verification Soil Quality Data for UST 29/Latex Spill Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Sidewall Samples in Place				Overexcavated Samples												
			UST29-S38 1/9/14 (6 ft) SAT	UST29-S39 1/9/14 (9 ft) SAT	UST29-S40 1/9/14 (9 ft) SAT	UST29-S41 1/10/14 (6 ft) SAT	UST29-B07 12/30/13 (18 ft) OverEx SAT	UST29-B09 1/3/14 (15 ft) OverEx SAT	UST29-B11 1/3/14 (15 ft) OverEx SAT	UST29-S14 1/3/14 (9 ft) OverEx SAT	UST29-S23 1/7/14 (12 ft) OverEx SAT	UST29-S24 1/8/14 (3 ft) OverEx	UST29-S25 1/8/14 (6 ft) OverEx SAT	UST29-S26 1/8/14 (9 ft) OverEx SAT	UST29-S27 1/8/14 (6 ft) OverEx SAT	UST29-S28 1/8/14 (3 ft) OverEx	UST29-S35 1/8/14 (6 ft) OverEx SAT	UST29-S36 1/8/14 (3 ft) OverEx	XY-TPSW2 9/10/13 (8 ft) OverEx
Total Petroleum Hydrocarbons (TPH)																			
Gasoline Range Hydrocarbons in mg/kg	100	100	2 U	2 U	5.6	55	1,000	110	150	190	23	2 U	27,000	2 U	1,100	2 U	28	2 U	
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	50 U	50 U	260	50 U	830	50 U	50 U	160	1,100 x	50 U	610 x	50 U	50 U	50 U	2,100 x	50 U	
Oil Range Hydrocarbons in mg/kg	2,000	2,000	250 U	250 U	380	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	2,000	ND	ND	640	ND	955	ND	ND	285	1,220	ND	735	ND	ND	ND	2,220	ND	
Metals																			
Arsenic in mg/kg	20	20												5.01			4.07		2.94
Cadmium in mg/kg	3,500	3,500												1 U			1 U		1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																	14.5
Copper in mg/kg	36	36												11.5			7.67		
Lead in mg/kg	81	1,000												2.53			1.88		9.59
Mercury in mg/kg	0.1	0.1												0.1 U			0.1 U		0.1 U
Nickel in mg/kg	48	48												16.8			11.8		
Selenium in mg/kg	18,000	18,000																	1 U
Silver in mg/kg	18,000	18,000																	1 U
Zinc in mg/kg	85	100												18.6			11		
TCLP Metals																			
Arsenic in mg/L																			1 U
Barium in mg/L																			1 U
Cadmium in mg/L																			1 U
Chromium (Total) in mg/L																			1 U
Lead in mg/L																			1 U
Mercury in mg/L																			0.1 U
Selenium in mg/L																			1 U
Silver in mg/L																			1 U
Conventional Chemistry Parameters																			
Formaldehyde in mg/kg	700,000	700,000	3.6	4.5	10	2.2	0.86 J	14	6.6	2.2 J									
Total Solids in percent			72.8	79.4	83.4	90.8	85.7	83.3	82.2	76.6									
Polycyclic Aromatic Hydrocarbons (PAHs)																			
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.04	0.52	0.011	0.27	0.01 U	0.01 U	0.01 U	0.46	0.01 U	0.025	0.01 U	0.01 U	0.01 U	0.64	0.022	
Acenaphthylene in mg/kg			0.01 U	0.024	0.011	0.01	0.01 U	0.01 U	0.01 U	0.01 U	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	1,100,000	0.01 U	0.025	0.14	0.022	0.28	0.01 U	0.01 U	0.01 U	2.4	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.26	0.05	
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.079	0.039	0.053	0.16	0.01 U	0.01 U	0.017	1.2	0.01 U	0.01 U	0.01 U	0.016	0.01 U	0.075	0.066	
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.33	0.8	0.089	1.5	0.01 U	0.01 U	0.048	14	0.01 U	0.033	0.01 U	0.14	0.01 U	0.73	0.17	
Fluorene in mg/kg	140,000	140,000	0.01 U	0.029	0.26	0.011	0.22	0.01 U	0.01 U	0.01 U	0.38	0.01 U	0.038	0.01 U	0.014	0.01 U	0.57	0.022	
Phenanthrene in mg/kg			0.01 U	0.37	0.43	0.079	1.1	0.01 U	0.01 U	0.047	5.3	0.01 U	0.052	0.01 U	0.045	0.01 U	1.1	0.21	
Pyrene in mg/kg	110,000	110,000	0.01 U	0.31	0.75	0.11	1.2	0.01 U	0.01 U	0.048	12 J	0.01 U	0.03	0.01 U	0.13	0.01 U	0.63	0.22	
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.049	0.024	0.019	0.01 U	0.022	0.027	0.01 U	0.01 U	0.01 U	0.49	0.01 U	0.01 U	0.01 U	0.01 U	0.025	
Benz(a)anthracene in mg/kg			0.01 U	0.076	0.21	0.062	0.57	0.01 U	0.01 U	0.021	6.6 J	0.01 U	0.012	0.01 U	0.055	0.01 U	0.28	0.1	
Benzo(a)pyrene in mg/kg			0.01 U	0.1	0.08	0.062	0.43	0.01 U	0.01 U	0.022	4.2	0.01 U	0.01 U	0.01 U	0.035	0.01 U	0.17	0.098	
Benzo(b)fluoranthene in mg/kg			0.01 U	0.13	0.085	0.068	0.59	0.01 U	0.01 U	0.026	5.4	0.01 U	0.01 U	0.01 U	0.05	0.01 U	0.24	0.11	
Benzo(k)fluoranthene in mg/kg			0.01 U	0.05	0.023	0.02	0.19	0.01 U	0.01 U	0.01 U	1.5	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.084	0.033	
Chrysene in mg/kg			0.01 U	0.15	0.25	0.083	0.49	0.01 U	0.01 U	0.026	6.7 J	0.01 U	0.012	0.01 U	0.067	0.01 U	0.31	0.14	
Dibenzo(a,h)anthracene in mg/kg			0.01 U	0.012	0.013	0.012	0.043	0.01 U	0.01 U	0.01 U	0.4	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.022	0.016	
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U	0.071	0.026	0.05	0.22	0.01 U	0.01 U	0.015	1.4	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.087	0.071	
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	0.135	0.118	0.084	0.596	ND	ND	0.0295	5.8 J	ND	0.00832	ND	0.0502	ND	0.244	0.132	
Volatile Organic Compounds (VOC)																			
1,1,1,2-Tetrachloroethane in mg/kg	5,000	5,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane in mg/kg	7,000,000	7,000,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane in mg/kg	660	660	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane in mg/kg	2,300	2,300	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane in mg/kg	23,000	23,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene in mg/kg	180,000	180,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene in mg/kg			0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ
1,2,3-Trichloropropane in mg/kg	4.4	4.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene in mg/kg	4,500	4,500	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.28	0.27	0.2	0.05 U	0.05 U	0.05 U	20	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane in mg/kg	160	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane (EDB) in mg/kg	66	66	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene in mg/kg	320,000	320,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC) in mg/kg	1,400	1,400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane in mg/kg	3,600	3,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Table 17 - Excavation Verification Soil Quality Data for UST 29/Latex Spill Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place				Overexcavated Samples												
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	UST29-S38 1/9/14 (6 ft) SAT	UST29-S39 1/9/14 (9 ft) SAT	UST29-S40 1/9/14 (9 ft) SAT	UST29-S41 1/10/14 (6 ft) SAT	UST29-B07 12/30/13 (18 ft) OverEx SAT	UST29-B09 1/3/14 (15 ft) OverEx SAT	UST29-B11 1/3/14 (15 ft) OverEx SAT	UST29-S14 1/3/14 (9 ft) OverEx SAT	UST29-S23 1/7/14 (12 ft) OverEx SAT	UST29-S24 1/8/14 (3 ft) OverEx	UST29-S25 1/8/14 (6 ft) OverEx SAT	UST29-S26 1/8/14 (9 ft) OverEx SAT	UST29-S27 1/8/14 (6 ft) OverEx SAT	UST29-S28 1/8/14 (3 ft) OverEx	UST29-S35 1/8/14 (6 ft) OverEx SAT	UST29-S36 1/8/14 (3 ft) OverEx	XY-TPSW2 9/10/13 (8 ft) OverEx
1,3,5-Trimethylbenzene in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.07	0.06	0.05 U	0.05 U	0.05 U	6.3	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene in mg/kg	24,000	24,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dioxane in mg/kg	1312	1312	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	25 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	
2,2-Dichloropropane in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone in mg/kg	2,100,000	2,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone in mg/kg	280,000	280,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone in mg/kg	3,200,000	3,200,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene in mg/kg	2,400	2,400	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	1.5 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane in mg/kg	2,100	2,100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform in mg/kg	17,000	17,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane in mg/kg	4,900	4,900	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride in mg/kg	1,900	1,900	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform in mg/kg	4,200	4,200	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane in mg/kg			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	7,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane in mg/kg	1,600	1,600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane in mg/kg	35,000	35,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane in mg/kg	700,000	700,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	3	19	15	0.05 U	0.05 U	0.05 U	1,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene in mg/kg	1,700	1,700	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	12	0.05 U	0.056	0.05 U	0.05 U	0.05 U	4.8	0.05 U	0.89	0.05 U	0.11	0.05 U	0.05 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride in mg/kg	21,000	21,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	25 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
n-Propylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	7.7	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	3.9	0.05 U	0.81	0.05 U	0.24	0.05 U	0.05 U
p-Isopropyltoluene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.062	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
sec-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.54	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.41	0.05 U	0.05 U	0.05 U	0.063
Styrene in mg/kg	700,000	700,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene in mg/kg	350,000	350,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene (PCE) in mg/kg	21,000	21,000	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	1.2 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene in mg/kg	280,000	280,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	12	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene in mg/kg	70,000	70,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene in mg/kg			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene (TCE) in mg/kg	1,800	1,800	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	1.5 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Trichlorofluoromethane in mg/kg	1,100,000	1,100,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl acetate in mg/kg	3,500,000	3,500,000	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	25 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	
Vinyl chloride in mg/kg	88	88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylenes in mg/kg	2.5	49	0.1 U	0.1 U	0.1 U	0.1 U	10	46	53	0.1 U	0.1 U	0.1 U	2,900	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
o-Xylene in mg/kg	4.1	80	0.05 U	0.05 U	0.05 U	0.05 U	1.5	12	12	0.05 U	0.05 U	0.05 U	690	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene in mg/kg	70,000	70,000																	0.05 U
Polychlorinated Biphenyls (PCBs)																			
Aroclor 1016 in mg/kg																			0.1 U
Aroclor 1221 in mg/kg																			0.1 U
Aroclor 1232 in mg/kg																			0.1 U
Aroclor 1242 in mg/kg																			0.1 U
Aroclor 1248 in mg/kg																			0.1 U
Aroclor 1254 in mg/kg																			0.1 U
Aroclor 1260 in mg/kg																			0.1 U
Total PCBs (Sum of Aroclors) in mg/kg	10	10																	ND

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil. Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil. SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate. U = Analyte was not detected at or above the reported result. UJ = Analyte was not detected at or above the reported estimate. x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 18 - Excavation Verification Soil Quality Data for UST 70 Interim Action Area Verification Samples and Residual Exceedances

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place					Sidewall Samples in Place																
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	UST70-B01 11/21/13 (11 ft) SAT	UST70-B02 11/21/13 (11 ft) SAT	UST70-B03 11/21/13 (11 ft) SAT	UST70-B04 11/21/13 (11 ft) SAT	UST70-B05 11/21/13 (11 ft) SAT	UST70-S01 11/21/13 (4 ft)	UST70-S02 11/21/13 (8 ft)	UST70-S03 11/21/13 (4 ft)	UST70-S04 11/21/13 (8 ft)	UST70-S05 11/21/13 (4 ft)	UST70-S06 11/21/13 (8 ft)	UST70-S11 11/21/13 (4 ft)	UST70-S12 11/21/13 (8 ft)	UST70-S13 11/21/13 (4 ft)	UST70-S13 FD 11/21/13 (4 ft)	UST70-S14 11/21/13 (8 ft)	UST70-S15 11/21/13 (4 ft)	UST70-S16 11/21/13 (8 ft)	UST70-S16 FD 11/21/13 (8 ft)	UST70-S20 1/3/14 (4 ft)	UST70-S22 1/6/14 (8 ft)	UST70-S22 FD 1/6/14 (8 ft)
Total Petroleum Hydrocarbons (TPH)																								
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	50 U	50 U	50 U	50 U	76 x	50 U	50 U	570	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	580	50 U	50 U
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	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	2,000	ND	ND	ND	ND	201	ND	ND	695	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	705	ND	ND
Metals																								
Arsenic in mg/kg	20	20					3.66	3.48					3.14	8.92						5.36	5.97			
Cadmium in mg/kg	3,500	3,500					1 U	1 U					1 U	1 U						1 U	1 U			
Chromium (Total) in mg/kg	5,300,000	5,300,000																						
Copper in mg/kg	36	36					14.3	12.6					12.9	20.4						11.6	11.9			
Lead in mg/kg	81	1,000					23.4	8.67					7.14	49.4						10.2	9.83			
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			
Nickel in mg/kg	48	48					11.7	12.7					11	15.3						14.3	14.8			
Zinc in mg/kg	85	100					27	36.4					22.2	52.9						21.6	24.4			
Polycyclic Aromatic Hydrocarbons (PAHs)																								
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.018	0.016	0.01 U	0.038	0.01 U	0.01 U	0.13	0.01 U	0.01 U	0.01 U	0.012	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
Acenaphthylene 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	0.02	0.01 U	0.01 U	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	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.036	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			0.01 U	0.011	0.01 U	0.012	0.01 U	0.01	0.011	0.01 UJ	0.017	0.01 U	0.058	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 UJ	0.023 J		0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	140,000	0.027	0.065	0.029	0.019	0.064	0.01	0.017	0.023 J	0.044	0.01 U	0.21	0.014	0.18	0.01 U	0.016	0.01 U	0.01 U	0.01 UJ	0.04 J		0.01 U	0.01 U
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.026	0.01 U	0.01 U	0.16	0.01 U	0.01 U	0.01 U	0.01 U	0.11	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			0.01 U	0.019	0.01 U	0.011	0.045	0.01 U	0.01 U		0.031	0.01 U	0.19	0.011	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
Pyrene in mg/kg	110,000	110,000	0.027	0.063	0.044	0.03	0.078	0.013	0.021	0.035 J	0.071	0.01 U	0.28	0.018	0.13	0.014	0.021	0.01 U	0.01 U	0.01 J	0.05 J		0.01 U	0.01 U
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.011	0.01 U	0.01 U	0.032	0.01 U	0.01 U	0.023	0.01 U	0.01 U	0.01 U	0.022	0.17	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.14	0.14
Benz(a)anthracene in mg/kg			0.01 U	0.023	0.013	0.014	0.016	0.01 U	0.01 U	0.01 UJ	0.026	0.01 U	0.091	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.037 J		0.01 U	0.01 U
Benzo(a)pyrene in mg/kg			0.01 U	0.018	0.01 U	0.016	0.012	0.011	0.013	0.01 UJ	0.029	0.01 U	0.1	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.01 UJ	0.036 J		0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg			0.01 U	0.023	0.01 U	0.02	0.018	0.016	0.017	0.016 J	0.03	0.01 U	0.13	0.01 U	0.014	0.012	0.016	0.01 U	0.01	0.01 UJ	0.049 J		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 UJ	0.01 U	0.01 U	0.046	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.019 J		0.01 U	0.01 U
Chrysene in mg/kg			0.01 U	0.021	0.01 U	0.018	0.023	0.01	0.012	0.014 J	0.037	0.01 U	0.16	0.01 U	0.018	0.01 U	0.012	0.01 U	0.01 U	0.01 UJ	0.039 J		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 UJ	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 U
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U	0.011	0.01 U	0.011	0.01 U	0.011	0.011	0.01 UJ	0.015	0.01 U	0.059	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.024 J		0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	0.0249	0.00835	0.0217	0.0171	0.0153	0.0174	0.00874 J	0.0375	ND	0.136	ND	0.00968	0.00825	0.0167	ND	0.00805	ND	0.0498		ND	ND
Polychlorinated Biphenyls (PCBs)																								
Aroclor 1016 in mg/kg																								
Aroclor 1221 in mg/kg																								
Aroclor 1232 in mg/kg																								
Aroclor 1242 in mg/kg																								
Aroclor 1248 in mg/kg																								
Aroclor 1254 in mg/kg																								
Aroclor 1260 in mg/kg																								
Total PCBs (Sum of Aroclors) in mg/kg	10	10																						

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.
Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.
SAT = Sample of saturated soil; samples without this designation are unsaturated soil.
J = Analyte was positively identified. The reported result is an estimate.
U = Analyte was not detected at or above the reported result.
UJ = Analyte was not detected at or above the reported estimate.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 18 - Excavation Verification Soil Quality Data for UST 70 Interim Action Area Verification Samples and Residual Exceedances

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Overexcavated Samples								
			UST70-S07 11/21/13 (4 ft) OverEx	UST70-S08 11/21/13 (8 ft) OverEx	UST70-S09 11/21/13 (4 ft) OverEx	UST70-S10 11/21/13 (8 ft) OverEx	UST70-S17 12/19/13 (4 ft) OverEx	UST70-S18 12/19/13 (8 ft) OverEx	UST70-S19 12/19/13 (8 ft) OverEx	UST70-S21 1/3/14 (8 ft) OverEx	UST70-TP1 8/30/13 (7 ft) OverEx
Total Petroleum Hydrocarbons (TPH)											
Diesel Range Hydrocarbons in mg/kg	2,000	2,000	**29,000**	**15,000**	50 U	**4,100**	50 U	**2,100**	**5,000**	**2,800**	250
Oil Range Hydrocarbons in mg/kg	2,000	2,000	1,000 x	250 U	250 U	250 U	250 U	250 U	910 x	250 U	250 U
Total TPHs in mg/kg	2,000	2,000	**30,000**	**15,100**	ND	**4,220**	ND	**2,220**	**5,910**	**2,920**	375
Metals											
Arsenic in mg/kg	20	20									4.77
Cadmium in mg/kg	3,500	3,500									1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000									7.59
Copper in mg/kg	36	36									21.3
Lead in mg/kg	81	1,000									29
Mercury in mg/kg	0.1	0.1									0.1 U
Nickel in mg/kg	48	48									13
Zinc in mg/kg	85	100									55.4
Polycyclic Aromatic Hydrocarbons (PAHs)											
Acenaphthene in mg/kg	210,000	210,000	11	7.1	0.01 U	1.1	0.01 U	0.38	0.01 U		
Acenaphthylene in mg/kg			0.1 U	0.1 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U		
Anthracene in mg/kg	1,100,000	1,100,000	0.1 U	0.1 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U		
Benzo(g,h,i)perylene in mg/kg			0.1 U	0.1 U	0.01 U	0.1 U	0.016	0.01 U	0.026		
Fluoranthene in mg/kg	140,000	140,000	0.6	0.43	0.014	0.44	0.017	0.061	0.01 U		
Fluorene in mg/kg	140,000	140,000	11	6.6	0.01 U	1.2	0.01 U	0.14	0.01 U		
Phenanthrene in mg/kg			9.8	6.7	0.01 U	1.2	0.013	0.16	0.01 U		
Pyrene in mg/kg	110,000	110,000	1	0.56	0.025	0.4	0.021	0.092	0.093		
Naphthalene in mg/kg	70,000	70,000	0.1 U	0.1 U	0.01 U	0.1 U	0.014	0.01 U	0.01 U		
Benz(a)anthracene in mg/kg			0.14	0.1	0.01 U	0.11	0.01	0.02	0.01 U		
Benzo(a)pyrene in mg/kg			0.1 U	0.1 U	0.01 U	0.1 U	0.016	0.01	0.024		
Benzo(b)fluoranthene in mg/kg			0.1 U	0.1 U	0.011	0.1 U	0.023	0.019	0.036		
Benzo(k)fluoranthene in mg/kg			0.1 U	0.1 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U		
Chrysene in mg/kg			0.22	0.14	0.01 U	0.11	0.015	0.027	0.035		
Dibenzo(a,h)anthracene in mg/kg			0.1 U	0.1 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U		
Indeno(1,2,3-cd)pyrene in mg/kg			0.1 U	0.1 U	0.01 U	0.1 U	0.014	0.01 U	0.019		
Total cPAHs TEQ in mg/kg	0.4	7.9	0.0862	0.0814	0.00815	0.0821	0.0219	0.0157	0.0314		
Polychlorinated Biphenyls (PCBs)											
Aroclor 1016 in mg/kg											0.1 U
Aroclor 1221 in mg/kg											0.1 U
Aroclor 1232 in mg/kg											0.1 U
Aroclor 1242 in mg/kg											0.1 U
Aroclor 1248 in mg/kg											0.1 U
Aroclor 1254 in mg/kg											0.1 U
Aroclor 1260 in mg/kg											0.1 U
Total PCBs (Sum of Aroclors) in mg/kg	10	10									ND

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 19 - Excavation Verification Soil Quality Data for USTs 71, 72, 73 Interim Action Area

K-C Worldwide Site Upland Area 110207

			Bottom Samples in Place																		
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BUST-B01 11/7/13 (8 ft)	BUST-B02 11/7/13 (8 ft)	BUST-B03 11/7/13 (16 ft) SAT	BUST-B04 11/7/13 (16 ft) SAT	BUST-B05 11/8/13 (18 ft) SAT	BUST-B06 11/8/13 (18 ft) SAT	BUST-B07 11/8/13 (19 ft) SAT	BUST-B08 11/8/13 (19 ft) SAT	BUST-B09 11/8/13 (21 ft) SAT	BUST-B10 11/8/13 (19 ft) SAT	BUST-B11 11/8/13 (19 ft) SAT	BUST-B20 11/12/13 (6 ft)	BUST-B21 11/13/13 (18 ft) SAT	BUST-B22 11/15/13 (5 ft)	BUST-B24 11/15/13 (4 ft)	BUST-B26 11/15/13 (6 ft)	BUST-B29 11/19/13 (12 ft) SAT	BUST-B30 11/19/13 (12 ft) SAT	BUST-B31 11/19/13 (12 ft) SAT	BUST-B32 11/19/13 (12 ft) SAT
Total Petroleum Hydrocarbons (TPH)																						
Bunker C in mg/kg	2,000	2,000	420	250 U	250 U	250 U	250 U	250 U	250 U	1,200	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Metals																						
Antimony in mg/kg	1,400	1,400														1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic in mg/kg	20	20	4.3						2.8							3.81	2.23	3.99	1.53	2.85	2.1	1.86
Cadmium in mg/kg	3,500	3,500	1 U						1 U							1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																				
Copper in mg/kg	36	36	12.6						4.2							12.5	18.5	14.2	3.29	3.8	5.48	4.19
Lead in mg/kg	81	1,000	1.96						1.23							2.07	8.66	2.14	1 U	1 U	6.64	1.36
Mercury in mg/kg	0.1	0.1	0.1 U						0.1 U							0.1 U	**0.11**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	48	15.1						10.2							18.8	11	17.9	9.67	11.1	10.6	11.4
Zinc in mg/kg	85	100	18.8						8.06							26.4	21.5	24.2	3.92 J	6.09 J	10.1 J	7.72 J
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.46	0.01 U	0.01 U	0.01 U	0.01 U	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			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	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	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.7	0.013	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			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	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	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.25	0.01 U	0.01 U	0.01 U	0.01 U	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			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.95	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 U	0.01 U
Pyrene in mg/kg	110,000	110,000	0.01 U	0.01 U	0.01 U	0.011	0.01	0.01 U	0.01 U	1.2	0.023	0.019	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.022	0.01 U
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
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	0.46	0.01 U	0.01 U	0.01 U	0.01 U	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	0.22	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
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	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.52	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	0.017	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	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.2 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
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	ND	ND	ND	ND	ND	0.311	ND	0.0142	ND	ND	ND	ND	ND	ND	ND	ND	0.00767	ND
Polychlorinated Biphenyls (PCBs)																						
Aroclor 1016 in mg/kg																						
Aroclor 1221 in mg/kg																						
Aroclor 1232 in mg/kg																						
Aroclor 1242 in mg/kg																						
Aroclor 1248 in mg/kg																						
Aroclor 1254 in mg/kg																						
Aroclor 1260 in mg/kg																						
Total PCBs (Sum of Aroclors) in mg/kg	10	10																				

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

Table 19 - Excavation Verification Soil Quality Data for USTs 71, 72, 73 Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Bottom Samples in Place: BUST-B33 11/19/13 (12 ft) SAT	BUST-B34 11/21/13 (12 ft) SAT	BUST-B35 11/21/13 (12 ft) SAT	BUST-B37 11/21/13 (10 ft) SAT	BUST-B38 11/21/13 (8 ft)	BUST-B40 12/3/13 (12 ft) SAT	BUST-B41 12/3/13 (12 ft) SAT	Sidewall Samples in Place: BUST-S04 11/7/13 (10 ft) SAT	BUST-S05 11/7/13 (7 ft)	BUST-S05 FD 11/7/13 (7 ft)	BUST-S06 11/7/13 (8 ft)	BUST-S07 11/7/13 (4 ft)	BUST-S08 11/7/13 (10 ft) SAT	BUST-S09 11/7/13 (5 ft)	BUST-S10 11/7/13 (10 ft) SAT	BUST-S11 11/7/13 (5 ft)	BUST-S12 11/7/13 (10 ft) SAT	BUST-S13 11/7/13 (5 ft)	BUST-S14 11/7/13 (9 ft) SAT	BUST-S15 11/7/13 (5 ft)
Total Petroleum Hydrocarbons (TPH)																						
Bunker C in mg/kg	2,000	2,000	250 U	250 U	250 U	1,700	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	380	250 U	250 U	710	250 U	250 U	250 U	250 U
Metals																						
Antimony in mg/kg	1,400	1,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U													
Arsenic in mg/kg	20	20	2.87	4.19	6.12	4.54	3.42	1 U	1 U		1 U	1 U	1 U					3.79				
Cadmium in mg/kg	3,500	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U					1 U				
Chromium (Total) in mg/kg	5,300,000	5,300,000																				
Copper in mg/kg	36	36	3.92	16.6	21	26.5	9.28	5.36	4.5		5.23	5.09	5.17					12.2				
Lead in mg/kg	81	1,000	1.33	2.23	3.49	21.2	1.53	1.65	1.76		4.58	4.85	2.38					2.12				
Mercury in mg/kg	0.1	0.1	0.1 U	0.1 U	0.1 U	**0.17**	0.1 U	0.1 U	**0.11**		0.1 U	0.1 U	0.1 U					0.1 U				
Nickel in mg/kg	48	48	10.5	20.3	20.1	20.4	15.8	16.4	9.93		7.98	9.09	11.3					12.6				
Zinc in mg/kg	85	100	6.73	33.4	32.8	43.9	26.8	13.9	7.63		11.3	11.4	31.4					18.4				
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.1	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.063	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene 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
Anthracene in mg/kg	1,100,000	1,100,000	0.01 U	0.01 U	0.01 U	0.088	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.021	0.01 U	0.01 U	0.09	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg			0.01 U	0.01 U	0.01 U	0.045	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.023	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.03	0.01 U	0.12	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.043	0.01 U	0.019	0.01 U	0.01 U
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.058	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.068	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg			0.01 U	0.026	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	0.01 U	0.01 U	0.28	0.01 U	0.011	0.01 U	0.01 U
Pyrene in mg/kg	110,000	110,000	0.01 U	0.03	0.01 U	0.35	0.01 U	0.01 U	0.01 U	0.023	0.01 U	0.01 U	0.01 U	0.01 U	0.034	0.014	0.01 U	0.2	0.01 U	0.025	0.015	0.01 U
Naphthalene in mg/kg	70,000	70,000	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
Benz(a)anthracene in mg/kg			0.01 U	0.015	0.01 U	0.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.077	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg			0.01 U	0.012	0.01 U	0.064	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.038	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg			0.01 U	0.016	0.01 U	0.062	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017	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	0.012	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	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	0.016	0.01 U	0.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.11	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
Indeno(1,2,3-cd)pyrene in mg/kg			0.01 U	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	0.01 U	0.01 U	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	0.4	7.9	ND	0.0168	ND	0.0867	ND	ND	ND	ND	ND	ND	ND	ND	0.00828	ND	ND	0.05	ND	ND	ND	ND
Polychlorinated Biphenyls (PCBs)																						
Aroclor 1016 in mg/kg																						
Aroclor 1221 in mg/kg																						
Aroclor 1232 in mg/kg																						
Aroclor 1242 in mg/kg																						
Aroclor 1248 in mg/kg																						
Aroclor 1254 in mg/kg																						
Aroclor 1260 in mg/kg																						
Total PCBs (Sum of Aroclors) in mg/kg	10	10																				

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

Table 19 - Excavation Verification Soil Quality Data for USTs 71, 72, 73 Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place																			
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BUST-S18 11/12/13 (8 ft)	BUST-S19 11/12/13 (5 ft)	BUST-S20 11/12/13 (8 ft)	BUST-S24 11/15/13 (3 ft)	BUST-S30 11/15/13 (3 ft)	BUST-S31 11/15/13 (3 ft)	BUST-S32 11/21/13 (8 ft) SAT	BUST-S33 11/21/13 (12 ft) SAT	BUST-S34 11/21/13 (4 ft)	BUST-S35 11/21/13 (8 ft) SAT	BUST-S36 11/21/13 (12 ft) SAT	BUST-S37 11/19/13 (4 ft)	BUST-S38 11/19/13 (8 ft) SAT	BUST-S39 11/19/13 (12 ft) SAT	BUST-S40 11/19/13 (4 ft)	BUST-S41 11/19/13 (8 ft) SAT	BUST-S42 11/19/13 (12 ft) SAT	BUST-S43 11/19/13 (4 ft)	BUST-S43 FD 11/19/13 (4 ft)	BUST-S44 11/19/13 (8 ft)
Total Petroleum Hydrocarbons (TPH)																						
Bunker C in mg/kg	2,000	2,000	250 U	250 U	250 U	250 U	250 U	1,400	560	1,200	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Metals																						
Antimony in mg/kg	1,400	1,400				1.16	1 U	1.43	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic in mg/kg	20	20				1.47	6.01	8.34	5.13	7.97	5.98	4.67	4.53	1.22	1 U	1 U	1 U	1 U	2.88	1 UJ	2.44 J	1 U
Cadmium in mg/kg	3,500	3,500				1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																				
Copper in mg/kg	36	36				9.82	23.6	33.3	17.8	**74.5**	**36.9**	**62.5**	16.1	7.9	4.76	8.23	2.44	3.12	7.8	19.1 J	3.62 J	6.01
Lead in mg/kg	81	1,000				1.46	17.3	26.5	3.62	32.6	6.39	2.28	2.39	3.04	1.91	1.68	1.51	1 U	7.59	6.16 J	1 UJ	1.94
Mercury in mg/kg	0.1	0.1				0.1 U	**0.19**	**0.21**	0.1 U	**0.13**	0.1 U	0.1 U	0.1 U	0.1 U	**0.17**	**0.22**	0.1 U	0.1 U	**0.17**	0.1 U	0.1 U	0.1 U
Nickel in mg/kg	48	48				20.9	12	15	46.1	19.2	15.3	14.6	16.4	5.21	6.03	6.9	5.99	7.97	15.5	22.3 J	10.4 J	7.65
Zinc in mg/kg	85	100				13.3	30	45.2	46.1	71.4	27.1	27.4	24.3	5.92	5.03	6.78	3 J	3.98 J	18 J	25.6 J	6.46 J	7.22 J
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	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			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01	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	0.011	0.1	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	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			0.01 U	0.01 U	0.01 U	0.01 U	0.029	0.37	0.012	0.26	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.023	0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	140,000	0.01 U	0.012	0.01 U	0.01 U	0.057	0.81	0.035	0.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.038	0.01 U	0.01 U	0.01 U
Fluorene in mg/kg	140,000	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	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			0.01 U	0.01 U	0.01 U	0.01 U	0.05	0.74	0.01 U	0.2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.013	0.01 U	0.01 U	0.01 U
Pyrene in mg/kg	110,000	110,000	0.01 U	0.023	0.01 U	0.01 U	0.074	1.4	0.049	0.31	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.027	0.01 U	0.01 U	0.053	0.01 U	0.01 U	0.01 U
Naphthalene in mg/kg	70,000	70,000	0.01 U	0.011	0.01 U	0.01 U	0.029	0.1 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benz(a)anthracene in mg/kg			0.01 U	0.01 U	0.01 U	0.01 U	0.024	0.35	0.022	0.17	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.023	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	0.026	0.47	0.018	0.18	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.022	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	0.04	0.41	0.024	0.22	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.037	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	0.12	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.043	0.6	0.023	0.18	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.032	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	0.1 U	0.01 U	0.1 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.022	0.24	0.01	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	0.018	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.4	7.9	ND	ND	ND	ND	0.036	0.593	0.0248	0.245	ND	ND	ND	ND	ND	ND	ND	ND	0.0311	ND	ND	ND
Polychlorinated Biphenyls (PCBs)																						
Aroclor 1016 in mg/kg																						
Aroclor 1221 in mg/kg																						
Aroclor 1232 in mg/kg																						
Aroclor 1242 in mg/kg																						
Aroclor 1248 in mg/kg																						
Aroclor 1254 in mg/kg																						
Aroclor 1260 in mg/kg																						
Total PCBs (Sum of Aroclors) in mg/kg	10	10																				

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.
Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.
SAT = Sample of saturated soil; samples without this designation are unsaturated soil.
J = Analyte was positively identified. The reported result is an estimate.
U = Analyte was not detected at or above the reported result.
UJ = Analyte was not detected at or above the reported estimate.

Table 19 - Excavation Verification Soil Quality Data for USTs 71, 72, 73 Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place																			
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BUST-S46 11/19/13 (4 ft)	BUST-S46A 11/19/13 (8 ft)	BUST-S47 11/19/13 (12 ft) SAT	BUST-S48 11/19/13 (4 ft)	BUST-S49 11/19/13 (8 ft)	BUST-S50 11/19/13 (12 ft) SAT	BUST-S51 11/19/13 (4 ft)	BUST-S52 11/19/13 (8 ft)	BUST-S53 11/19/13 (12 ft) SAT	BUST-S54 11/20/13 (8 ft) SAT	BUST-S55 11/20/13 (12 ft) SAT	BUST-S56 11/20/13 (8 ft) SAT	BUST-S57 11/20/13 (12 ft) SAT	BUST-S59 12/3/13 (12 ft) SAT	BUST-S60 12/3/13 (6 ft)	BUST-S61 12/3/13 (12 ft) SAT	BUST-S63 12/12/13 (3 ft)	BUST-S64 12/12/13 (6 ft)	BUST-S65 12/12/13 (9 ft) SAT	BUST-S66 12/12/13 (3 ft)
Total Petroleum Hydrocarbons (TPH)																						
Bunker C 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	250 U	250 U	250 U	250 U	250 U	250 U	250 U	550
Metals																						
Antimony in mg/kg	1,400	1,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic in mg/kg	20	20	2.65	1.55	1.55	7.65	1.75	1 U	1 U	1.05	1 U	6.77	4.15	3.36	1.7	1 U	1 U	1 U	3.46	3.97	3.35	4.54
Cadmium in mg/kg	3,500	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																				
Copper in mg/kg	36	36	9.71	7.06	4.73	10	4.33	4.22	3.91	4.46	3.43	20	6.36	14.1	4.98	5.05	3.62	6.71	25.3	12.8	8.85	34.1
Lead in mg/kg	81	1,000	7.4	1.98	1 U	2.09	1 U	1 U	1.81	1.11	1 U	2.24	1 U	3.76	1.22	1.37	1.13 J	2.76	2.66	2.21	1.62	9.95
Mercury in mg/kg	0.1	0.1	**0.11**	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	48	10.4	7.59	17	11.2	7.77	7.06	7.1	7.7	6.57	18.8	15.2	20.4	10.9	9.71	7.65	11	11.3	17.3	16.5	22.7
Zinc in mg/kg	85	100	86 J	6.8 J	7.2 J	16	7.09	10.8	7.14	5.74	5.89	30.3	10.3	39.1	9.21	6.13	5.08	10.6	90.7	21.8	21	36.5
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	210,000	0.25	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene 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
Anthracene in mg/kg	1,100,000	1,100,000	0.2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02
Benzo(g,h,i)perylene in mg/kg			0.048	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.044
Fluoranthene in mg/kg	140,000	140,000	0.32	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	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.11
Fluorene in mg/kg	140,000	140,000	0.17	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.021	0.01 U	0.01 U	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			0.72	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.063	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.065
Pyrene in mg/kg	110,000	110,000	0.3	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	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	0.018	0.01 U	0.01 U	0.28
Naphthalene in mg/kg	70,000	70,000	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	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.084
Benz(a)anthracene in mg/kg			0.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.075
Benzo(a)pyrene in mg/kg			0.089	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.062
Benzo(b)fluoranthene in mg/kg			0.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.059
Benzo(k)fluoranthene in mg/kg			0.035	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025
Chrysene in mg/kg			0.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.12
Dibenzo(a,h)anthracene in mg/kg			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 U	0.01 U	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			0.05	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.028
Total cPAHs TEQ in mg/kg	0.4	7.9	0.122	ND	ND	ND	ND	ND	ND	ND	ND	0.0077	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0824
Polychlorinated Biphenyls (PCBs)																						
Aroclor 1016 in mg/kg																						
Aroclor 1221 in mg/kg																						
Aroclor 1232 in mg/kg																						
Aroclor 1242 in mg/kg																						
Aroclor 1248 in mg/kg																						
Aroclor 1254 in mg/kg																						
Aroclor 1260 in mg/kg																						
Total PCBs (Sum of Aroclors) in mg/kg	10	10																				

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.
Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.
SAT = Sample of saturated soil; samples without this designation are unsaturated soil.
J = Analyte was positively identified. The reported result is an estimate.
U = Analyte was not detected at or above the reported result.
UJ = Analyte was not detected at or above the reported estimate.

Table 19 - Excavation Verification Soil Quality Data for USTs 71, 72, 73 Interim Action Area

K-C Worldwide Site Upland Area 110207

			Sidewall Samples in Place		Soils Beneath Monolith Foundations							Overexcavated Samples										
Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	BUST-S68 12/19/13 (3 ft)	BUST-S69 1/3/14 (3 ft)	BUST-B39 12/3/13 (12 ft) SAT	BUST-S16 11/12/13 (8 ft)	BUST-S16 FD 11/12/13 (8 ft)	BUST-S17 11/12/13 (8 ft)	BUST-S21 11/12/13 (10 ft) SAT	BUST-S22 11/12/13 (10 ft) SAT	BUST-S58 12/3/13 (12 ft) SAT	BUST-B23 11/15/13 (6 ft) OverEx	BUST-B23 FD 11/15/13 (6 ft) OverEx	BUST-B25 11/15/13 (4 ft) OverEx	BUST-B27 11/15/13 (6 ft) OverEx	BUST-B36 11/21/13 (6 ft) OverEx	BUST-S01 11/7/13 (6 ft) OverEx	BUST-S02 11/7/13 (10 ft) OverEx SAT	BUST-S03 11/7/13 (10 ft) OverEx SAT	BUST-S23 11/13/13 (16 ft) OverEx SAT	BUST-S25 11/15/13 (3 ft) OverEx	BUST-S26 11/15/13 (5 ft) OverEx
Total Petroleum Hydrocarbons (TPH)																						
Bunker C in mg/kg	2,000	2,000	500	250 U	**17,000**	**8,400**	**8,600**	**6,400**	**3,800**	250 U	**28,000**	250 U	380	**4,200**	250 U	**8,000**	250 U	250 U	670	250 U	**2,200**	**7,100**
Metals																						
Antimony in mg/kg	1,400	1,400	1.6		1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U				1 U	2.33	1 U
Arsenic in mg/kg	20	20	7.05		1 U	3.62	4.37			4.8	1 U	3.29	3.6	6.46	4.6	5.01				2.98	6.71	5.2
Cadmium in mg/kg	3,500	3,500	1 U		1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U				1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000																				
Copper in mg/kg	36	36	**54** J		5.07	8.35	9.96			16.6	3.44	9.71	10.4	35.2	**194**	27.7				7.51	**36.1**	27
Lead in mg/kg	81	1,000	29.5		2.17	2.26	3.42			3.42	1.58	1.79	1.91	39.9	1.92	43.8				1.73	58.4	30.4
Mercury in mg/kg	0.1	0.1	**0.14**		**0.11**	0.1 U	0.1 U			0.1 U	0.1 U	0.1 U	0.1 U	**0.3**	0.1 U	**0.18**				0.1 U	**0.69**	**0.3**
Nickel in mg/kg	48	48	13.1		13.4	16.3	17.6			20	8.78	14.2	16.1	20.2	16.2	19				11.4	17.7	17.7
Zinc in mg/kg	85	100	47.4		12.3	18.5	22.4			40.7	7.99	18.2	22.6	55.8	31.3	77				13.1	**118**	43.6
Polycyclic Aromatic Hydrocarbons (PAHs)																						
Acenaphthene in mg/kg	210,000	210,000	0.023		0.2 U	0.76	0.59	0.77	0.21	0.01 U	0.5 U	0.067 J	0.01 UJ	0.039	0.01 U	0.077	0.01 U	0.011	0.14	0.01 U	0.24	0.18
Acenaphthylene in mg/kg			0.012		0.2 U	0.1 U	0.1 U	0.1 U	0.01 U	0.01 U	0.5 U	0.01 UJ	0.01 UJ	0.023	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U
Anthracene in mg/kg	1,100,000	1,100,000	0.033		0.2 U	1.2	1.1	1.2	0.24	0.01 U	1.8	0.11 J	0.01 UJ	0.091	0.01 U	0.01 U	0.01 U	0.01 U	0.19	0.01 U	0.43	0.11
Benzo(g,h,i)perylene in mg/kg			0.032		0.28	0.28	0.26	0.25	0.083	0.01 U	0.52	0.038 J	0.01 UJ	0.088	0.01 U	0.11	0.01 U	0.01 U	0.053	0.01 U	0.3	0.07
Fluoranthene in mg/kg	140,000	140,000	0.049		0.24	0.36	0.35	0.38	0.21	0.01 U	0.86	0.29 J	0.01 UJ	0.15	0.01 U	0.22	0.01 U	0.01 U	0.083	0.01 U	1.4	0.12
Fluorene in mg/kg	140,000	140,000	0.01 U		0.2 U	0.59 J	0.37 J	0.54	0.01 U	0.01 U	0.5 U	0.057 J	0.01 UJ	0.026	0.01 U	0.019	0.01 U	0.01 U	0.17	0.01 U	0.19	0.018
Phenanthrene in mg/kg			0.022		0.2 U	1.8 J	1 J	1.9	0.01 U	0.01 U	3	0.35 J	0.01 UJ	0.081	0.01 U	0.01 U	0.012	0.01 U	0.59	0.01 U	1.5	0.057
Pyrene in mg/kg	110,000	110,000	0.099		1.7	2.2	2.1	2.1	0.97	0.01 U	5.9	0.27 J	0.01 UJ	0.44	0.01 U	0.8	0.01 U	0.015	0.44	0.01 U	1.6	0.4
Naphthalene in mg/kg	70,000	70,000	0.01 U		0.2 U	0.12	0.1 U	0.1 U	0.01 U	0.01 U	0.5 U	0.026 J	0.01 UJ	0.047	0.01 U	0.038	0.01 U	0.01 U	0.013	0.01 U	0.18	0.07
Benz(a)anthracene in mg/kg			0.046		1.1	0.99	0.86	0.84	0.28	0.01 U	2.1	0.11 J	0.01 UJ	0.18	0.01 U	0.28	0.01 U	0.01 U	0.15	0.01 U	0.56	0.16
Benzo(a)pyrene in mg/kg			0.044		0.51	0.52	0.48	0.47	0.17	0.01 U	0.86	0.087 J	0.01 UJ	0.1	0.01 U	0.17	0.01 U	0.01 U	0.09	0.01 U	0.49	0.095
Benzo(b)fluoranthene in mg/kg			0.059		0.4	0.17	0.16	0.17	0.03	0.01 U	0.7	0.097 J	0.01 UJ	0.079	0.01 U	0.12	0.01 U	0.01 U	0.035	0.01 U	0.55	0.067
Benzo(k)fluoranthene in mg/kg			0.012		0.2 U	0.1 U	0.1 U	0.1 U	0.085	0.01 U	0.5 U	0.043 J	0.01 UJ	0.017	0.01 U	0.023	0.01 U	0.01 U	0.039	0.01 U	0.21	0.012
Chrysene in mg/kg			0.078		1.9	1.7 J	1 J	1	0.69	0.01 U	4.5	0.12 J	0.01 UJ	0.33	0.01 U	0.2	0.01 U	0.01 U	0.19	0.01 U	0.68	0.25
Dibenzo(a,h)anthracene in mg/kg			0.01 U		0.2 U	0.1 U	0.1 U	0.1 U	0.051	0.01 U	0.5 U	0.01 UJ	0.01 UJ	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.01 U	0.1 U	0.021
Indeno(1,2,3-cd)pyrene in mg/kg			0.027		0.2 U	0.1 U	0.1 U	0.1 U	0.043	0.01 U	0.5 U	0.041 J	0.01 UJ	0.052	0.01 U	0.06	0.01 U	0.01 U	0.018	0.01 U	0.28	0.044
Total cPAHs TEQ in mg/kg	0.4	7.9	0.0597		0.709	0.668	0.607	0.596	0.226	ND	1.26	0.118	ND	0.138	ND	0.221	ND	ND	0.118	ND	0.662	0.128
Polychlorinated Biphenyls (PCBs)																						
Aroclor 1016 in mg/kg																						
Aroclor 1221 in mg/kg																						
Aroclor 1232 in mg/kg																						
Aroclor 1242 in mg/kg																						
Aroclor 1248 in mg/kg																						
Aroclor 1254 in mg/kg																						
Aroclor 1260 in mg/kg																						
Total PCBs (Sum of Aroclors) in mg/kg	10	10																				

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

J = Analyte was positively identified. The reported result is an estimate.

U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

Table 19 - Excavation Verification Soil Quality Data for USTs 71, 72, 73 Interim Action Area

K-C Worldwide Site Upland Area 110207

Chemical Name	Interim Action Cleanup Level - Saturated Soil	Interim Action Cleanup Level - Unsaturated Soil	Overexcavated Samples BUST-S27 11/15/13 (5 ft) OverEx	BUST-S28 11/15/13 (3 ft) OverEx	BUST-S29 11/15/13 (5 ft) OverEx	BUST-S45 11/19/13 (12 ft) OverEx SAT	BUST-S62 12/12/13 (3 ft) OverEx	BUST-S62 FD 12/12/13 (3 ft) OverEx	BUST-S67 12/12/13 (3 ft) OverEx	UST71-H06TP7 8/30/13 (1 ft) OverEx
Total Petroleum Hydrocarbons (TPH)										
Bunker C in mg/kg	2,000	2,000	470	250 U	250 U	**37,000**	**3,100**	**7,100**	**82,000** J	1,800
Metals										
Antimony in mg/kg	1,400	1,400	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Arsenic in mg/kg	20	20	4.29	3.59	2.07	1.25	2.57	3.14	1.82	1 U
Cadmium in mg/kg	3,500	3,500	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chromium (Total) in mg/kg	5,300,000	5,300,000								8.2
Copper in mg/kg	36	36	**40.7**	35.9	**40.4**	5.21	18.6	15.7	9.66	9.63
Lead in mg/kg	81	1,000	34.2	3.82	3.03	4.79	35.5	27	3.55	3.68
Mercury in mg/kg	0.1	0.1	**0.13**	0.1 U	0.1 U	0.1 U	0.1 U	**0.13**	0.1 U	0.1 U
Nickel in mg/kg	48	48	25.1	22	16.7	8.72	18.1	16.6	9.33	11.7
Zinc in mg/kg	85	100	**134**	38.1	30.9	12.9 J	46.5	62.4	22	13.9
Polycyclic Aromatic Hydrocarbons (PAHs)										
Acenaphthene in mg/kg	210,000	210,000	0.059	0.01 U	0.01 U	0.45	0.053 J	0.14 J	0.1 U	
Acenaphthylene in mg/kg			0.016	0.01 U	0.01 U	0.1 U	0.01 U	0.01 U	0.1 U	
Anthracene in mg/kg	1,100,000	1,100,000	0.03	0.01 U	0.01 U	0.1 U	0.068 J	0.13 J	0.1 U	
Benzo(g,h,i)perylene in mg/kg			0.1	0.01 U	0.01 U	0.35	0.059 J		0.1 U	
Fluoranthene in mg/kg	140,000	140,000	0.15	0.01 U	0.01 U	0.61	0.12 J	0.29 J	0.1 U	
Fluorene in mg/kg	140,000	140,000	0.013	0.01 U	0.01 U	0.72	0.01 U	0.01 U	0.1 U	
Phenanthrene in mg/kg			0.1	0.01 U	0.01 U	0.89	0.077 J	0.2 J	0.18	
Pyrene in mg/kg	110,000	110,000	0.3	0.01 U	0.01 U	3.6	0.33 J	0.7 J	0.1 U	
Naphthalene in mg/kg	70,000	70,000	0.026	0.01 U	0.01 U	0.1 U	0.012 J	0.033 J	0.86	
Benz(a)anthracene in mg/kg			0.1	0.01 U	0.01 U	1.4	0.11 J	0.26 J	0.1 U	
Benzo(a)pyrene in mg/kg			0.11	0.01 U	0.01 U	0.4	0.08 J		0.1 U	
Benzo(b)fluoranthene in mg/kg			0.14	0.01 U	0.01 U	0.46	0.083 J		0.1 U	
Benzo(k)fluoranthene in mg/kg			0.031	0.01 U	0.01 U	0.1 U	0.019	0.015 J	0.1 U	
Chrysene in mg/kg			0.17	0.01 U	0.01 U	3.4	0.21 J	0.43 J	0.1 U	
Dibenzo(a,h)anthracene in mg/kg			0.021	0.01 U	0.01 U	0.12	0.014	0.017 J	0.1 U	
Indeno(1,2,3-cd)pyrene in mg/kg			0.078	0.01 U	0.01 U	0.12	0.037 J	0.075 J	0.1 U	
Total cPAHs TEQ in mg/kg	0.4	7.9	0.149	ND	ND	0.649	0.108	0.214	ND	
Polychlorinated Biphenyls (PCBs)										
Aroclor 1016 in mg/kg										0.1 U
Aroclor 1221 in mg/kg										0.1 U
Aroclor 1232 in mg/kg										0.1 U
Aroclor 1242 in mg/kg										0.1 U
Aroclor 1248 in mg/kg										0.1 U
Aroclor 1254 in mg/kg										0.1 U
Aroclor 1260 in mg/kg										0.1 U
Total PCBs (Sum of Aroclors) in mg/kg	10	10								ND

Notes

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.
Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.
SAT = Sample of saturated soil; samples without this designation are unsaturated soil.
J = Analyte was positively identified. The reported result is an estimate.
U = Analyte was not detected at or above the reported result.
UJ = Analyte was not detected at or above the reported estimate.

Table 20 - Excavation Verification Extractable and Volatile Petroleum Hydrocarbons (EPH/VPH) Soil Quality Data for All Areas

K-C Worldwide Site Upland Area 110207

			Soil Beneath Warehouse			Bottom Sample in Place	Sidewall Samples in Place				Overexcavated Samples		
Chemical Name	Interim Action Cleanup Level - Unsaturated Soil	Interim Action Cleanup Level - Saturated Soil	BAST-EPH-03 10/21/13 (2 ft) SAT	BAST-EPH-04 10/21/13 (2 ft) SAT	BAST-S059 1/21/14 (7 ft) SAT	BUST-B39 12/3/13 (12 ft) SAT	BAST-S075 2/17/14 (4 ft)	BUST-S16 11/12/13 (8 ft)	BUST-S17 11/12/13 (8 ft)	BUST-S58 12/3/13 (12 ft) SAT	BAST-EPH-01 10/21/13 (2 ft) OverEx	BAST-EPH-02 10/21/13 (2 ft) OverEx	NRU-B05 1/27/14 (16 ft) OverEx SAT
Extractable Petroleum Hydrocarbons													
Aliphatics C10-C12 (EPH) in mg/kg			123	41.4 J	123	14.6	625	32.2	73.4	19.9	24.6 J	15.3 J	118
Aliphatics C12-C16 (EPH) in mg/kg			450	242	322	385	710	256	756	507	284	175	484
Aliphatics C16-C21 (EPH) in mg/kg			317	217	71.2	666	286	352	1,050	892	418	230	273
Aliphatics C21-C34 (EPH) in mg/kg			477	285	16	753	560	514	1,450	1,050	530	361	329
Aliphatics C8-C10 (EPH) in mg/kg			11.9 J	103 U	18.3 J	1.04 J	181	6.34 U	6.92	1.18 J	97.7 U	111 U	10 J
Aromatics C10-C12 (EPH) in mg/kg			102 U	103 U	5.57	5.63 UJ	50.5 J	6.34 U	5.53 U	5.64 UJ	97.7 U	111 U	32.1
Aromatics C12-C16 (EPH) in mg/kg			95 J	47.2 J	59.3	10.4	285	73.9	161	24.4	12.5 J	26.9 J	342
Aromatics C16-C21 (EPH) in mg/kg			315	276	58.5	422	840	388	870	583	166	181	560
Aromatics C21-C34 (EPH) in mg/kg			382	257	18.2	543	1,620	573	1,250	662	252	212	413
Aromatics C8-C10 (EPH) in mg/kg			5.32 J	103 U	1.06 J	2.85 J	52.5 U	6.34 UJ	5.53 UJ	3.76 J	97.7 U	111 U	5.99 U
Volatile Petroleum Hydrocarbons													
Aliphatics C10-C12 (VPH) in mg/kg					33		20.7						12.2 J
Aliphatics C5-C6 (VPH) in mg/kg					1.2		1.5 U						0.235 U
Aliphatics C6-C8 (VPH) in mg/kg					7.38		1.5 U						0.235 U
Aliphatics C8-C10 (VPH) in mg/kg					10.4		5.21						1.22
Aromatics C10-C12 (VPH) in mg/kg					106		50.4						65.6 J
Aromatics C12-C13 (VPH) in mg/kg					202		106						212
Aromatics C8-C10 (VPH) in mg/kg					18.1		6.98						2.82
Benzene in mg/kg	2,400	2,400			0.212 U		0.374 U						0.235 U
Ethylbenzene in mg/kg	350,000	350,000			0.212 U		0.374 U						0.235 U
m,p-Xylenes in mg/kg	2.5	49			0.212 U		0.374 U						0.235 U
Methyl tert-butyl ether (MTBE) in mg/kg	73,000	73,000			0.212		0.374 U						0.235 U
Naphthalene in mg/kg	70,000	70,000			2.59		0.374 U						3.97
o-Xylene in mg/kg	4.1	80			0.154 J		0.374 U						0.235 U
Toluene in mg/kg	70,000	70,000			0.212 U		0.374 U						0.235 U

Notes

Concentrations in bold text indicate value exceeds Interim Action Cleanup Level - Unsaturated Soil.

Concentrations in shaded cells indicate value exceeds Interim Action Cleanup Level - Saturated Soil.

SAT = Sample of saturated soil; samples without this designation are unsaturated soil.

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U = Analyte was not detected at or above the reported result.

UJ = Analyte was not detected at or above the reported estimate.

Table 21 - Concentrations of Contaminants Remaining Above IACLs

K-C Worldwide Site Upland Area 110207

	TPH				PAHs		Metals									
	Diesel- + Oil-Range Hydrocarbons		Gasoline-Range Hydrocarbons		Total cPAHs TEQ		Arsenic		Copper		Lead		Mercury		Zinc	
Interim Action Area	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Boiler/Baghouse Excavation																
Unsaturated									36.6	96.9			0.12	16	103	328
Bunker C ASTs Excavation																
Unsaturated	2300	6600 w							52.9	52.9			0.11	0.18		
Saturated	2800	9700 w	150	2100 w	0.45	7.8 w			40.4	42.7						
CN-B-2 Excavation																
Unsaturated									37.1	37.1						
Saturated					0.73	6.4	25.2	25.2	36.8	77.6	114	121	0.13	0.15	102	216
GF-11 Excavation																
Unsaturated									36.2	99.2			0.11	0.5	126	126
Heavy Duty Shop Sump Excavation																
Unsaturated															114	114
Naval Reserve Area UST Excavation																
Saturated					0.53	0.53										
REC2-MW-5 Area Excavation (near Diesel AST)																
Unsaturated									36.1	47.7			0.25	0.31	104	456
Saturated									41.6	56.9			0.14	0.17	99	525
SHB-MW-1 Excavation																
Unsaturated									45.4	65.1			0.12	0.12	186	229
USTs 71, 72, and 73 Excavation																
Unsaturated	6400	8600 f							36.9	54			0.11	0.21		
Saturated	3800	28000 f			0.71	1.3 f			62.5	74.5			0.11	0.22		

Notes

Residual soils within the BA-MW-6, Hydraulic Barker Vault, Naval Reserve Parcel South, Rail Car Dumper, and UST 29/Latex Spill, and UST 70 Excavation Areas meet IACLs.

Residual exceedances are segregated by unsaturated vs saturated soil (different IACLs can apply).

IACL = Interim Action Cleanup Level

w = The listed maximum residual hydrocarbon concentrations are in inaccessible soil at or beneath the north edge of the Distribution Warehouse (refer to text).

f = The listed maximum residual hydrocarbon concentrations are in inaccessible soil beneath monolithic foundation elements (refer to text).

Table 22 - Summary of Interim Action by Area

K-C Worldwide Site Upland Area 110207

Interim Action Area	Contaminant Targeted for Removal	Tons of Material Removed During Interim Action	Compliance Monitoring Conducted for Interim Action? Soil	Compliance Monitoring Conducted for Interim Action? Groundwater
BA-MW-6 Area	Oil-range TPH	100	Yes	Yes (ongoing)
Boiler/Baghouse Area	Lead	2,380	Yes	Yes (ongoing)
Bunker C ASTs Area	Oil-range and gasoline-range TPH, PAHs	9,690	Yes	Yes (ongoing)
CN-B-2 Area	Oil-range TPH	6,560	Yes	Yes (ongoing)
GF-11 Area	Lead	224	Yes	Yes (ongoing)
Heavy Duty Shop Sump Area	Oil-range TPH	0	Yes	No
Hydraulic Barker Vault Area	Oil-range TPH	10	Yes	Yes (ongoing)
Naval Reserve Area UST Area	Diesel-range and gasoline-range TPH	2,280	Yes	Yes (ongoing)
Naval Reserve Area South Area	Oil-range and gasoline-range TPH	1,710	Yes	Yes (ongoing)
Rail Car Dumper Area	Oil-range TPH	140	Yes	Yes (ongoing)
REC2-MW-5 Area Area (near Diesel AST)	Oil-range TPH	510	Yes	Yes (ongoing)
SHB-MW-1 Area	Oil-range and gasoline-range TPH, and copper	210	Yes	Yes (ongoing)
UST 29/Latex Spill Area	Xylenes, latex	5,440	Yes	Yes (ongoing)
UST 70 Area	Diesel-range TPH	1,050	Yes	Yes (ongoing)
USTs 71, 72, and 73 Area	Oil-range TPH	8,150	Yes	Yes (ongoing)
	Total Tons Removed:	**38,454**		

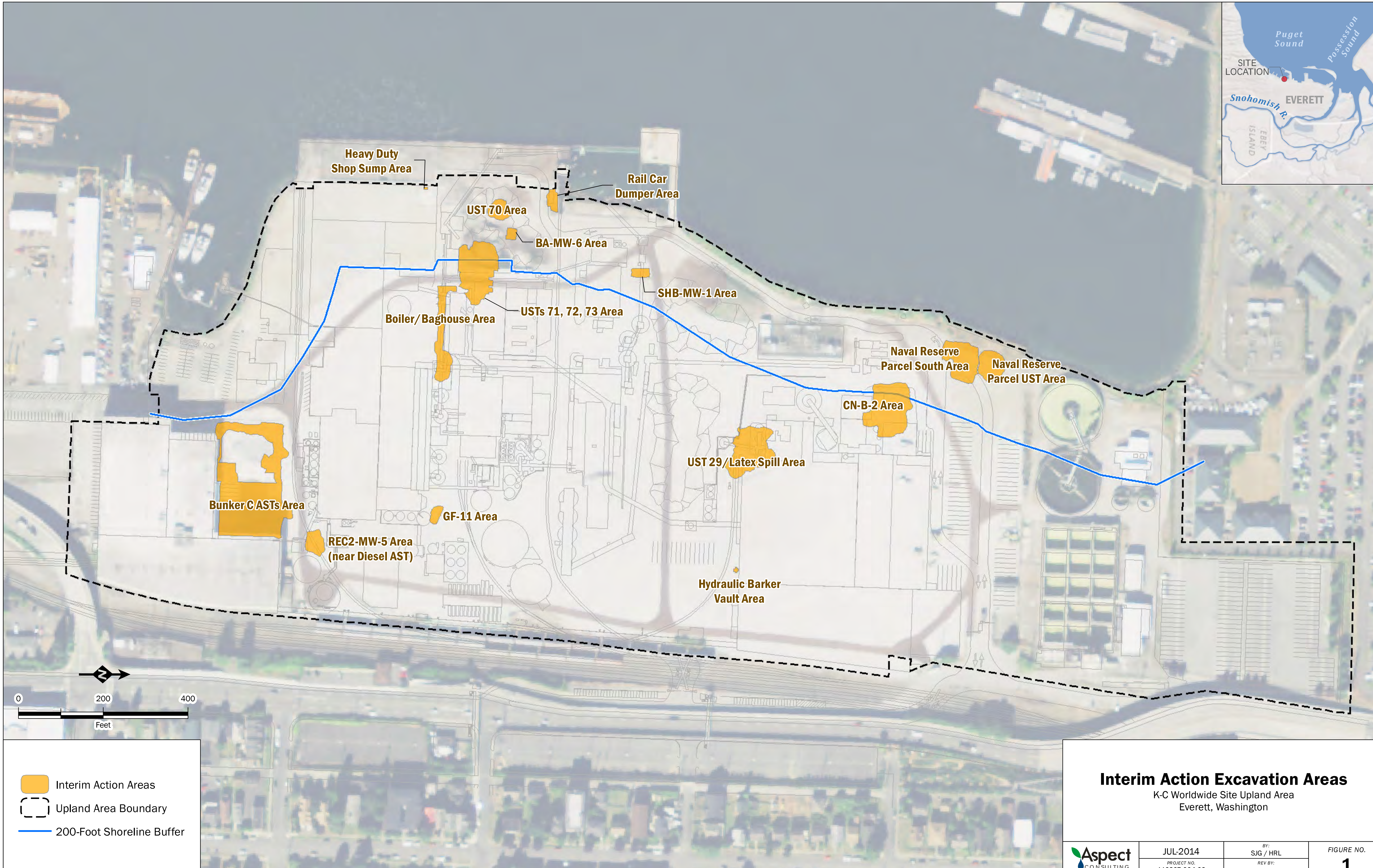
Notes

TPH - Total petroleum hydrocarbons

PAHs - Polycyclic aromatic hydrocarbons

AST - Above-ground storage tank

FIGURES



Interim Action Excavation Areas

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	JUL-2014	BY: SJG / HRL	FIGURE NO. 1
	PROJECT NO. 110207-004-06	REV BY: - - -	

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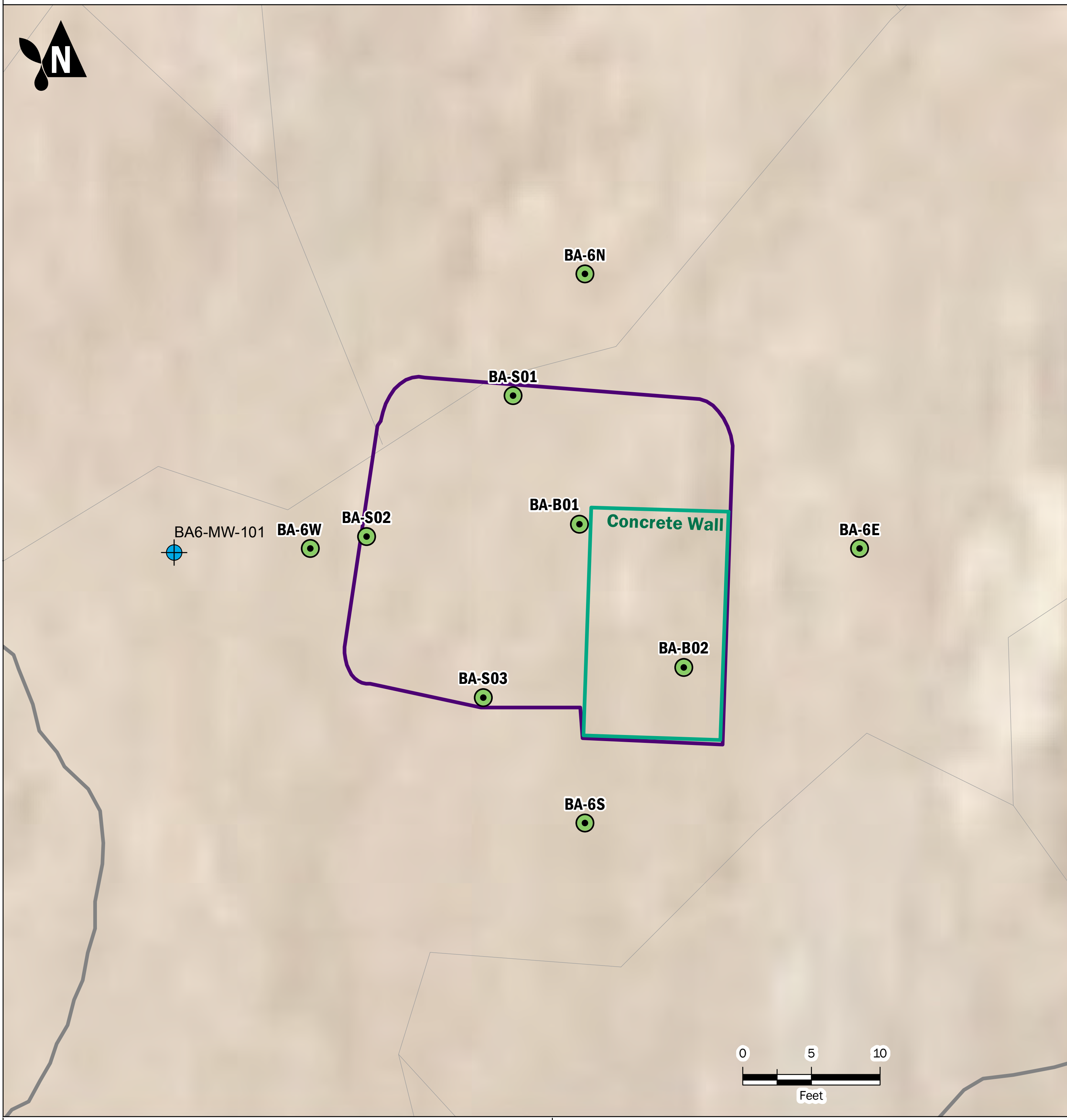
TPHs/cPAHs



Monitoring Well

BA-MW-6 Excavation Extent

All Other Excavation Extents

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

Note: Pre-excavation characterization samples BA-6N, -6E, -6S, and -6W were analyzed for TPH only.

BA-MW-6 Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING

JAN-2015	BY: SJG / HRL	FIGURE NO. 2
PROJECT NO. 110207	REVISED BY: - - -	

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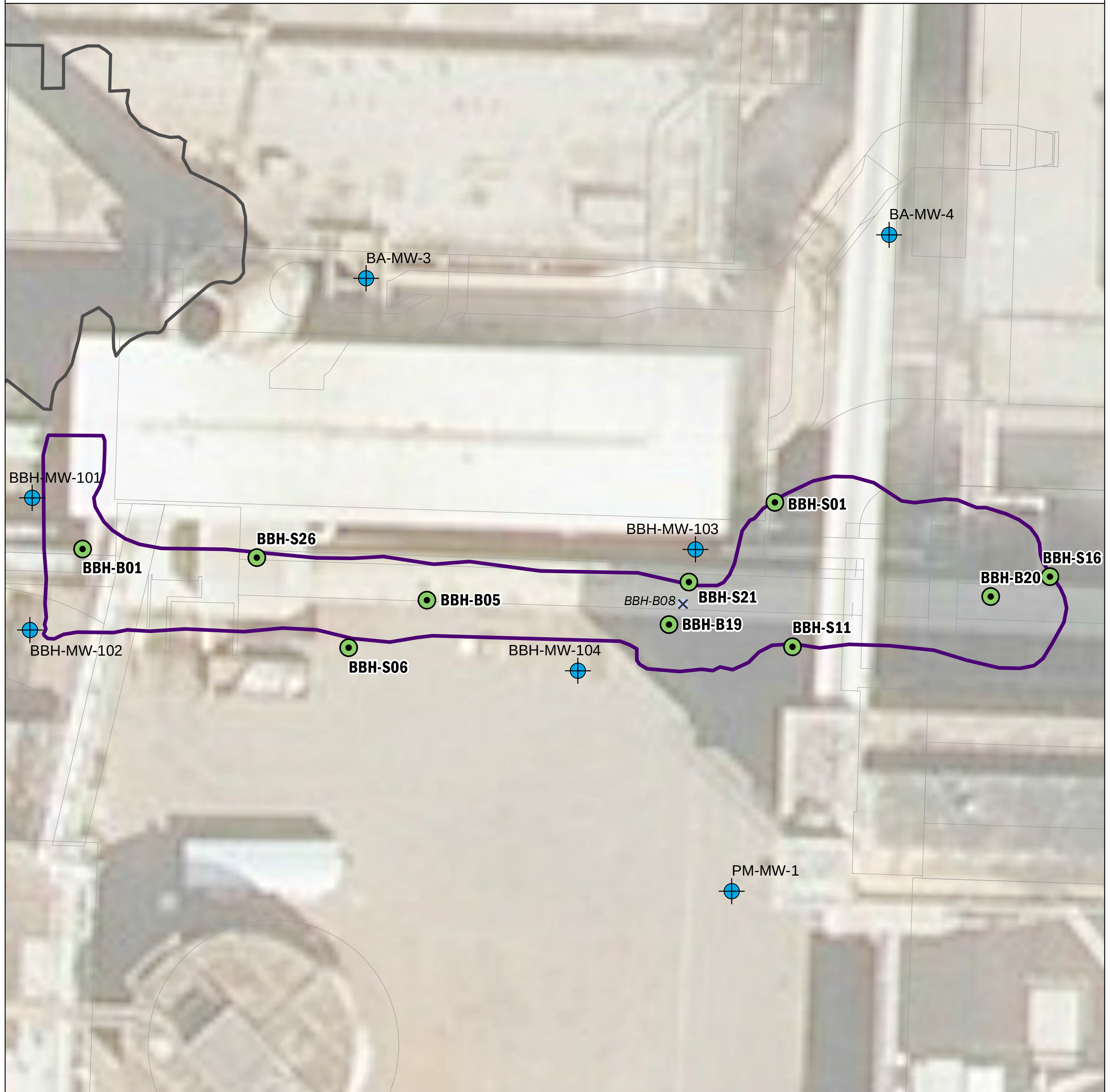
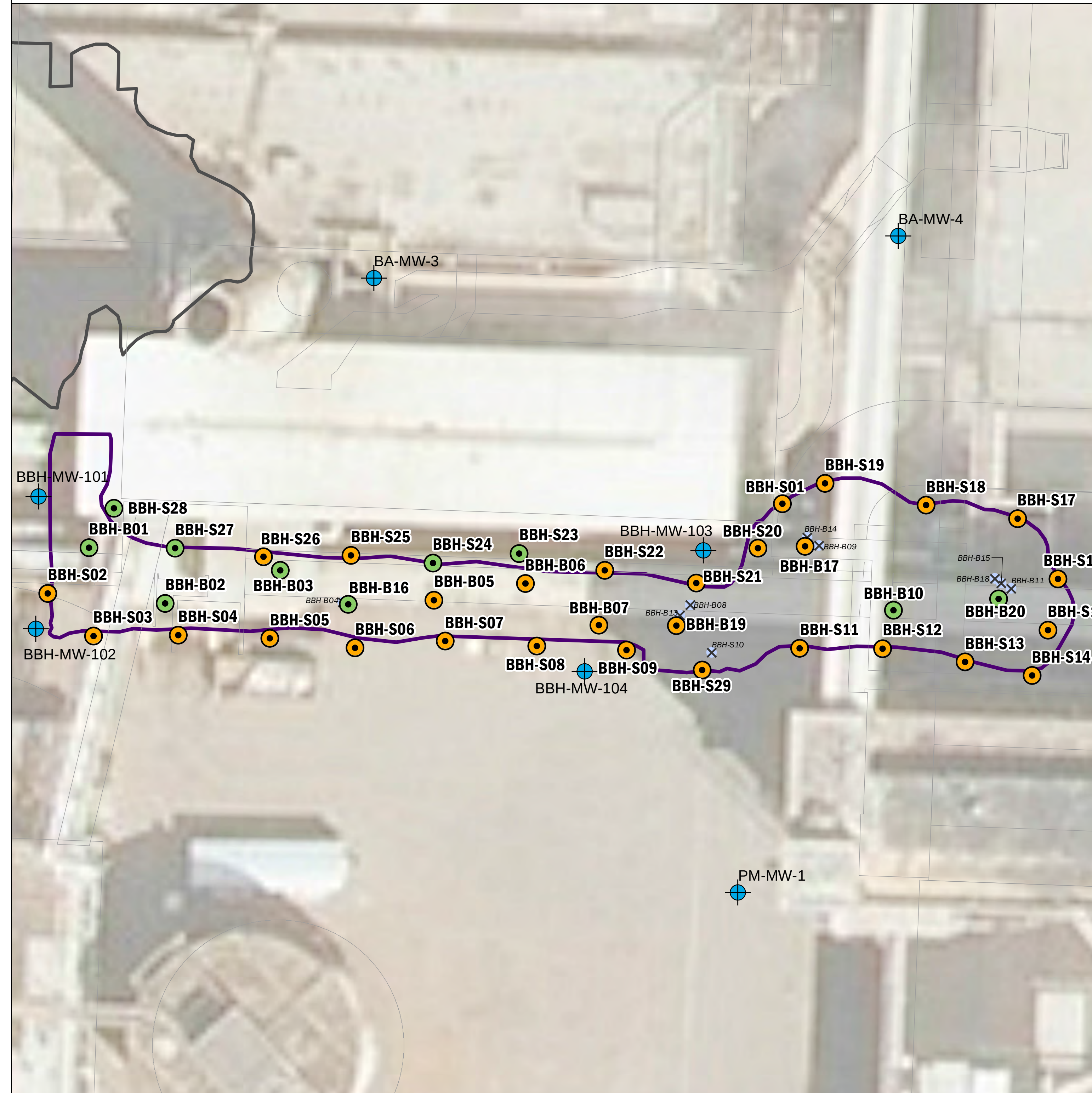
cPAHs



Metals



Monitoring Well

Boiler Baghouse Excavation Extent

Bunker C USTs 71, 72, 73 Excavation Extent

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

Over Excavated Sample Locations

Count of residual metals exceedances in verification soil samples:
21 copper, 29 mercury, 11 zinc; refer to Table 5 for full data.

0 15 30
Feet

Boiler/Baghouse Interim Action Area Verification Samples and Residual Exceedances

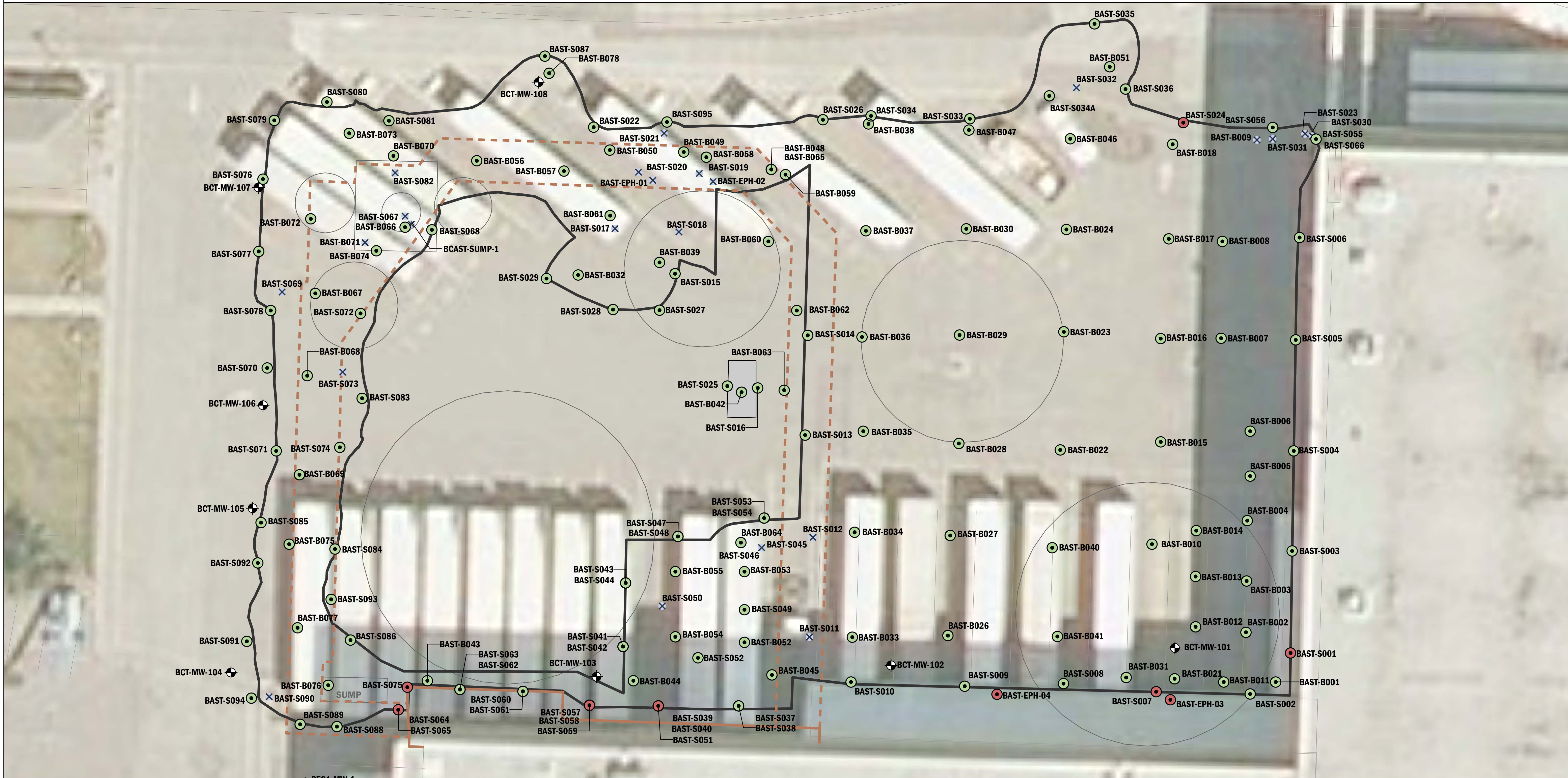
K-C Worldwide Site Upland Area Interim Action
Everett, Washington

Aspect CONSULTING

APR-2015	BY: SJG / HRL	FIGURE NO.
PROJECT NO. 110207	REVISED BY: RAP	3

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_July2014 Stoplight Figures\Revised_Jan2015\03 BBH.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 4/6/2015 || User: rpepin || Print Date: 4/6/2015

TPHs/cPAHs



Monitoring Well

Footer for Tank Farm Enclosure Wall

(dashed where removed during interim action)

Above-Ground Storage Tanks (composite of historical configurations)

Test Pit

Bunker C AST Excavation Extent

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

Over Excavated Sample Locations

N

0 12.5 25

Feet

Bunker C ASTs Interim Action Area Verification Samples and TPHs/cPAHs Residual Exceedances

K-C Worldwide Site Upland Area Interim Action

Everett, Washington

Aspect CONSULTING

JAN-2015

PROJECT NO. 110207

BY: SJG / HRL

REV BY: EAC

FIGURE NO. 4a

GIS Path: T:\projects_8\KimberlyClark\Env Support_110207\Deliverables\IA_July2014 Stoplight Figures\Revised_Jan2015\04a BAST TPHs and cPAHs.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 1/15/2015 || User: pwittman || Print Date: 1/15/2015

Metals

Monitoring Well

Footer for Tank Farm Enclosure Wall

(dashed where removed during interim action)

Above-Ground Storage Tanks (composite of historical configurations)

Test Pit

Bunker C AST Excavation Extent

Metals Exceedances

Exceedance Present

Exceedance

No Exceedance

Over Excavated Sample Locations

Count of residual metals exceedances in verification soil samples: 3 copper, 3 mercury; refer to Table 6 for full data.

N

0 12.5 25
Feet

Bunker C ASTs Interim Action Area Verification Samples and Metals Residual Exceedances

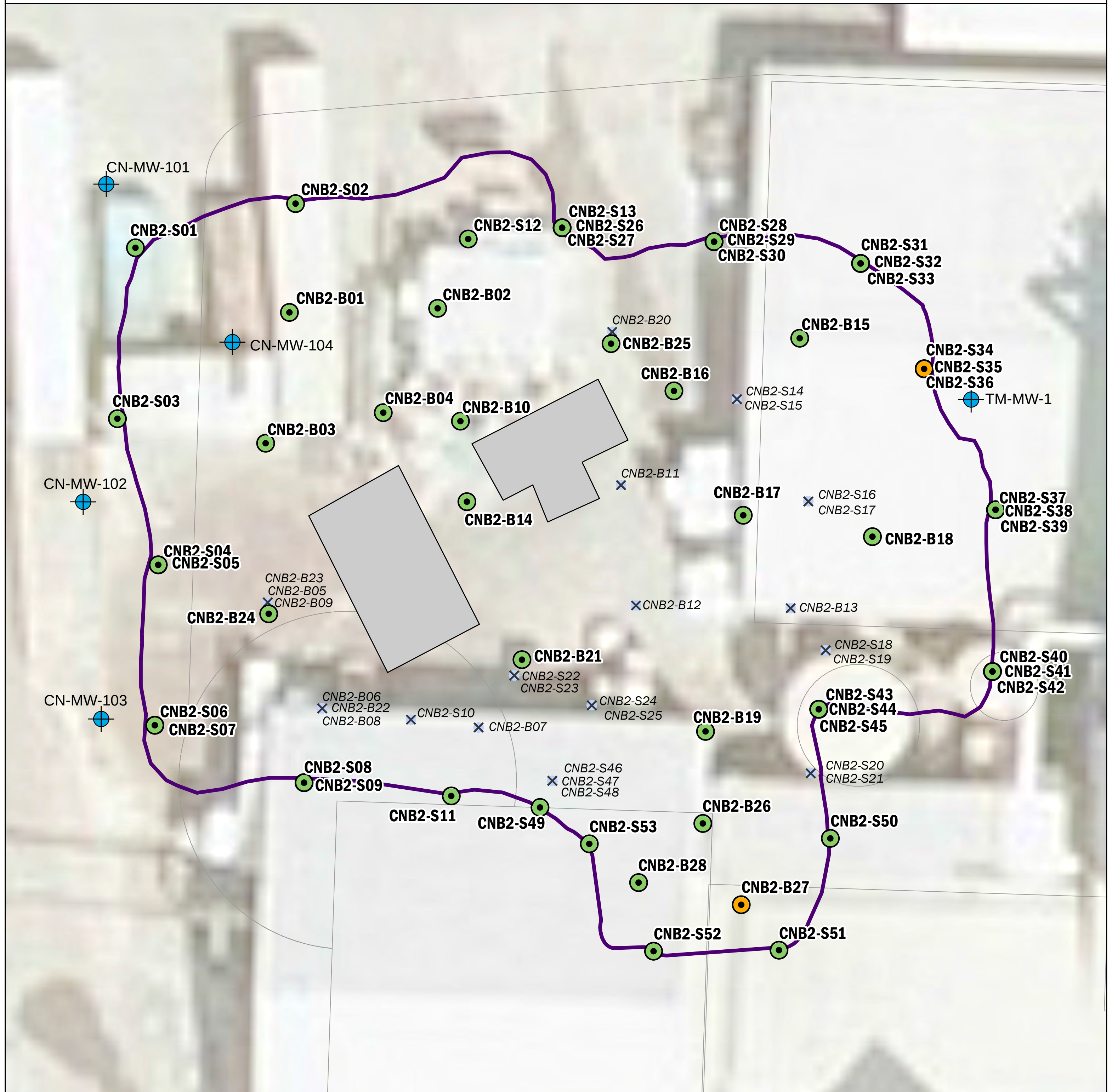
K-C Worldwide Site Upland Area Interim Action
Everett, Washington

Aspect CONSULTING

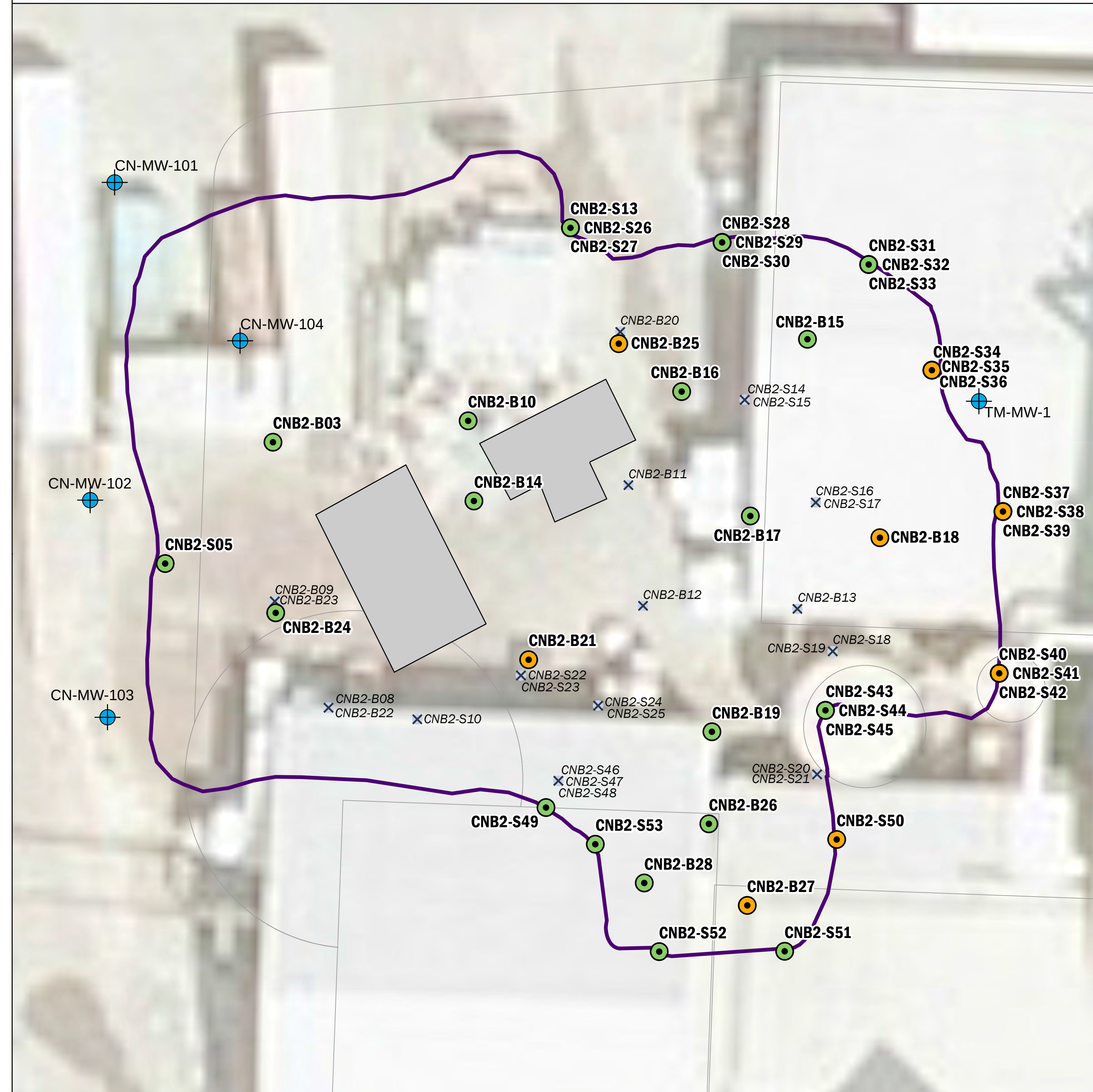
JAN-2015	BY: SJG / HRL	FIGURE NO.
PROJECT NO. 110207	REV BY: EAC	4b

GIS Path: T:\projects_8\KimberlyClark\Env Support_110207\Delivered\IA_July2014 Stoplight Figures\Revised_Jan2015\04b BAST Metals.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 1/13/2015 || User: randrusyszyn || Print Date: 1/13/2015

TPHs/cPAHs



Metals



- Monitoring Well
- Concrete Block
- CN-B-2 Excavation Extent

Verification Samples

Exceedance Present

- At Least One Exceedance
- No Exceedance
- Over Excavated Sample Locations

Count of residual metals exceedances in verification soil samples:
1 arsenic, 4 copper, 2 lead, 2 mercury, 3 zinc; refer to Table 7 for full data.

N

0 10 20
Feet

CN-B-2 Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING

JAN-2015

PROJECT NO. 110207

BY: SJG / HRL

REV BY: - - -

FIGURE NO. **5**

cPAHs

Metals

Monitoring Well

CN-B-2 Excavation Extent

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

Count of residual metals exceedances in verification soil samples:
5 copper, 11 mercury, 1 zinc; refer to Table 8 for full data.

N

0 5 10

Feet

GF-11 Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING

JAN-2015

PROJECT NO. 110207

BY: SJG / HRL

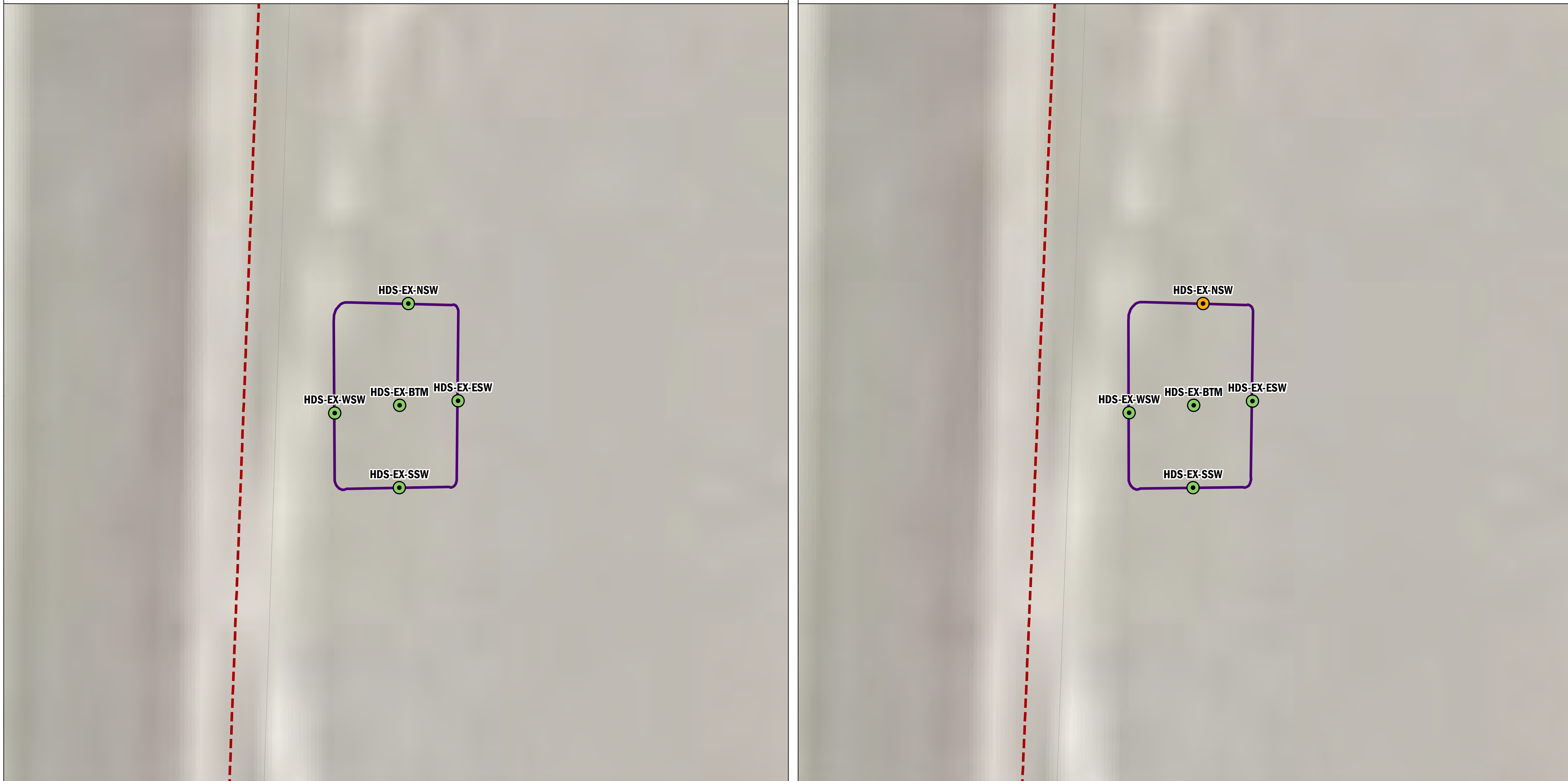
REV BY: - - -

FIGURE NO. 6

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_July2014 Stoplight Figures\Revised_Jan2015\06 GF11.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 1/13/2015 || User: randrusyszyn || Print Date: 1/13/2015

TPHs/cPAHs

Metals



Monitoring Well

Upland Area Boundary

Heavy Duty Shop Sump Excavation Extent

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

Count of residual metals exceedance in verification soil samples:
1 zinc; refer to Table 9 for full data.

N

0 2.5 5

Feet

Heavy Duty Shop Sump Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING	JUL-2014	BY: SJG / HRL	FIGURE NO. 7
	PROJECT NO. 110207	REV BY: ---	

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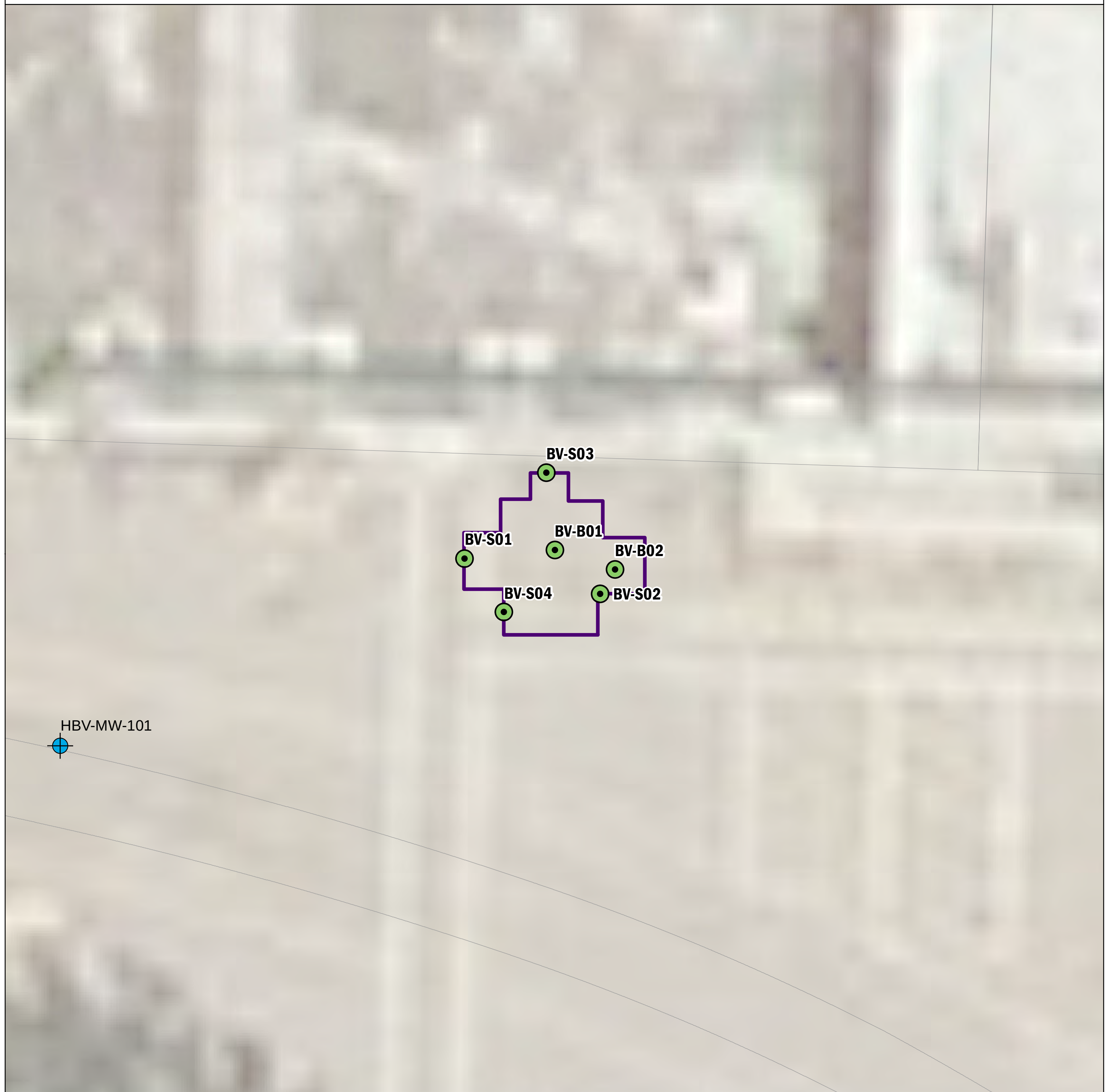
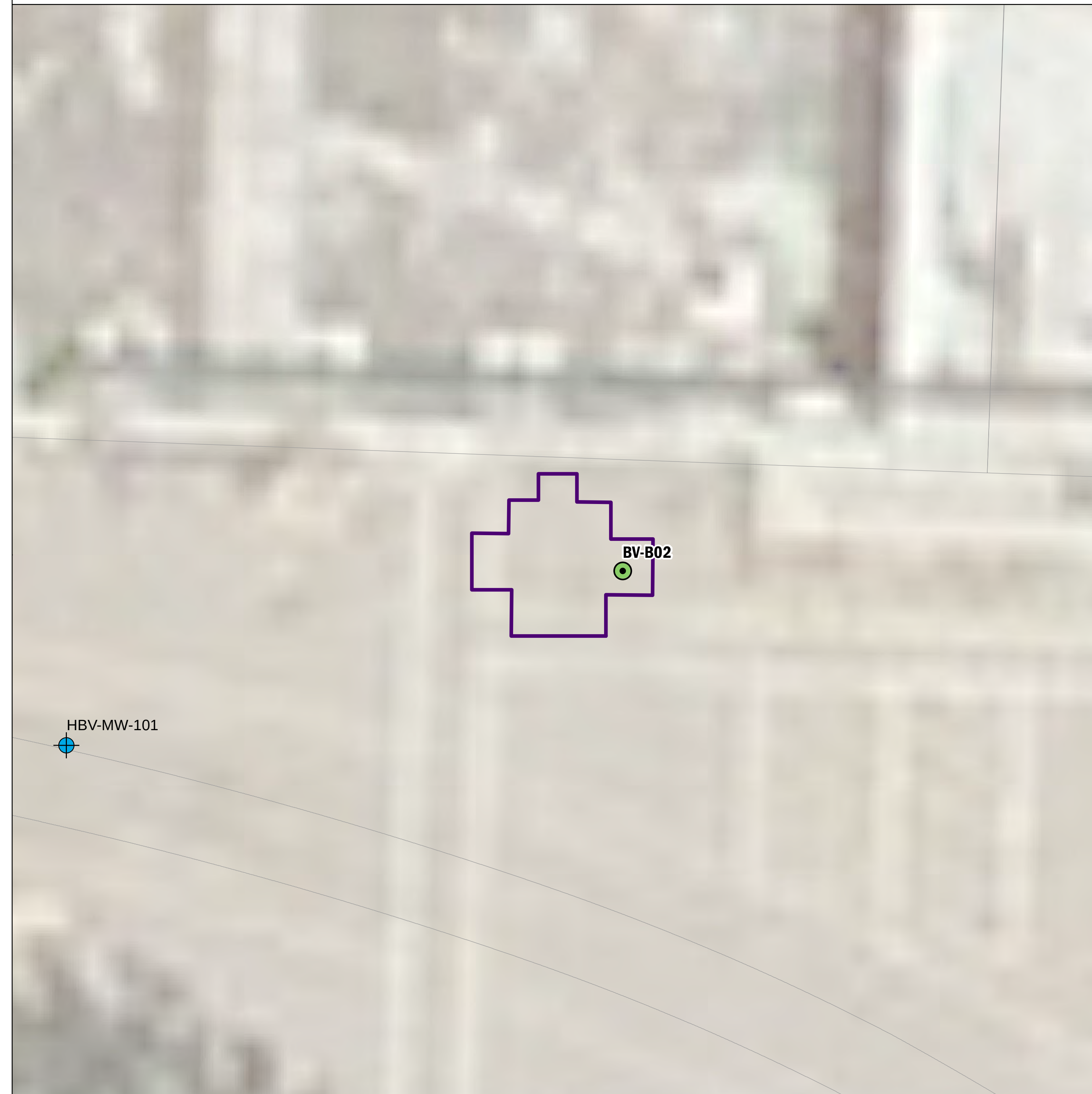
TPHs/cPAHs



Metals



Monitoring Well
Heavy Duty Shop Sump Excavation Extent

Verification Samples
Exceedance Present
At Least One Exceedance
No Exceedance

0 5 10
Feet

Hydraulic Barker Vault Interim Action Area Verification Samples and Residual Exceedances

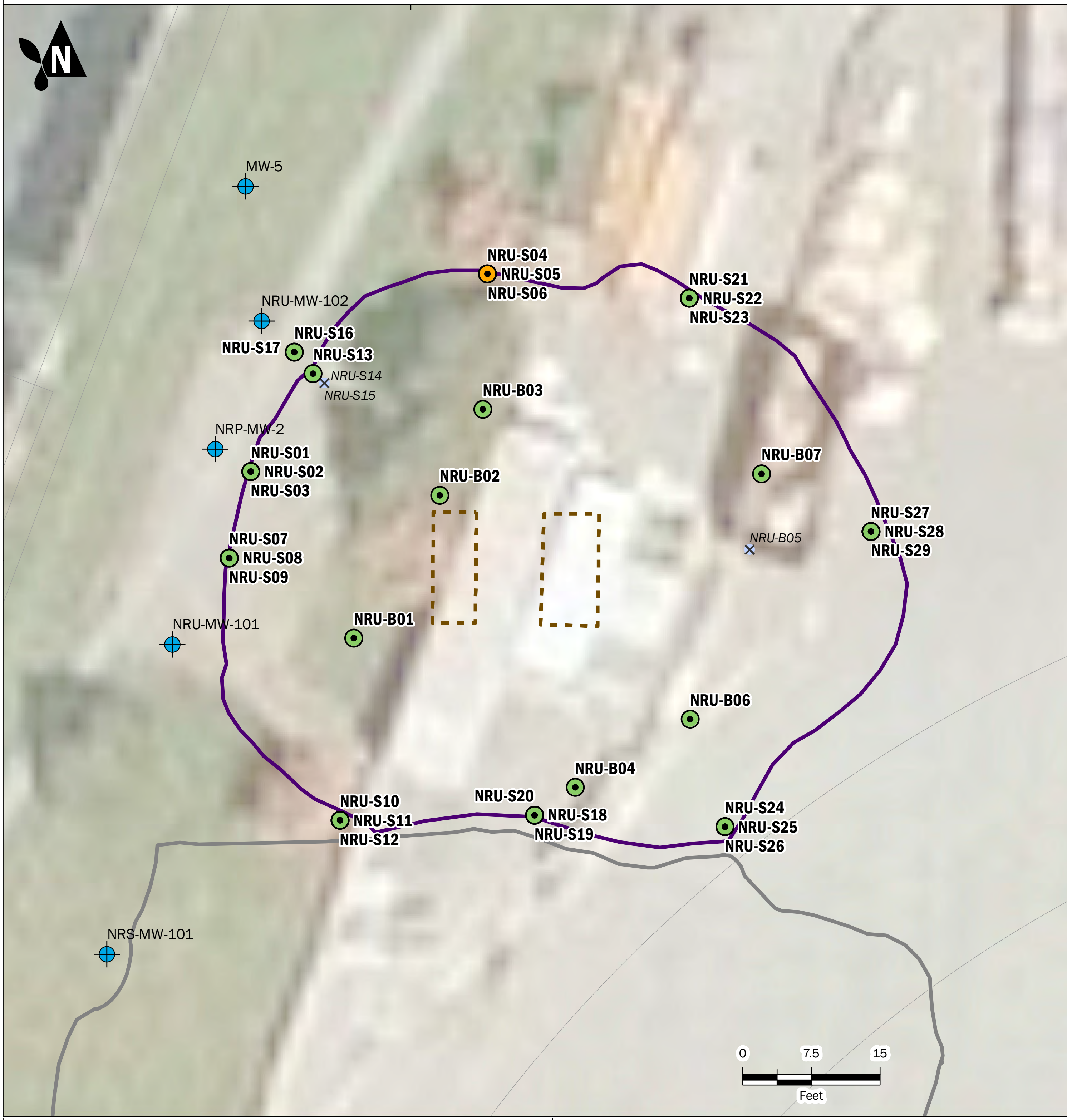
K-C Worldwide Site Upland Area Interim Action
Everett, Washington

Aspect CONSULTING

JUL-2014	BY: SJG / HRL	FIGURE NO. 8
PROJECT NO. 110207	REV BY: - - -	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_July2014 Stoplight Figures\08 HBV.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 7/17/2014 || User: hlovelace || Print Date: 7/21/2014

TPHs/cPAHs



GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_Jul2014 Stoplight Figures\09 NRU_85x11.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 7/21/2014 || User: hlovelace || Print Date: 7/21/2014

Monitoring Well

Approximate Former USTs

Naval Reserve Parcel UST Excavation Outline

Naval Reserve Parcel South Excavation Outline

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

Over Excavated Sample Locations

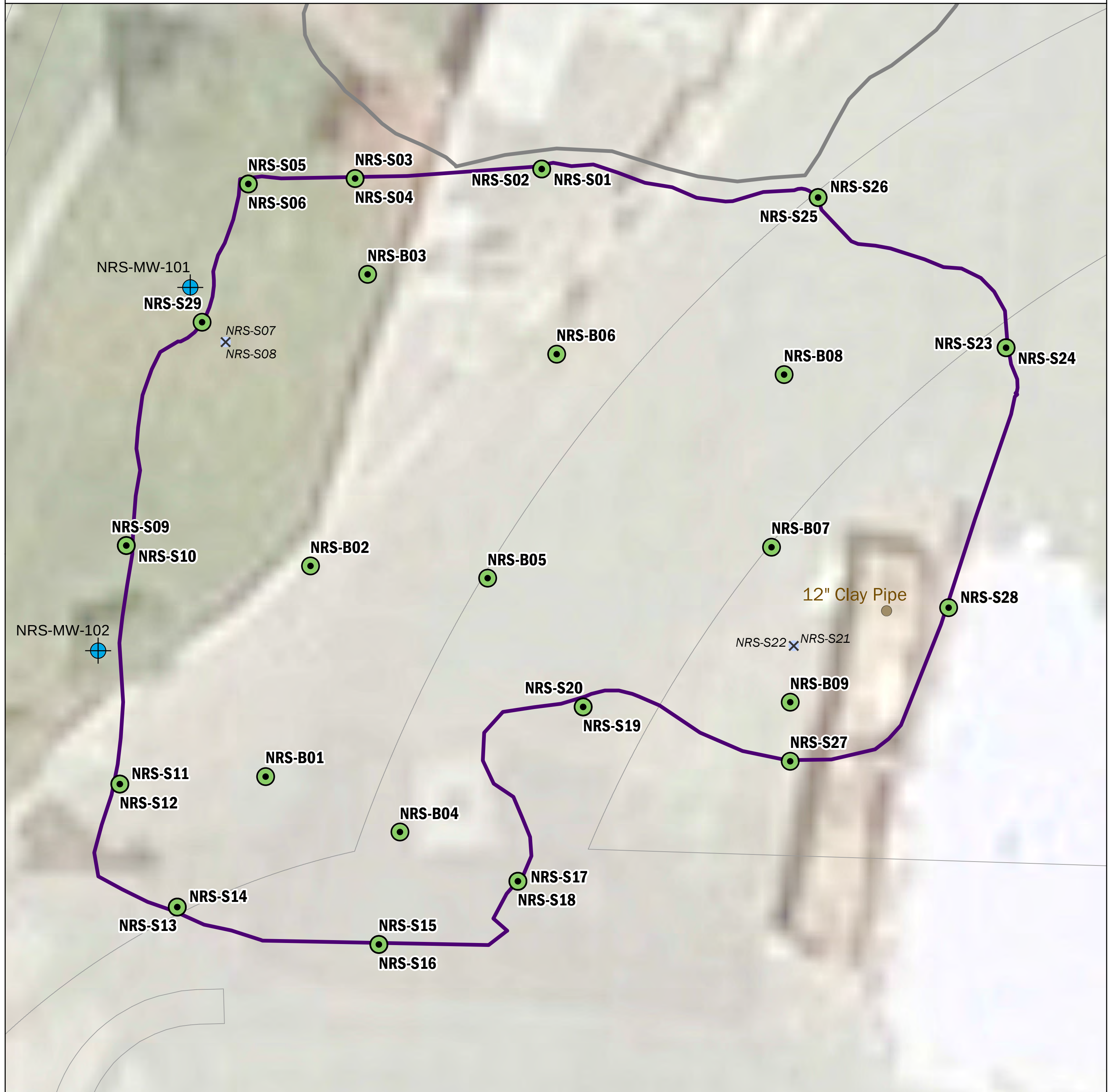
Naval Reserve Parcel UST Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING

JUL-2014	BY: SJG / HRL	FIGURE NO. 9
PROJECT NO. 110207	REVISED BY: - - -	

TPHs/cPAHs



Metals

Monitoring Well

Over Excavated Sample Locations

12-inch Clay Pipe

Naval Reserve Parcel South Excavation Outline

Naval Reserve Parcel UST Excavation Outline

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

0 7.5 15

Feet

Naval Reserve Parcel South Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING

JAN-2015	BY: SJG / HRL	FIGURE NO.
PROJECT NO. 110207	REV BY: - - -	10

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_July2014 Stoplight Figures\10 NRS.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 1/20/2015 || User: randrusyszyn || Print Date: 1/20/2015

TPHs/cPAHs

Metals

Monitoring Well
Upland Area Boundary
Rail Car Dumper Excavation Extent

Verification Samples
Exceedance Present
At Least One Exceedance
No Exceedance
Over Excavated Sample Locations

N

0 5 10
Feet

Rail Car Dumper Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING

JUL-2014	BY: SJG / HRL	FIGURE NO.
PROJECT NO. 110207	REV BY: - - -	11

TPHs/cPAHs

Metals

Monitoring Well

REC2-MW-5 Excavation Extent

Verification Samples

Exceedance Present

- At Least One Exceedance
- No Exceedance
- Over Excavated Sample Locations

Count of residual metals exceedances in verification soil samples:
8 copper, 4 mercury, 4 zinc; refer to Table 14 for full data.

N

0 5 10
Feet

REC2-MW-5 (near Diesel AST) Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING

JUL-2014	BY: SJG / HRL	FIGURE NO.	12
PROJECT NO. 110207	REV BY: - - -		

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_July2014 Stoplight Figures\12 REC2-MW-5.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 7/17/2014 || User: hlovelace || Print Date: 7/21/2014

TPHs/cPAHs

Metals

Decommisioned Monitoring Well

Monitoring Well

SHB-MW-1 Excavation Extent

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

Over Excavated Sample Locations

Count of residual metals exceedances in verification soil samples:
3 copper, 1 mercury, 2 zinc; refer to Table 15 for full data.

N

0 5 10

Feet

SHB-MW-1 Interim Action Area Verification Samples and Residual Exceedances

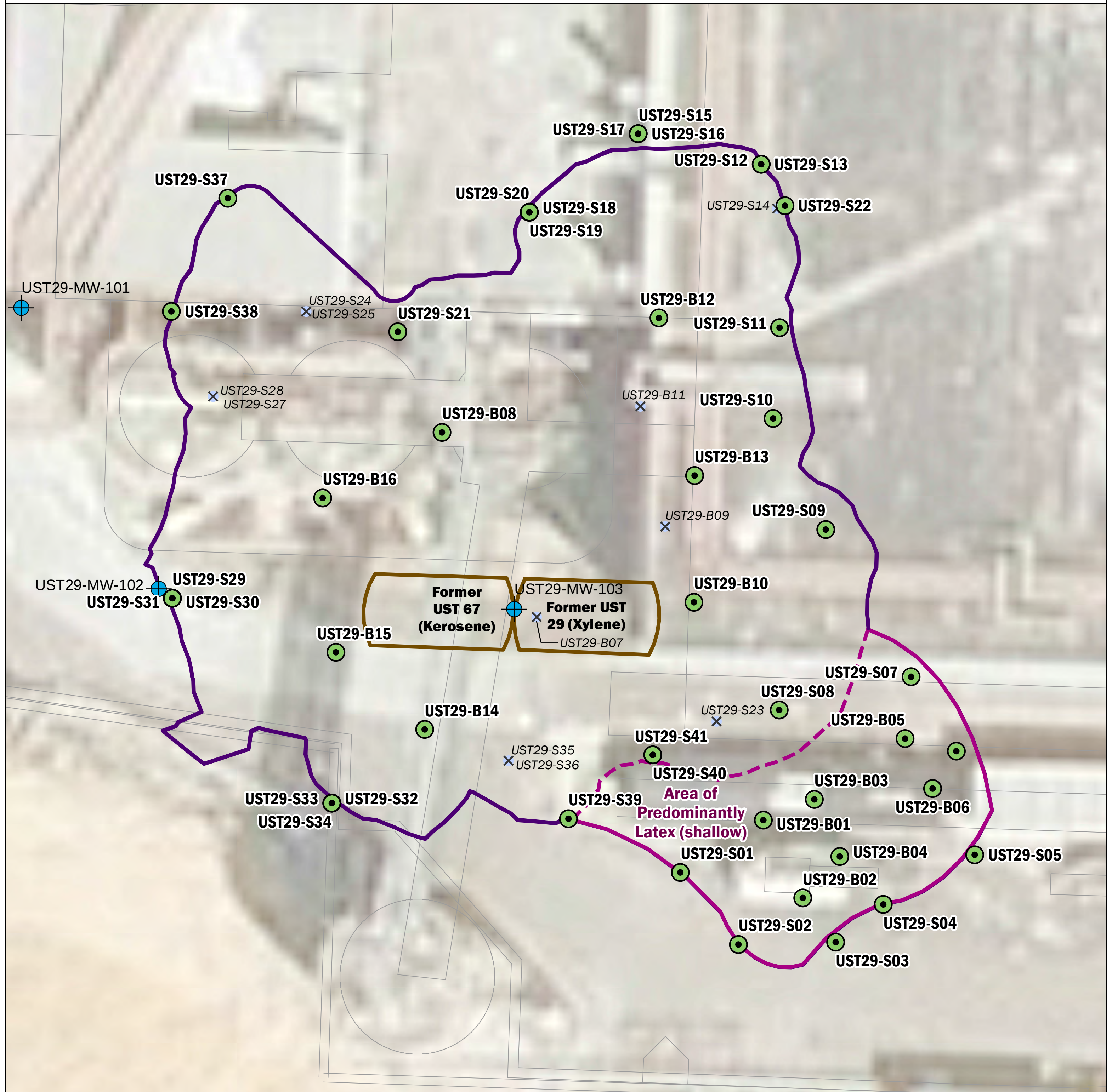
K-C Worldwide Site Upland Area Interim Action
Everett, Washington

Aspect CONSULTING

OCT-2014	BY: SJG / HRL	FIGURE NO. 13
PROJECT NO. 110207	REV BY: - - -	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_June2014 Stop Light Figures\13 SHBMW1.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 10/20/2014 || User: pwittman || Print Date: 10/20/2014

TPHs/cPAHs



Metals

Monitoring Well

Former USTs

UST 29/Latex Spill Excavation Extent

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

Over Excavated Sample Locations

N

0 10 20

Feet

UST 29/Latex Spill Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING

JAN-2015

PROJECT NO. 110207

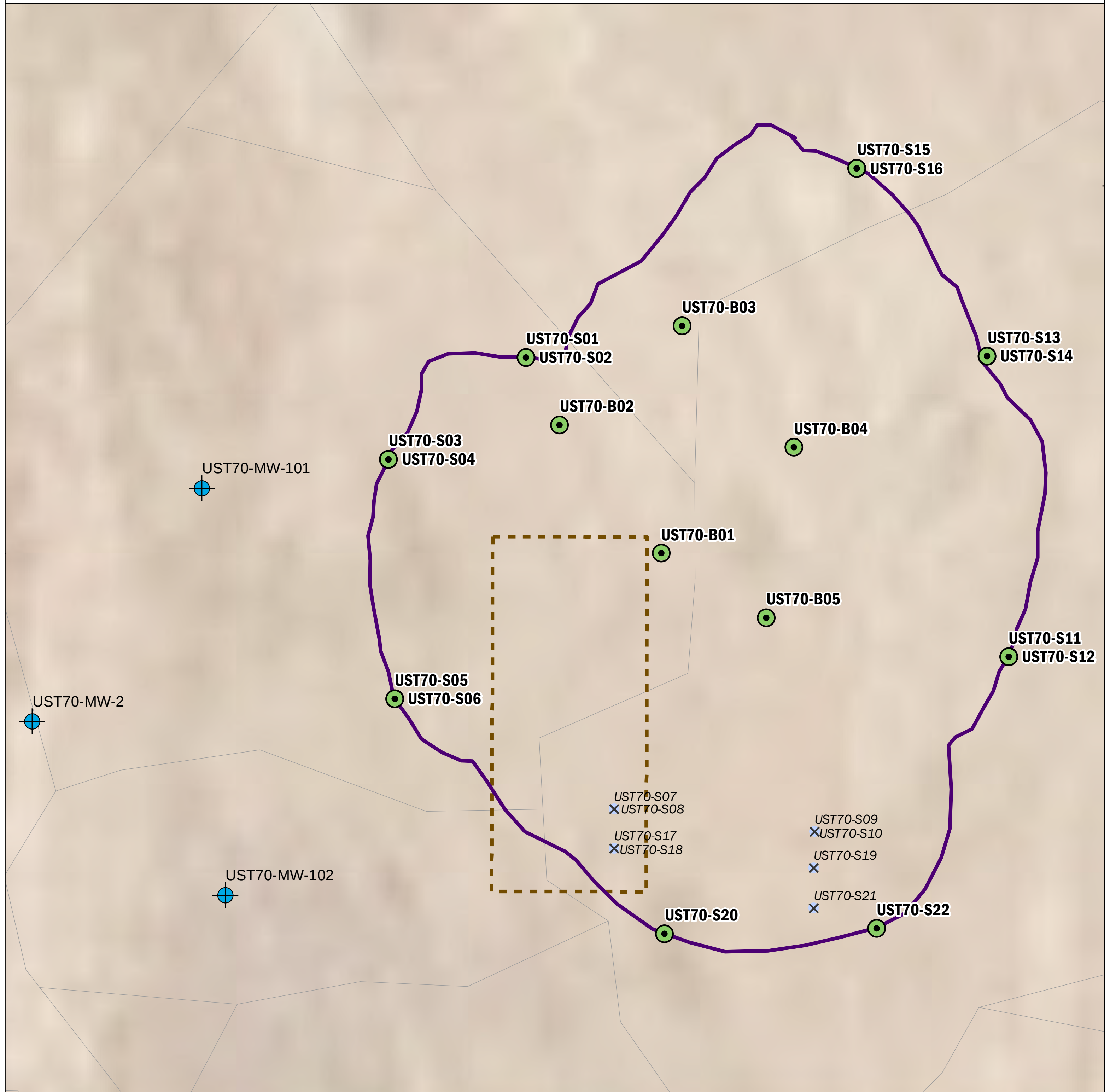
BY: SJG / HRL

REV BY: - - -

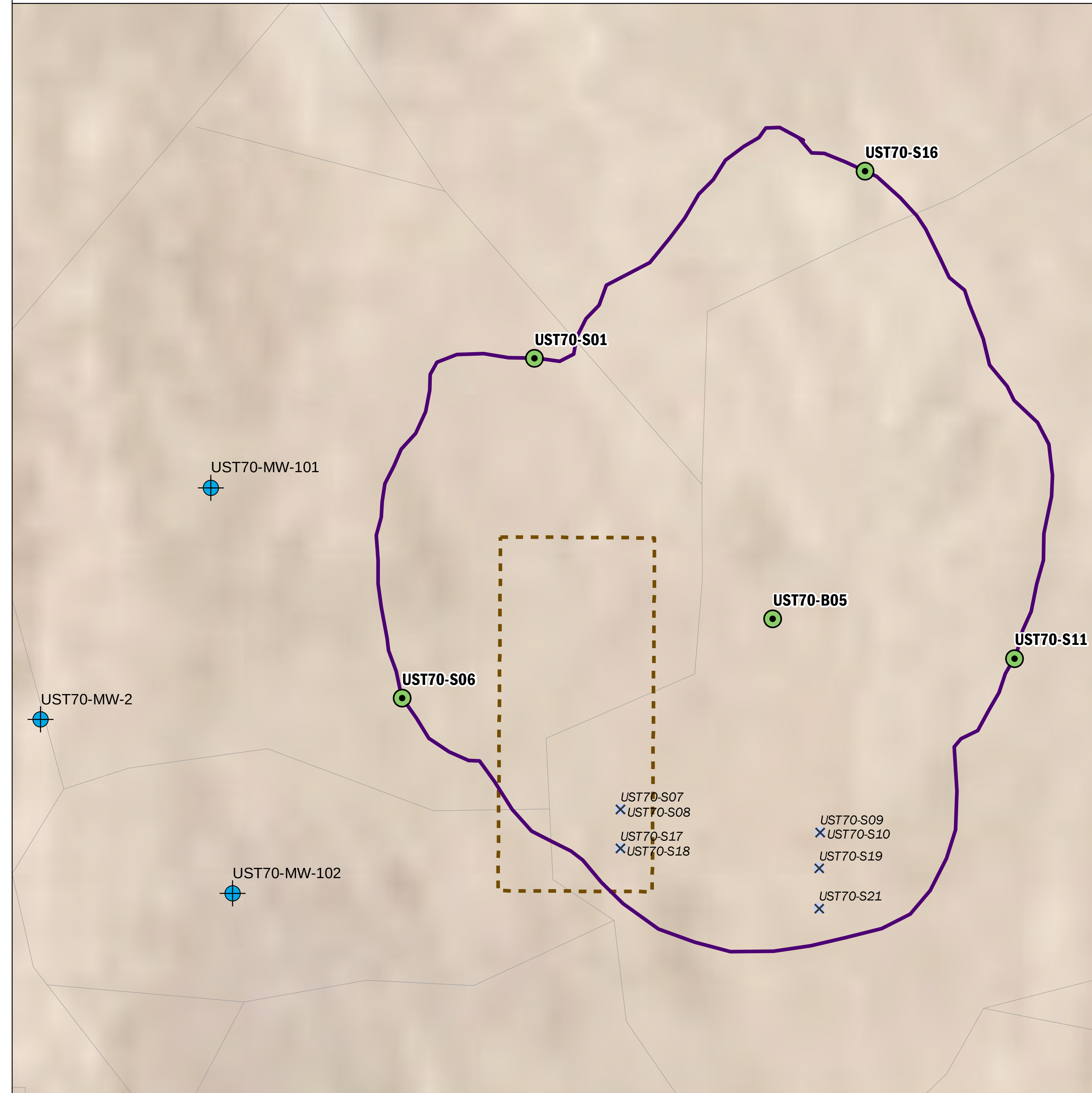
FIGURE NO. **14**

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_July2014 Stoplight Figures\14 UST29.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 1/20/2015 || User: randrusyszyn || Print Date: 1/20/2015

TPHs/cPAHs



Metals



Monitoring Well
Approximate Location of UST 70
UST 70 Excavation Extent

Verification Samples
Exceedance Present
At Least One Exceedance
No Exceedance
Over Excavated Sample Locations

0 5 10
Feet

UST 70 Interim Action Area Verification Samples and Residual Exceedances

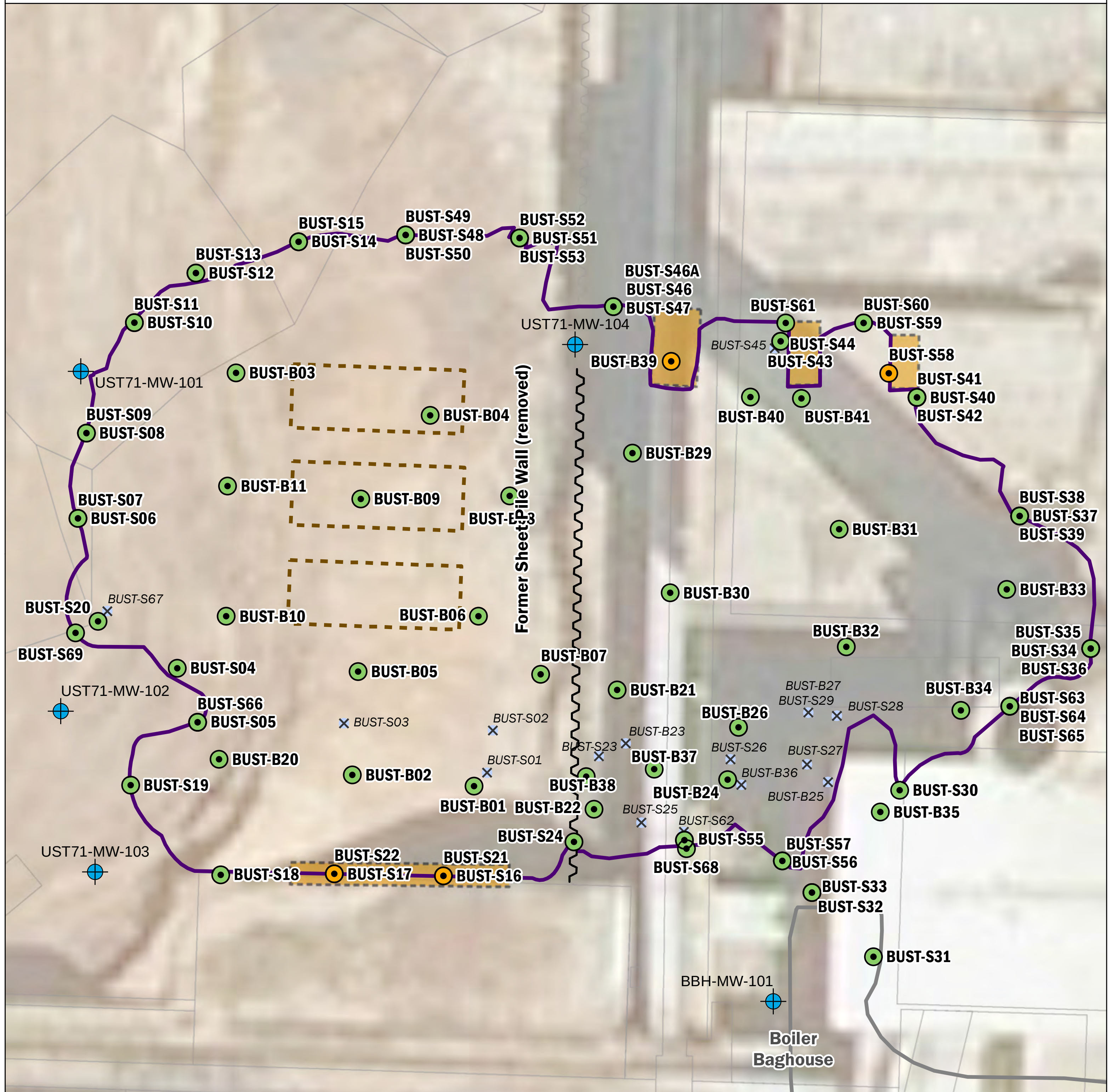
K-C Worldwide Site Upland Area Interim Action
Everett, Washington

Aspect CONSULTING

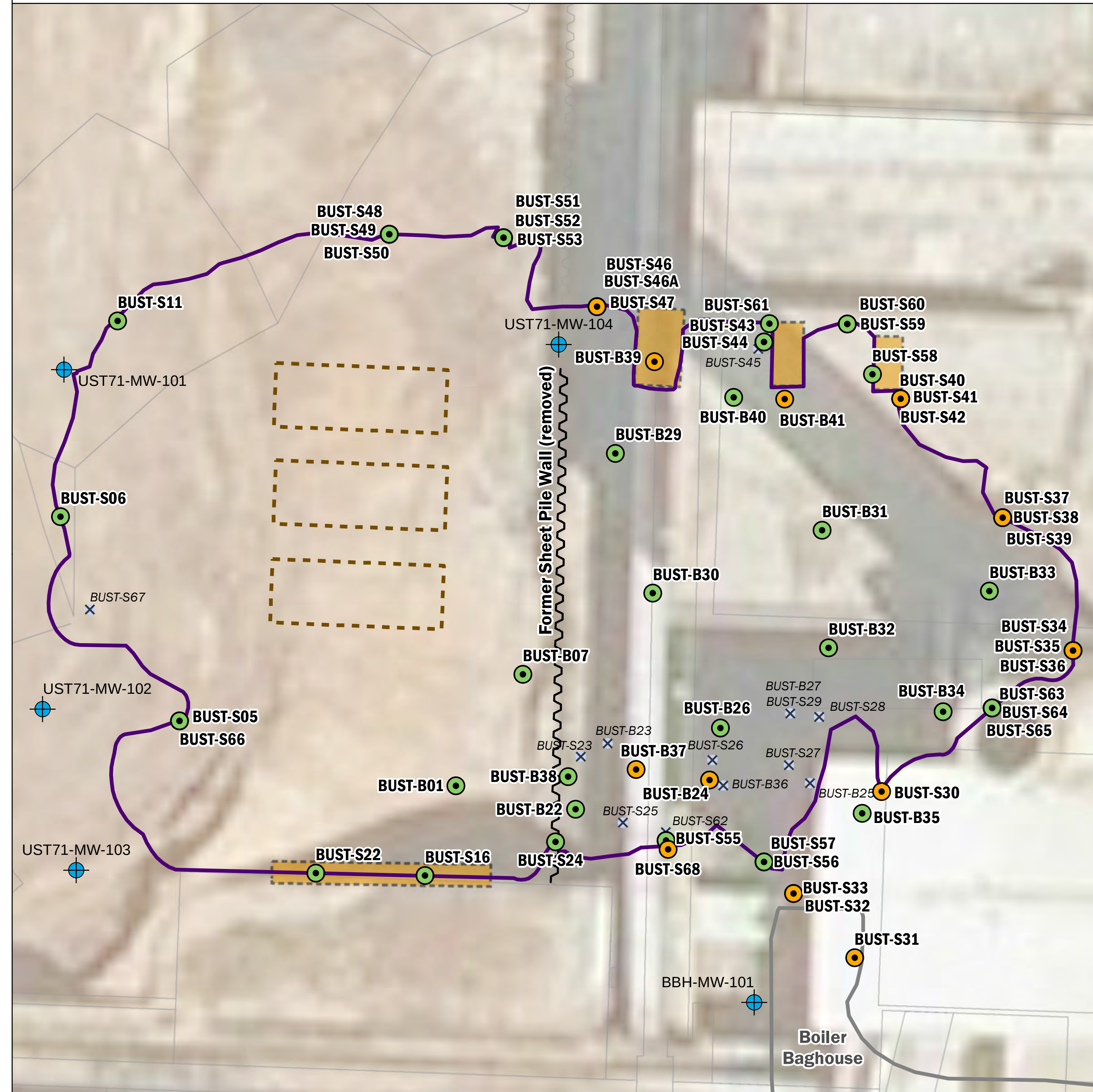
JUL-2014	BY: SJG / HRL	FIGURE NO.
PROJECT NO. 110207	REV BY: - - -	15

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\IA_July2014 Stoplight Figures\15 UST70.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 7/21/2014 || User: hlovelace || Print Date: 7/21/2014

TPHs/cPAHs



Metals



Monitoring Well

Former Sheet Pile Wall (Removed)

Residual petroleum-impacted soil beneath monolithic foundation

Boiler Baghouse Excavation Outline

Bunker C UST Excavation Outline

Verification Samples

Exceedance Present

At Least One Exceedance

No Exceedance

Over Excavated Sample Locations

Count of residual metals exceedances in verification soil samples:
Copper 4, Mercury 12; refer to Table 18 for full data.

N

0 10 20
Feet

USTs 71, 72, 73 Interim Action Area Verification Samples and Residual Exceedances

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

Aspect CONSULTING

JAN-2015	BY: SJG / HRL	FIGURE NO.
PROJECT NO. 110207	REV BY: - - -	16

APPENDIX A

Waste Disposal Records

Certificates of Disposal and Manifests for Hazardous Waste Soil Disposed at Chemical Waste Management Subtitle C Landfill

WASTE MANAGEMENT

APR 07 2014

By______

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812

KIMBERLY CLARK CORP
WAD009250820
2600 FEDERAL AVE
EVERETT WA 98201-3409

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	KIMBERLY CLARK CORP
MANIFEST #:	001823392JJK
CWM TRACKING ID:	431138-01
PROFILE #:	OR321512
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	11/25/13
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	11/27/13

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 01/09/14

WASTE MANAGEMENT

APR 07 2014

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812

KIMBERLY CLARK CORP
WAD009250820
2600 FEDERAL AVE
EVERETT WA 98201-3409

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	KIMBERLY CLARK CORP
MANIFEST #:	001823390JJK
CWM TRACKING ID:	431137-01
PROFILE #:	OR321512
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	11/25/13
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	11/27/13

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 01/09/14

WASTE MANAGEMENT

APR 07 2014

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812

KIMBERLY CLARK CORP
WAD009250820
2600 FEDERAL AVE
EVERETT WA 98201-3409

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	KIMBERLY CLARK CORP
MANIFEST #:	001823391JJK
CWM TRACKING ID:	431136-01
PROFILE #:	OR321512
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	11/25/13
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	11/27/13

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 01/09/14

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812

APR 07 2014

KIMBERLY CLARK CORP
WAD009250820
2600 FEDERAL AVE
EVERETT WA 98201-3409

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	KIMBERLY CLARK CORP
MANIFEST #:	001823389JJK
CWM TRACKING ID:	431304-01
PROFILE #:	OR321512
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	12/02/13
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	12/03/13

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 01/13/14

WASTE MANAGEMENT

APR 07 2014

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812

KIMBERLY CLARK CORP
WAD009250820
2600 FEDERAL AVE
EVERETT WA 98201-3409

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	KIMBERLY CLARK CORP
MANIFEST #:	001823395JJK
CWM TRACKING ID:	431308-01
PROFILE #:	OR321512
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	12/02/13
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	12/03/13

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 01/13/14

WASTE MANAGEMENT

APR 07 2014

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812

KIMBERLY CLARK CORP
WAD009250820
2600 FEDERAL AVE
EVERETT WA 98201-3409

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	KIMBERLY CLARK CORP
MANIFEST #:	001823394JJK
CWM TRACKING ID:	431309-01
PROFILE #:	OR321512
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	12/02/13
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	12/03/13

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 01/13/14

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812

APR 07 2014

KIMBERLY CLARK CORP
WAD009250820
2600 FEDERAL AVE
EVERETT WA 98201-3409

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	KIMBERLY CLARK CORP
MANIFEST #:	001823393JJK
CWM TRACKING ID:	431358-01
PROFILE #:	OR321512
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	12/03/13
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	12/04/13

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 01/13/14

431364 213061 CWMI

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAD009250820
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: **001823389 JJK**

5. Generator's Name and Mailing Address
KIMBERLY CLARK CORP
2600 FEDERAL AVE
EVERETT WA 98201-3409
Generator's Phone: (206) 259-7393

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: STEVE FORLER 208 342 3145
U.S. EPA ID Number: WAR000001263

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709
Facility's Phone: (541) 454-2643
U.S. EPA ID Number: ORD089452353

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, WASTE HAZARDOUS WASTE, SOLID, N.O.S., 9, III (LEAD SOIL WITH <10% DEMO DEBRIS)	1	DT	63000	P	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. OR321512: LEAD CONTAMINATED SOIL WITH DEMOLITION DEBRIS; ERG# 171 (RQ = 10 LBS)

67540P

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert R. HANFORD Agent for Kimberly Clark Corp.
Signature: Robert R Hanford
Month 12 Day 02 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Shannon Lyrans
Signature: [signature]
Month 12 Day 2 Year 13
Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H110
2.
3.
4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Bobbi Galvin
Signature: Bubbi Mc
Month 12 Day 2 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

BMS

213061

CWMI

~~11-25-13~~ 433 431137

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	WAD009250820	1	(800) 424-9300	001823390 JJK

GENERATOR

5. Generator's Name and Mailing Address
KIMBERLY CLARK CORP
2600 FEDERAL AVE
EVERETT WA 98201-3409

Generator's Site Address (if different than mailing address)

Generator's Phone: (206) 259-7393

6. Transporter 1 Company Name: STEVE FORLER Trucking 208-342-2145 — U.S. EPA ID Number: WAR000001263

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address — U.S. EPA ID Number: ORD089452353
CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709

Facility's Phone: (541) 454-2643

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, WASTE HAZARDOUS WASTE, SOLID, N.O.S., 9, III LEAD SOIL WITH <10% DEMO DEBRIS	1	DT	63,000		D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1. OR321512: LEAD CONTAMINATED SOIL WITH DEMOLITION DEBRIS; ERG# 171 (RQ = 10 LBS)

58800 P.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert R. HANFORD Agent for Kimberly Clark Corp — Signature — Month 11 Day 25 Year 2013

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Shannon Lykins — Signature — Month 11 Day 25 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H110			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Sue McAlren — Signature — Month 11 Day 25 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

2130601

129

CWMI

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

43136

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAD009250820
2. Page 1 of: 1
3. Emergency Response Phone: (800)424-9300
4. Manifest Tracking Number: 001823391 JJK

5. Generator's Name and Mailing Address
KIMBERLY CLARK CORP
2600 FEDERAL AVE
EVERETT WA 98201-3409
Generator's Phone: (206) 259-7393
Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: STEVE FORIER TRUCKING (208)-342-2145
U.S. EPA ID Number: WAR000001263

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709
Facility's Phone: (541) 454-2643
U.S. EPA ID Number: ORD089452353

GENERATOR

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RQ, NA3077, WASTE HAZARDOUS WASTE, SOLID, N.O.S., 9, III LEAD SOIL WITH ≤10% DEMO DEBRIS	1	DT	63,000	P ~~LB~~	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1. OR321512: LEAD CONTAMINATED SOIL WITH DEMOLITION DEBRIS; ERG# 171 (RQ = 10 LBS)

64040 P.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert R. HANFORD Agent for Kimberly Clark Corp
Signature: [signature]
Month 11 Day 25 Year 2013

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: GARY BYERLEY
Signature: [signature]
Month 11 Day 25 Year 13
Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

DESIGNATED FACILITY

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H110
2.
3.
4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sue McAhren
Signature: [signature]
Month 11 Day 25 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

213061

CWMI

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 431138

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAD009250820
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 001823392 JJK

5. Generator's Name and Mailing Address:
KIMBERLY CLARK CORP
2600 FEDERAL AVE
EVERETT WA 98201-3409

Generator's Site Address (if different than mailing address)

Generator's Phone: (206) 259-7393

6. Transporter 1 Company Name: STEVE FORLER (208) 342-2145 — U.S. EPA ID Number: WAR 000001863

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709

U.S. EPA ID Number: ORD089452353

Facility's Phone: (541) 454-2643

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, WASTE HAZARDOUS WASTE, SOLID, N.O.S., 9, III LEAD SOIL WITH <10% DEMO DEBRIS	1	DT	63,000	LB	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

63580 P.

1. OR321512: LEAD CONTAMINATED SOIL WITH DEMOLITION DEBRIS; ERG# 171 (RQ = 10 LBS)

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert R. HANFORD Agent for Kimberly Clark Corp — Signature: [signature] — Month 11 Day 25 Year 2013

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jason Green — Signature: [signature] — Month 11 Day 25 Year 13
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H110			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sue McAhren — Signature: [signature] — Month 11 Day 25 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

431358

CWMI

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

GENERATOR

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	WAD009250820	1	(800) 424-9300	001823393 JJK

5. Generator's Name and Mailing Address
KIMBERLY CLARK CORP
2600 FEDERAL AVE
EVERETT WA 98201-3409
Generator's Phone: (206) 259-7393

Generator's Site Address (if different than mailing address)

JAN 0 8 2014

6. Transporter 1 Company Name
STEVE FORLER 208 342 3145
U.S. EPA ID Number WAR 000001263

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709
Facility's Phone: (541) 454-2643
U.S. EPA ID Number ORD089452353

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, WASTE HAZARDOUS WASTE, SOLID, N.O.S., 9, III LEAD SOIL WITH <10% DEMO DEBRIS	1	DT	M.P. ~~63,000~~ 69900	P ~~lbs~~	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1. OR321512: LEAD CONTAMINATED SOIL WITH DEMOLITION DEBRIS; ERG# 171 (RQ = 10 LBS)

69900 P

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I *am the Primary* Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert R HANFORD Agent for Kimberly Clark Corp
Signature: [signature]
Month 12 Day 03 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Mike [illegible]
Signature: [signature]
Month 12 Day 3 Year 13

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Quantity changed by driver sm 12-3-13

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H110			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sue McAhren
Signature: Sue McAhren
Month 12 Day 03 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

F2/4

DESIGNATED FACILITY TO GENERATOR

BMS

CWMI

431309

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAD009250820
2. Page 1 of 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 001823394 JJK

5. Generator's Name and Mailing Address: KIMBERLY CLARK CORP, 2600 FEDERAL AVE, EVERETT WA 98201-3409
Generator's Site Address (if different than mailing address)
Generator's Phone: (206) 259-7393

6. Transporter 1 Company Name: STEVE FORLER 208 342-3145
U.S. EPA ID Number: WAR000001263

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: CHEMICAL WASTE MANAGEMENT, INC, 17629 CEDAR SPRINGS LANE, ARLINGTON OR 97812-9709
U.S. EPA ID Number: ORD089452353
Facility's Phone: (541) 454-2643

GENERATOR

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, WASTE HAZARDOUS WASTE, SOLID, N.O.S., 9, III (LEAD SOIL WITH <10% DEMO DEBRIS)	1	DT	63,000	P	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1. OR321512: LEAD CONTAMINATED SOIL WITH DEMOLITION DEBRIS; ERG# 171 (RQ = 10 LBS)

60,380P

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert R. Hanford Agent for Kimberly Clark Corp
Signature: [signature]
Month 12 Day 02 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter signature (for exports only):
Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Mike Padgett
Signature: [signature]
Month 12 Day 2 Year 13

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H110			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sue McAhren
Signature: Sue McAhren
Month 12 Day 02 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

BMS

4/3/2008

CWMI

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WA D 0 0 9 2 5 0 8 2 0
2. Page 1 of 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: **001823395 JJK**

5. Generator's Name and Mailing Address
KIMBERLY CLARK CORP
2600 FEDERAL AVE
EVERETT WA 98201-3409
Generator's Phone: (206) 259-7303
Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: STEVE FORLER 208 342 3145
U.S. EPA ID Number: WAR 000001263

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709
Facility's Phone: (541) 454-2643
U.S. EPA ID Number: O R D 0 8 9 4 5 2 3 5 3

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, WASTE HAZARDOUS WASTE, SOLID, N.O.S., 9, III (LEAD SOIL WITH <10% DEMO DEBRIS)	1	DT	63,000	P	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. OR321512: LEAD CONTAMINATED SOIL WITH DEMOLITION DEBRIS; ERG# 171 (RQ = 10 LBS)

63,540P

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert R. HANFORD Agent for Kimberly Clark Corp
Signature: Robert R Hanford
Month 12 Day 02 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kurt Cotters
Signature: Kurt Cotters
Month 12 Day 02 Year 13
Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H110
2.
3.
4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sue McAhren
Signature: Sue McAhren
Month 12 Day 02 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

BMS

Certificate of Disposal for Non-Hazardous Waste Disposed at CEMEX Soil Remediation Facility, Everett

CEMEX

June 5, 2014

Release of Liability/Certificate of Disposal

CLEARCREEK CONTRACTORS: is released from liability for all petroleum contaminated waste originating from:

Kimberly Clark
Everett, Wa

and transported to:

CEMEX USA-Everett Soil Remediation
6300 Glenwood Avenue
Everett, WA 98203

From 09/13/13 through 03/31/14

A total of 25393.42 tons of petroleum contaminated soil was transported to the above facility. The material was disposed of in the following manner:

Thermal Remediation (21679.69) / Landfill for Reclamation (3713.73)

Disposal of the contaminated soil was performed in accordance with all applicable federal, state, and local laws and regulations.

Signed:

Larry W. Baker

Larry W. Baker
Soil Remediation Operations Manager
CEMEX
Northwest Region
U.S. Operations

Certificates of Disposal for Non-Hazardous Waste Disposed at Republic Services' Roosevelt Regional Landfill

REPUBLIC SERVICES

CERTIFICATE OF DESTRUCTION

I, Don Tibbets, of Regional Disposal Company (RSI facility), hereby certify that the entire product described in Section A has been properly and legally disposed of in Roosevelt Regional Landfill on April, 2014 (attach any appropriate documentation).

I understand that due to potential concerns related to such things as health, quality, and loss of goodwill, Clearcreek Contractors (Company) does not want this product to be distributed to consumers, even through so called "distressed merchandise" channels of trade, and I further certify that these items were destroyed in such a manner that it cannot be sold, and that the company has taken every reasonable step to prevent resale of said items.

Name (print): Don Tibbets

Signature:

Title: Roosevelt Regional LF General Manager

Date: 6/17/2014

Section A- Products Destroyed (attached additional sheets if needed):

Waste Profile Number (if applicable): 4178137115 / LW-13436A

Description of Product	*Quantity or Weight*
Contaminated Soil w/Debris	856.06 Tons Total Disposed

Detail Contract Activity Report

All Ticket Types

January 01, 2013 to June 09, 2014

History and Waiting

Specific Contract: LW13436A

LW13436A

Ticket Date		Customer	Material	Billing Quantity
04/23/2014	907098	014755 - Clearcreek Contractors	SW-CONT SOIL	29.06 TN
04/23/2014	907107	014755 - Clearcreek Contractors	SW-CONT SOIL	26.34 TN
04/23/2014	907123	014755 - Clearcreek Contractors	SW-CONT SOIL	31.62 TN
04/24/2014	907150	014755 - Clearcreek Contractors	SW-CONT SOIL	33.58 TN
04/24/2014	907151	014755 - Clearcreek Contractors	SW-CONT SOIL	30.84 TN
04/24/2014	907159	014755 - Clearcreek Contractors	SW-CONT SOIL	35.07 TN
04/24/2014	907172	014755 - Clearcreek Contractors	SW-CONT SOIL	28.47 TN
04/25/2014	907223	014755 - Clearcreek Contractors	SW-CONT SOIL	28.25 TN
04/25/2014	907234	014755 - Clearcreek Contractors	SW-CONT SOIL	28.29 TN
04/25/2014	907259	014755 - Clearcreek Contractors	SW-CONT SOIL	26.86 TN
04/28/2014	907321	014755 - Clearcreek Contractors	SW-CONT SOIL	31.47 TN
04/28/2014	907367	014755 - Clearcreek Contractors	SW-CONT SOIL	32.01 TN
04/28/2014	907400	014755 - Clearcreek Contractors	SW-CONT SOIL	34.76 TN
04/28/2014	907409	014755 - Clearcreek Contractors	SW-CONT SOIL	31.31 TN
04/29/2014	907427	014755 - Clearcreek Contractors	SW-CONT SOIL	36.75 TN
04/29/2014	907428	014755 - Clearcreek Contractors	SW-CONT SOIL	34.03 TN
04/29/2014	907455	014755 - Clearcreek Contractors	SW-CONT SOIL	36.98 TN
04/29/2014	907462	014755 - Clearcreek Contractors	SW-CONT SOIL	40.01 TN
04/30/2014	907478	014755 - Clearcreek Contractors	SW-CONT SOIL	38.27 TN
04/30/2014	907506	014755 - Clearcreek Contractors	SW-CONT SOIL	38.02 TN
04/30/2014	907539	014755 - Clearcreek Contractors	SW-CONT SOIL	33.96 TN
05/01/2014	907556	014755 - Clearcreek Contractors	SW-CONT SOIL	36.30 TN
05/01/2014	907560	014755 - Clearcreek Contractors	SW-CONT SOIL	34.87 TN
05/01/2014	907597	014755 - Clearcreek Contractors	SW-CONT SOIL	32.25 TN
05/01/2014	907600	014755 - Clearcreek Contractors	SW-CONT SOIL	32.74 TN
05/02/2014	907661	014755 - Clearcreek Contractors	SW-CONT SOIL	33.95 TN

Tickets Items Reported: 26

Material	Weight Inbound	Outbound	
VH - SW-CONT	856.06	0.00	T

REPUBLIC SERVICES

CERTIFICATE OF DESTRUCTION

I, Don Tibbets, of Regional Disposal Company (RSI facility), hereby certify that the entire product described in Section A has been properly and legally disposed of in Roosevelt Regional Landfill on January, 2014 (attach any appropriate documentation).

I understand that due to potential concerns related to such things as health, quality, and loss of goodwill, Clearcreek Contractors (Company) does not want this product to be distributed to consumers, even through so called “distressed merchandise” channels of trade, and I further certify that these items were destroyed in such a manner that it cannot be sold, and that the company has taken every reasonable step to prevent resale of said items.

Name (print): Don Tibbets

Signature:

Title: Roosevelt Regional LF General Manager

Date: 6/17/2014

Section A- Products Destroyed (attached additional sheets if needed):

Waste Profile Number (if applicable): 4178137115 / LW-13436

Description of Product	*Quantity or Weight*
Contaminated Soil w/Debris	290.52 Tons Total Disposed

Detail Contract Activity Report

All Ticket Types January 01, 2013 to June 09, 2014

History and Waiting Specific Contract: LW-13436

LW-13436

Ticket Date		Customer	Material	Billing Quantity
01/30/2014	903925	014755 - Clearcreek Contractors	SW-CONT SOIL	20.98 TN
01/30/2014	903926	014755 - Clearcreek Contractors	SW-CONT SOIL	25.80 TN
01/30/2014	903934	014755 - Clearcreek Contractors	SW-CONT SOIL	22.01 TN
01/30/2014	903936	014755 - Clearcreek Contractors	SW-CONT SOIL	20.65 TN
01/30/2014	903938	014755 - Clearcreek Contractors	SW-CONT SOIL	18.42 TN
01/30/2014	903939	014755 - Clearcreek Contractors	SW-CONT SOIL	25.39 TN
01/30/2014	903941	014755 - Clearcreek Contractors	SW-CONT SOIL	21.75 TN
01/30/2014	903950	014755 - Clearcreek Contractors	SW-CONT SOIL	30.97 TN
01/30/2014	903951	014755 - Clearcreek Contractors	SW-CONT SOIL	28.02 TN
01/30/2014	903952	014755 - Clearcreek Contractors	SW-CONT SOIL	28.47 TN
01/30/2014	903953	014755 - Clearcreek Contractors	SW-CONT SOIL	22.46 TN
01/30/2014	903954	014755 - Clearcreek Contractors	SW-CONT SOIL	25.60 TN

Tickets Items Reported: 12

Material	Weight Inbound	Outbound	
VH - SW-CONT	290.52	0.00	T

REPUBLIC SERVICES

CERTIFICATE OF DESTRUCTION

I, Don Tibbets, of Regional Disposal Company (RSI facility), hereby certify that the entire product described in Section A has been properly and legally disposed of in Roosevelt Regional Landfill on March, 2014 (attach any appropriate documentation).

I understand that due to potential concerns related to such things as health, quality, and loss of goodwill, Clearcreek Contractors (Company) does not want this product to be distributed to consumers, even through so called "distressed merchandise" channels of trade, and I further certify that these items were destroyed in such a manner that it cannot be sold, and that the company has taken every reasonable step to prevent resale of said items.

Name (print): Don Tibbets

Signature: [signature]

Title: Roosevelt Regional LF General Manager

Date: 6/17/2014

Section A- Products Destroyed (attached additional sheets if needed):

Waste Profile Number (if applicable): 4178137117 / LW-13435

Description of Product	*Quantity or Weight*
Contaminated Soil w/Debris	249.97 Tons Total Disposed

Detail Contract Activity Report

All Ticket Types January 01, 2013 to June 09, 2014

History and Waiting Specific Contract: LW-13435

LW-13435

Ticket Date		Customer	Material	Billing Quantity
03/05/2014	191274	014755 - Clearcreek Contractors Inc.	Cont Soil	27.19 TN
03/05/2014	191295	014755 - Clearcreek Contractors Inc.	Cont Soil	29.64 TN
03/05/2014	191299	014755 - Clearcreek Contractors Inc.	Cont Soil	28.86 TN
03/06/2014	191380	014755 - Clearcreek Contractors Inc.	Cont Soil	25.62 TN
03/06/2014	191382	014755 - Clearcreek Contractors Inc.	Cont Soil	30.52 TN
03/07/2014	191509	014755 - Clearcreek Contractors Inc.	Cont Soil	29.00 TN
03/07/2014	191515	014755 - Clearcreek Contractors Inc.	Cont Soil	29.97 TN
03/11/2014	191654	014755 - Clearcreek Contractors Inc.	Cont Soil	23.98 TN
03/11/2014	191655	014755 - Clearcreek Contractors Inc.	Cont Soil	25.19 TN

Tickets Items Reported: 9

Material	Weight Inbound	Outbound	
66 - Cont Soil	249.97	0.00	T

REPUBLIC SERVICES

CERTIFICATE OF DESTRUCTION

I, Don Tibbets, of Regional Disposal Company (RSI facility), hereby certify that the entire product described in Section A has been properly and legally disposed of in Roosevelt Regional Landfill on 11/24 - 12/6, 2013 (attach any appropriate documentation).

I understand that due to potential concerns related to such things as health, quality, and loss of goodwill, Clearcreek Contractors (Company) does not want this product to be distributed to consumers, even through so called "distressed merchandise" channels of trade, and I further certify that these items were destroyed in such a manner that it cannot be sold, and that the company has taken every reasonable step to prevent resale of said items.

Name (print): Don Tibbets

Signature:

Title: Roosevelt Regional LF General Manager

Date: 6/17/2014

Section A- Products Destroyed (attached additional sheets if needed):

Waste Profile Number (if applicable): 4178137117 / LW-13434

Description of Product	*Quantity or Weight*
Contaminated Soil w/Debris	4,850.99 Tons Total Disposed

Detail Contract Activity Report

All Ticket Types January 01, 2013 to June 09, 2014

History and Waiting Specific Contract: LW-13434

LW-13434

Ticket Date		Customer	Material	Billing Quantity
11/26/2013	901663	014755 - Clearcreek Contractors	SW-CONT SOIL	27.49 TN
11/26/2013	901664	014755 - Clearcreek Contractors	SW-CONT SOIL	25.72 TN
11/26/2013	901672	014755 - Clearcreek Contractors	SW-CONT SOIL	30.91 TN
11/26/2013	901673	014755 - Clearcreek Contractors	SW-CONT SOIL	32.33 TN
11/26/2013	901675	014755 - Clearcreek Contractors	SW-CONT SOIL	33.64 TN
11/26/2013	901684	014755 - Clearcreek Contractors	SW-CONT SOIL	30.38 TN
11/26/2013	901686	014755 - Clearcreek Contractors	SW-CONT SOIL	28.78 TN
11/26/2013	901687	014755 - Clearcreek Contractors	SW-CONT SOIL	25.98 TN
11/26/2013	901689	014755 - Clearcreek Contractors	SW-CONT SOIL	27.30 TN
11/26/2013	901694	014755 - Clearcreek Contractors	SW-CONT SOIL	29.28 TN
11/26/2013	901696	014755 - Clearcreek Contractors	SW-CONT SOIL	30.07 TN
11/26/2013	901697	014755 - Clearcreek Contractors	SW-CONT SOIL	26.43 TN
11/27/2013	901702	014755 - Clearcreek Contractors	SW-CONT SOIL	32.06 TN
11/27/2013	901705	014755 - Clearcreek Contractors	SW-CONT SOIL	30.73 TN
11/27/2013	901706	014755 - Clearcreek Contractors	SW-CONT SOIL	35.34 TN
11/27/2013	901710	014755 - Clearcreek Contractors	SW-CONT SOIL	31.66 TN
11/27/2013	901713	014755 - Clearcreek Contractors	SW-CONT SOIL	30.78 TN
11/27/2013	901714	014755 - Clearcreek Contractors	SW-CONT SOIL	33.77 TN
11/27/2013	901715	014755 - Clearcreek Contractors	SW-CONT SOIL	30.74 TN
11/27/2013	901716	014755 - Clearcreek Contractors	SW-CONT SOIL	28.39 TN
11/27/2013	901718	014755 - Clearcreek Contractors	SW-CONT SOIL	29.30 TN
11/27/2013	901719	014755 - Clearcreek Contractors	SW-CONT SOIL	28.94 TN
11/27/2013	901721	014755 - Clearcreek Contractors	SW-CONT SOIL	28.78 TN
11/27/2013	901723	014755 - Clearcreek Contractors	SW-CONT SOIL	27.51 TN
11/27/2013	901724	014755 - Clearcreek Contractors	SW-CONT SOIL	28.63 TN
11/27/2013	901733	014755 - Clearcreek Contractors	SW-CONT SOIL	28.82 TN
11/27/2013	901737	014755 - Clearcreek Contractors	SW-CONT SOIL	27.36 TN
11/27/2013	901738	014755 - Clearcreek Contractors	SW-CONT SOIL	29.24 TN
11/27/2013	901739	014755 - Clearcreek Contractors	SW-CONT SOIL	31.09 TN
11/27/2013	901740	014755 - Clearcreek Contractors	SW-CONT SOIL	28.92 TN
11/29/2013	901745	014755 - Clearcreek Contractors	SW-CONT SOIL	27.98 TN
11/29/2013	901746	014755 - Clearcreek Contractors	SW-CONT SOIL	30.92 TN
11/29/2013	901747	014755 - Clearcreek Contractors	SW-CONT SOIL	30.76 TN
11/29/2013	901749	014755 - Clearcreek Contractors	SW-CONT SOIL	28.58 TN
11/29/2013	901750	014755 - Clearcreek Contractors	SW-CONT SOIL	32.49 TN
11/29/2013	901751	014755 - Clearcreek Contractors	SW-CONT SOIL	26.76 TN

11/29/2013	901752	014755 - Clearcreek Contractors	SW-CONT SOIL	28.91 TN
11/29/2013	901753	014755 - Clearcreek Contractors	SW-CONT SOIL	32.71 TN
11/29/2013	901754	014755 - Clearcreek Contractors	SW-CONT SOIL	28.92 TN
11/29/2013	901757	014755 - Clearcreek Contractors	SW-CONT SOIL	32.79 TN
11/29/2013	901758	014755 - Clearcreek Contractors	SW-CONT SOIL	30.60 TN
11/29/2013	901759	014755 - Clearcreek Contractors	SW-CONT SOIL	31.16 TN
11/29/2013	901761	014755 - Clearcreek Contractors	SW-CONT SOIL	29.35 TN
11/29/2013	901762	014755 - Clearcreek Contractors	SW-CONT SOIL	31.44 TN
11/29/2013	901763	014755 - Clearcreek Contractors	SW-CONT SOIL	32.10 TN
11/29/2013	901764	014755 - Clearcreek Contractors	SW-CONT SOIL	29.48 TN
11/29/2013	901765	014755 - Clearcreek Contractors	SW-CONT SOIL	24.41 TN
11/29/2013	901767	014755 - Clearcreek Contractors	SW-CONT SOIL	31.89 TN
11/29/2013	901769	014755 - Clearcreek Contractors	SW-CONT SOIL	29.95 TN
11/29/2013	901770	014755 - Clearcreek Contractors	SW-CONT SOIL	30.59 TN
11/29/2013	901771	014755 - Clearcreek Contractors	SW-CONT SOIL	31.99 TN
11/29/2013	901773	014755 - Clearcreek Contractors	SW-CONT SOIL	26.47 TN
11/29/2013	901774	014755 - Clearcreek Contractors	SW-CONT SOIL	30.88 TN
11/29/2013	901776	014755 - Clearcreek Contractors	SW-CONT SOIL	29.99 TN
11/29/2013	901777	014755 - Clearcreek Contractors	SW-CONT SOIL	30.06 TN
11/29/2013	901779	014755 - Clearcreek Contractors	SW-CONT SOIL	29.37 TN
11/29/2013	901780	014755 - Clearcreek Contractors	SW-CONT SOIL	28.54 TN
11/29/2013	901782	014755 - Clearcreek Contractors	SW-CONT SOIL	32.07 TN
11/29/2013	901783	014755 - Clearcreek Contractors	SW-CONT SOIL	28.52 TN
11/29/2013	901785	014755 - Clearcreek Contractors	SW-CONT SOIL	29.79 TN
11/29/2013	901786	014755 - Clearcreek Contractors	SW-CONT SOIL	28.01 TN
11/29/2013	901787	014755 - Clearcreek Contractors	SW-CONT SOIL	27.39 TN
11/29/2013	901788	014755 - Clearcreek Contractors	SW-CONT SOIL	26.63 TN
11/29/2013	901791	014755 - Clearcreek Contractors	SW-CONT SOIL	28.90 TN
11/29/2013	901792	014755 - Clearcreek Contractors	SW-CONT SOIL	27.89 TN
11/29/2013	901793	014755 - Clearcreek Contractors	SW-CONT SOIL	32.96 TN
11/29/2013	901795	014755 - Clearcreek Contractors	SW-CONT SOIL	29.12 TN
11/29/2013	901796	014755 - Clearcreek Contractors	SW-CONT SOIL	29.49 TN
11/29/2013	901798	014755 - Clearcreek Contractors	SW-CONT SOIL	30.50 TN
11/29/2013	901799	014755 - Clearcreek Contractors	SW-CONT SOIL	29.70 TN
11/29/2013	901800	014755 - Clearcreek Contractors	SW-CONT SOIL	28.79 TN
11/29/2013	901801	014755 - Clearcreek Contractors	SW-CONT SOIL	28.91 TN
11/29/2013	901803	014755 - Clearcreek Contractors	SW-CONT SOIL	31.82 TN
12/02/2013	901819	014755 - Clearcreek Contractors	SW-CONT SOIL	29.06 TN
12/02/2013	901820	014755 - Clearcreek Contractors	SW-CONT SOIL	29.47 TN
12/02/2013	901821	014755 - Clearcreek Contractors	SW-CONT SOIL	32.41 TN
12/02/2013	901822	014755 - Clearcreek Contractors	SW-CONT SOIL	33.54 TN
12/02/2013	901823	014755 - Clearcreek Contractors	SW-CONT SOIL	29.56 TN
12/02/2013	901826	014755 - Clearcreek Contractors	SW-CONT SOIL	30.40 TN
12/02/2013	901828	014755 - Clearcreek Contractors	SW-CONT SOIL	29.07 TN
12/02/2013	901829	014755 - Clearcreek Contractors	SW-CONT SOIL	28.32 TN
12/02/2013	901831	014755 - Clearcreek Contractors	SW-CONT SOIL	30.89 TN

12/02/2013	901833	014755 - Clearcreek Contractors	SW-CONT SOIL	19.04 TN
12/02/2013	901835	014755 - Clearcreek Contractors	SW-CONT SOIL	28.34 TN
12/02/2013	901837	014755 - Clearcreek Contractors	SW-CONT SOIL	30.20 TN
12/02/2013	901838	014755 - Clearcreek Contractors	SW-CONT SOIL	26.96 TN
12/02/2013	901839	014755 - Clearcreek Contractors	SW-CONT SOIL	25.10 TN
12/02/2013	901840	014755 - Clearcreek Contractors	SW-CONT SOIL	25.13 TN
12/02/2013	901843	014755 - Clearcreek Contractors	SW-CONT SOIL	28.41 TN
12/02/2013	901845	014755 - Clearcreek Contractors	SW-CONT SOIL	32.11 TN
12/02/2013	901846	014755 - Clearcreek Contractors	SW-CONT SOIL	32.55 TN
12/02/2013	901847	014755 - Clearcreek Contractors	SW-CONT SOIL	33.67 TN
12/02/2013	901848	014755 - Clearcreek Contractors	SW-CONT SOIL	28.58 TN
12/02/2013	901849	014755 - Clearcreek Contractors	SW-CONT SOIL	32.92 TN
12/02/2013	901850	014755 - Clearcreek Contractors	SW-CONT SOIL	27.63 TN
12/02/2013	901851	014755 - Clearcreek Contractors	SW-CONT SOIL	28.74 TN
12/02/2013	901852	014755 - Clearcreek Contractors	SW-CONT SOIL	35.98 TN
12/02/2013	901856	014755 - Clearcreek Contractors	SW-CONT SOIL	32.40 TN
12/02/2013	901857	014755 - Clearcreek Contractors	SW-CONT SOIL	29.49 TN
12/02/2013	901859	014755 - Clearcreek Contractors	SW-CONT SOIL	34.28 TN
12/02/2013	901861	014755 - Clearcreek Contractors	SW-CONT SOIL	28.34 TN
12/02/2013	901862	014755 - Clearcreek Contractors	SW-CONT SOIL	32.88 TN
12/02/2013	901863	014755 - Clearcreek Contractors	SW-CONT SOIL	30.73 TN
12/02/2013	901864	014755 - Clearcreek Contractors	SW-CONT SOIL	30.57 TN
12/02/2013	901865	014755 - Clearcreek Contractors	SW-CONT SOIL	31.19 TN
12/02/2013	901866	014755 - Clearcreek Contractors	SW-CONT SOIL	23.30 TN
12/02/2013	901867	014755 - Clearcreek Contractors	SW-CONT SOIL	23.75 TN
12/02/2013	901868	014755 - Clearcreek Contractors	SW-CONT SOIL	23.10 TN
12/02/2013	901869	014755 - Clearcreek Contractors	SW-CONT SOIL	24.12 TN
12/02/2013	901870	014755 - Clearcreek Contractors	SW-CONT SOIL	25.73 TN
12/03/2013	901874	014755 - Clearcreek Contractors	SW-CONT SOIL	31.51 TN
12/03/2013	901875	014755 - Clearcreek Contractors	SW-CONT SOIL	31.78 TN
12/03/2013	901876	014755 - Clearcreek Contractors	SW-CONT SOIL	38.54 TN
12/03/2013	901877	014755 - Clearcreek Contractors	SW-CONT SOIL	28.44 TN
12/03/2013	901878	014755 - Clearcreek Contractors	SW-CONT SOIL	33.92 TN
12/03/2013	901880	014755 - Clearcreek Contractors	SW-CONT SOIL	27.29 TN
12/03/2013	901881	014755 - Clearcreek Contractors	SW-CONT SOIL	24.80 TN
12/03/2013	901883	014755 - Clearcreek Contractors	SW-CONT SOIL	27.79 TN
12/03/2013	901885	014755 - Clearcreek Contractors	SW-CONT SOIL	31.04 TN
12/03/2013	901886	014755 - Clearcreek Contractors	SW-CONT SOIL	28.50 TN
12/03/2013	901887	014755 - Clearcreek Contractors	SW-CONT SOIL	23.20 TN
12/03/2013	901888	014755 - Clearcreek Contractors	SW-CONT SOIL	23.78 TN
12/03/2013	901892	014755 - Clearcreek Contractors	SW-CONT SOIL	26.74 TN
12/03/2013	901894	014755 - Clearcreek Contractors	SW-CONT SOIL	25.89 TN
12/03/2013	901897	014755 - Clearcreek Contractors	SW-CONT SOIL	28.53 TN
12/03/2013	901900	014755 - Clearcreek Contractors	SW-CONT SOIL	30.85 TN
12/03/2013	901901	014755 - Clearcreek Contractors	SW-CONT SOIL	31.18 TN
12/03/2013	901902	014755 - Clearcreek Contractors	SW-CONT SOIL	26.84 TN

12/03/2013	901903	014755 - Clearcreek Contractors	SW-CONT SOIL	27.27 TN
12/03/2013	901905	014755 - Clearcreek Contractors	SW-CONT SOIL	29.42 TN
12/03/2013	901907	014755 - Clearcreek Contractors	SW-CONT SOIL	25.15 TN
12/03/2013	901908	014755 - Clearcreek Contractors	SW-CONT SOIL	3.68 TN
12/03/2013	901909	014755 - Clearcreek Contractors	SW-CONT SOIL	31.28 TN
12/03/2013	901910	014755 - Clearcreek Contractors	SW-CONT SOIL	26.08 TN
12/03/2013	901911	014755 - Clearcreek Contractors	SW-CONT SOIL	35.36 TN
12/03/2013	901912	014755 - Clearcreek Contractors	SW-CONT SOIL	28.69 TN
12/03/2013	901913	014755 - Clearcreek Contractors	SW-CONT SOIL	29.85 TN
12/03/2013	901914	014755 - Clearcreek Contractors	SW-CONT SOIL	29.18 TN
12/04/2013	901917	014755 - Clearcreek Contractors	SW-CONT SOIL	28.38 TN
12/04/2013	901918	014755 - Clearcreek Contractors	SW-CONT SOIL	33.26 TN
12/04/2013	901919	014755 - Clearcreek Contractors	SW-CONT SOIL	27.33 TN
12/04/2013	901920	014755 - Clearcreek Contractors	SW-CONT SOIL	30.92 TN
12/04/2013	901921	014755 - Clearcreek Contractors	SW-CONT SOIL	31.29 TN
12/04/2013	901922	014755 - Clearcreek Contractors	SW-CONT SOIL	33.71 TN
12/04/2013	901928	014755 - Clearcreek Contractors	SW-CONT SOIL	28.10 TN
12/04/2013	901929	014755 - Clearcreek Contractors	SW-CONT SOIL	26.61 TN
12/04/2013	901933	014755 - Clearcreek Contractors	SW-CONT SOIL	29.40 TN
12/04/2013	901934	014755 - Clearcreek Contractors	SW-CONT SOIL	29.93 TN
12/04/2013	901935	014755 - Clearcreek Contractors	SW-CONT SOIL	31.25 TN
12/04/2013	901937	014755 - Clearcreek Contractors	SW-CONT SOIL	31.37 TN
12/04/2013	901938	014755 - Clearcreek Contractors	SW-CONT SOIL	29.99 TN
12/04/2013	901947	014755 - Clearcreek Contractors	SW-CONT SOIL	30.94 TN
12/04/2013	901949	014755 - Clearcreek Contractors	SW-CONT SOIL	30.45 TN
12/04/2013	901951	014755 - Clearcreek Contractors	SW-CONT SOIL	27.88 TN
12/04/2013	901952	014755 - Clearcreek Contractors	SW-CONT SOIL	24.69 TN
12/04/2013	901953	014755 - Clearcreek Contractors	SW-CONT SOIL	23.08 TN
12/04/2013	901956	014755 - Clearcreek Contractors	SW-CONT SOIL	23.92 TN
12/04/2013	901958	014755 - Clearcreek Contractors	SW-CONT SOIL	21.71 TN
12/06/2013	902015	014755 - Clearcreek Contractors	SW-CONT SOIL	25.75 TN
12/06/2013	902017	014755 - Clearcreek Contractors	SW-CONT SOIL	26.40 TN
12/06/2013	902020	014755 - Clearcreek Contractors	SW-CONT SOIL	32.69 TN
12/06/2013	902033	014755 - Clearcreek Contractors	SW-CONT SOIL	33.80 TN
12/06/2013	902035	014755 - Clearcreek Contractors	SW-CONT SOIL	31.15 TN
12/06/2013	902036	014755 - Clearcreek Contractors	SW-CONT SOIL	35.15 TN
12/06/2013	902048	014755 - Clearcreek Contractors	SW-CONT SOIL	30.49 TN
12/06/2013	902050	014755 - Clearcreek Contractors	SW-CONT SOIL	26.86 TN

Tickets Items Reported: 166

Material	Weight Inbound	Outbound	
VG - SW-CONT	4,850.99	0.00	T

REPUBLIC SERVICES

CERTIFICATE OF DESTRUCTION

I, Don Tibbets, of Regional Disposal Company (RSI facility), hereby certify that the entire product described in Section A has been properly and legally disposed of in Roosevelt Regional Landfill on 10/25 - 11/25, 2013 (attach any appropriate documentation).

I understand that due to potential concerns related to such things as health, quality, and loss of goodwill, Clearcreek Contractors (Company) does not want this product to be distributed to consumers, even through so called "distressed merchandise" channels of trade, and I further certify that these items were destroyed in such a manner that it cannot be sold, and that the company has taken every reasonable step to prevent resale of said items.

Name (print): Don Tibbets

Signature:

Title: Roosevelt Regional LF General Manager

Date: 6/17/2014

Section A- Products Destroyed (attached additional sheets if needed):

Waste Profile Number (if applicable): 41781315425 / LW-13408A

Description of Product	*Quantity or Weight*
Concrete Rubble	3,504.86 Tons Total Disposed

Detail Contract Activity Report

All Ticket Types   January 01, 2013 to June 09, 2014

History and Waiting   Specific Contract: LW13408A

LW13408A

Ticket Date		Customer	Material	Billing Quantity
10/25/2013	900690	014755 - Clearcreek Contractors	SW-CONT SOIL	29.50 TN
10/25/2013	900691	014755 - Clearcreek Contractors	SW-CONT SOIL	30.69 TN
10/25/2013	900692	014755 - Clearcreek Contractors	SW-CONT SOIL	35.77 TN
10/25/2013	900693	014755 - Clearcreek Contractors	SW-CONT SOIL	31.57 TN
10/25/2013	900695	014755 - Clearcreek Contractors	SW-CONT SOIL	32.41 TN
10/25/2013	900696	014755 - Clearcreek Contractors	SW-CONT SOIL	31.33 TN
10/25/2013	900698	014755 - Clearcreek Contractors	SW-CONT SOIL	30.68 TN
10/25/2013	900699	014755 - Clearcreek Contractors	SW-CONT SOIL	31.34 TN
10/25/2013	900705	014755 - Clearcreek Contractors	SW-CONT SOIL	35.59 TN
10/25/2013	900706	014755 - Clearcreek Contractors	SW-CONT SOIL	34.24 TN
10/25/2013	900707	014755 - Clearcreek Contractors	SW-CONT SOIL	29.82 TN
10/25/2013	900708	014755 - Clearcreek Contractors	SW-CONT SOIL	30.57 TN
10/25/2013	900711	014755 - Clearcreek Contractors	SW-CONT SOIL	29.51 TN
10/25/2013	900712	014755 - Clearcreek Contractors	SW-CONT SOIL	30.48 TN
10/25/2013	900713	014755 - Clearcreek Contractors	SW-CONT SOIL	30.73 TN
10/25/2013	900714	014755 - Clearcreek Contractors	SW-CONT SOIL	28.57 TN
10/25/2013	900717	014755 - Clearcreek Contractors	SW-CONT SOIL	30.10 TN
10/25/2013	900718	014755 - Clearcreek Contractors	SW-CONT SOIL	31.36 TN
10/25/2013	900723	014755 - Clearcreek Contractors	SW-CONT SOIL	32.31 TN
10/25/2013	900724	014755 - Clearcreek Contractors	SW-CONT SOIL	31.98 TN
10/25/2013	900726	014755 - Clearcreek Contractors	SW-CONT SOIL	31.64 TN
10/25/2013	900729	014755 - Clearcreek Contractors	SW-CONT SOIL	33.12 TN
10/25/2013	900730	014755 - Clearcreek Contractors	SW-CONT SOIL	32.34 TN
10/28/2013	900737	014755 - Clearcreek Contractors	SW-CONT SOIL	28.87 TN
10/28/2013	900738	014755 - Clearcreek Contractors	SW-CONT SOIL	29.80 TN
10/28/2013	900740	014755 - Clearcreek Contractors	SW-CONT SOIL	31.71 TN
10/28/2013	900742	014755 - Clearcreek Contractors	SW-CONT SOIL	32.41 TN
10/28/2013	900745	014755 - Clearcreek Contractors	SW-CONT SOIL	32.36 TN
10/28/2013	900746	014755 - Clearcreek Contractors	SW-CONT SOIL	32.82 TN
10/28/2013	900747	014755 - Clearcreek Contractors	SW-CONT SOIL	31.25 TN
10/28/2013	900749	014755 - Clearcreek Contractors	SW-CONT SOIL	31.78 TN
10/28/2013	900750	014755 - Clearcreek Contractors	SW-CONT SOIL	32.90 TN
10/28/2013	900752	014755 - Clearcreek Contractors	SW-CONT SOIL	30.06 TN
10/28/2013	900764	014755 - Clearcreek Contractors	SW-CONT SOIL	32.76 TN
10/28/2013	900766	014755 - Clearcreek Contractors	SW-CONT SOIL	32.67 TN
10/28/2013	900767	014755 - Clearcreek Contractors	SW-CONT SOIL	30.24 TN

10/28/2013	900771	014755 - Clearcreek Contractors	SW-CONT SOIL	29.09 TN
10/28/2013	900774	014755 - Clearcreek Contractors	SW-CONT SOIL	28.32 TN
10/28/2013	900775	014755 - Clearcreek Contractors	SW-CONT SOIL	29.72 TN
10/28/2013	900776	014755 - Clearcreek Contractors	SW-CONT SOIL	32.25 TN
10/28/2013	900778	014755 - Clearcreek Contractors	SW-CONT SOIL	27.74 TN
10/28/2013	900779	014755 - Clearcreek Contractors	SW-CONT SOIL	31.71 TN
10/28/2013	900784	014755 - Clearcreek Contractors	SW-CONT SOIL	29.23 TN
10/28/2013	900787	014755 - Clearcreek Contractors	SW-CONT SOIL	31.02 TN
10/28/2013	900789	014755 - Clearcreek Contractors	SW-CONT SOIL	32.56 TN
10/28/2013	900791	014755 - Clearcreek Contractors	SW-CONT SOIL	32.06 TN
10/28/2013	900795	014755 - Clearcreek Contractors	SW-CONT SOIL	32.34 TN
10/28/2013	900800	014755 - Clearcreek Contractors	SW-CONT SOIL	34.02 TN
10/28/2013	900802	014755 - Clearcreek Contractors	SW-CONT SOIL	32.32 TN
10/28/2013	900804	014755 - Clearcreek Contractors	SW-CONT SOIL	33.67 TN
10/28/2013	900805	014755 - Clearcreek Contractors	SW-CONT SOIL	30.09 TN
10/28/2013	900807	014755 - Clearcreek Contractors	SW-CONT SOIL	33.91 TN
10/29/2013	900814	014755 - Clearcreek Contractors	SW-CONT SOIL	34.55 TN
10/29/2013	900820	014755 - Clearcreek Contractors	SW-CONT SOIL	34.14 TN
10/29/2013	900822	014755 - Clearcreek Contractors	SW-CONT SOIL	31.73 TN
10/29/2013	900824	014755 - Clearcreek Contractors	SW-CONT SOIL	33.93 TN
10/29/2013	900832	014755 - Clearcreek Contractors	SW-CONT SOIL	33.14 TN
10/29/2013	900833	014755 - Clearcreek Contractors	SW-CONT SOIL	32.11 TN
10/29/2013	900834	014755 - Clearcreek Contractors	SW-CONT SOIL	29.37 TN
10/29/2013	900842	014755 - Clearcreek Contractors	SW-CONT SOIL	31.76 TN
10/29/2013	900845	014755 - Clearcreek Contractors	SW-CONT SOIL	32.82 TN
10/29/2013	900847	014755 - Clearcreek Contractors	SW-CONT SOIL	29.48 TN
10/29/2013	900848	014755 - Clearcreek Contractors	SW-CONT SOIL	32.33 TN
10/29/2013	900850	014755 - Clearcreek Contractors	SW-CONT SOIL	32.68 TN
10/29/2013	900851	014755 - Clearcreek Contractors	SW-CONT SOIL	31.35 TN
10/29/2013	900852	014755 - Clearcreek Contractors	SW-CONT SOIL	30.59 TN
11/11/2013	901172	014755 - Clearcreek Contractors	SW-CONT SOIL	26.95 TN
11/11/2013	901173	014755 - Clearcreek Contractors	SW-CONT SOIL	24.04 TN
11/11/2013	901175	014755 - Clearcreek Contractors	SW-CONT SOIL	25.23 TN
11/11/2013	901187	014755 - Clearcreek Contractors	SW-CONT SOIL	27.37 TN
11/11/2013	901188	014755 - Clearcreek Contractors	SW-CONT SOIL	30.19 TN
11/11/2013	901196	014755 - Clearcreek Contractors	SW-CONT SOIL	34.59 TN
11/11/2013	901205	014755 - Clearcreek Contractors	SW-CONT SOIL	28.76 TN
11/11/2013	901206	014755 - Clearcreek Contractors	SW-CONT SOIL	27.60 TN
11/11/2013	901211	014755 - Clearcreek Contractors	SW-CONT SOIL	30.59 TN
11/12/2013	901219	014755 - Clearcreek Contractors	SW-CONT SOIL	31.58 TN
11/12/2013	901220	014755 - Clearcreek Contractors	SW-CONT SOIL	31.90 TN
11/12/2013	901224	014755 - Clearcreek Contractors	SW-CONT SOIL	29.22 TN
11/12/2013	901235	014755 - Clearcreek Contractors	SW-CONT SOIL	30.66 TN
11/12/2013	901236	014755 - Clearcreek Contractors	SW-CONT SOIL	27.00 TN
11/12/2013	901244	014755 - Clearcreek Contractors	SW-CONT SOIL	26.11 TN
11/12/2013	901249	014755 - Clearcreek Contractors	SW-CONT SOIL	30.96 TN

11/12/2013	901250	014755 - Clearcreek Contractors	SW-CONT SOIL	29.16 TN
11/12/2013	901257	014755 - Clearcreek Contractors	SW-CONT SOIL	27.81 TN
11/20/2013	901477	014755 - Clearcreek Contractors	SW-CONT SOIL	31.24 TN
11/20/2013	901478	014755 - Clearcreek Contractors	SW-CONT SOIL	29.10 TN
11/20/2013	901479	014755 - Clearcreek Contractors	SW-CONT SOIL	29.17 TN
11/20/2013	901491	014755 - Clearcreek Contractors	SW-CONT SOIL	33.01 TN
11/20/2013	901493	014755 - Clearcreek Contractors	SW-CONT SOIL	32.08 TN
11/20/2013	901495	014755 - Clearcreek Contractors	SW-CONT SOIL	32.70 TN
11/21/2013	901503	014755 - Clearcreek Contractors	SW-CONT SOIL	33.73 TN
11/21/2013	901504	014755 - Clearcreek Contractors	SW-CONT SOIL	29.76 TN
11/21/2013	901505	014755 - Clearcreek Contractors	SW-CONT SOIL	35.05 TN
11/21/2013	901512	014755 - Clearcreek Contractors	SW-CONT SOIL	28.84 TN
11/21/2013	901513	014755 - Clearcreek Contractors	SW-CONT SOIL	31.96 TN
11/21/2013	901515	014755 - Clearcreek Contractors	SW-CONT SOIL	32.16 TN
11/21/2013	901537	014755 - Clearcreek Contractors	SW-CONT SOIL	28.60 TN
11/21/2013	901539	014755 - Clearcreek Contractors	SW-CONT SOIL	31.31 TN
11/21/2013	901542	014755 - Clearcreek Contractors	SW-CONT SOIL	31.32 TN
11/21/2013	901563	014755 - Clearcreek Contractors	SW-CONT SOIL	32.81 TN
11/21/2013	901565	014755 - Clearcreek Contractors	SW-CONT SOIL	30.58 TN
11/21/2013	901566	014755 - Clearcreek Contractors	SW-CONT SOIL	31.28 TN
11/22/2013	901579	014755 - Clearcreek Contractors	SW-CONT SOIL	29.17 TN
11/22/2013	901580	014755 - Clearcreek Contractors	SW-CONT SOIL	31.51 TN
11/22/2013	901582	014755 - Clearcreek Contractors	SW-CONT SOIL	29.38 TN
11/22/2013	901590	014755 - Clearcreek Contractors	SW-CONT SOIL	34.21 TN
11/22/2013	901593	014755 - Clearcreek Contractors	SW-CONT SOIL	29.75 TN
11/22/2013	901594	014755 - Clearcreek Contractors	SW-CONT SOIL	31.20 TN
11/22/2013	901599	014755 - Clearcreek Contractors	SW-CONT SOIL	30.32 TN
11/22/2013	901602	014755 - Clearcreek Contractors	SW-CONT SOIL	27.75 TN
11/22/2013	901603	014755 - Clearcreek Contractors	SW-CONT SOIL	28.90 TN
11/25/2013	901621	014755 - Clearcreek Contractors	SW-CONT SOIL	32.78 TN
11/25/2013	901623	014755 - Clearcreek Contractors	SW-CONT SOIL	30.16 TN

Tickets Reported: Items Reported: 113

Material Summary	Weight		
	Inbound	Outbound	
VG - SW-CONT	3,504.86	0.00	T

REPUBLIC SERVICES

CERTIFICATE OF DESTRUCTION

I, Don Tibbets, of Regional Disposal Company (RSI facility), hereby certify that the entire product described in Section A has been properly and legally disposed of in Roosevelt Regional Landfill on 9/17/13 - 1/4, 2014 (attach any appropriate documentation).

I understand that due to potential concerns related to such things as health, quality, and loss of goodwill, Clearcreek Contractors (Company) does not want this product to be distributed to consumers, even through so called "distressed merchandise" channels of trade, and I further certify that these items were destroyed in such a manner that it cannot be sold, and that the company has taken every reasonable step to prevent resale of said items.

Name (print): Don Tibbets

Signature:

Title: Roosevelt Regional LF General Manager

Date: 6/17/2014

Section A- Products Destroyed (attached additional sheets if needed):

Waste Profile Number (if applicable): 41781314885 / LW-13380

Description of Product	*Quantity or Weight*
Hog Fuel Mixed w/Soil	3874.32 Tons Total Disposed

Detail Contract Activity Report

All Ticket Types — January 01, 2013 to June 09, 2014

History and Waiting — Specific Contract: LW-13380

LW-13380

Ticket Date		Customer	Material	Billing Quantity
10/04/2013	905020	014755 - Clearcreek Contractors Inc.	Cont Soil	27.34 TN
10/04/2013	905023	014755 - Clearcreek Contractors Inc.	Cont Soil	27.60 TN
10/04/2013	905026	014755 - Clearcreek Contractors Inc.	Cont Soil	26.92 TN
10/04/2013	905142	014755 - Clearcreek Contractors Inc.	Cont Soil	28.16 TN
10/04/2013	905146	014755 - Clearcreek Contractors Inc.	Cont Soil	27.87 TN
10/04/2013	905161	014755 - Clearcreek Contractors Inc.	Cont Soil	28.17 TN
10/04/2013	905168	014755 - Clearcreek Contractors Inc.	Cont Soil	28.11 TN
10/05/2013	905301	014755 - Clearcreek Contractors Inc.	Cont Soil	26.03 TN
10/05/2013	905305	014755 - Clearcreek Contractors Inc.	Cont Soil	29.08 TN
10/05/2013	905321	014755 - Clearcreek Contractors Inc.	Cont Soil	23.67 TN
10/05/2013	905327	014755 - Clearcreek Contractors Inc.	Cont Soil	25.79 TN
10/08/2013	905761	014755 - Clearcreek Contractors Inc.	Cont Soil	27.84 TN
10/08/2013	905762	014755 - Clearcreek Contractors Inc.	Cont Soil	29.81 TN
11/01/2013	185381	014755 - Clearcreek Contractors Inc.	Cont Soil	27.92 TN
11/01/2013	185384	014755 - Clearcreek Contractors Inc.	Cont Soil	28.00 TN
11/01/2013	185393	014755 - Clearcreek Contractors Inc.	Cont Soil	27.86 TN
11/01/2013	185403	014755 - Clearcreek Contractors Inc.	Cont Soil	22.21 TN
11/01/2013	185404	014755 - Clearcreek Contractors Inc.	Cont Soil	26.81 TN
11/04/2013	185413	014755 - Clearcreek Contractors Inc.	Cont Soil	26.63 TN
11/04/2013	185429	014755 - Clearcreek Contractors Inc.	Cont Soil	26.60 TN
11/04/2013	185483	014755 - Clearcreek Contractors Inc.	Cont Soil	27.11 TN
11/04/2013	185489	014755 - Clearcreek Contractors Inc.	Cont Soil	28.58 TN
11/04/2013	185490	014755 - Clearcreek Contractors Inc.	Cont Soil	25.20 TN
11/04/2013	185514	014755 - Clearcreek Contractors Inc.	Cont Soil	27.60 TN
11/04/2013	185526	014755 - Clearcreek Contractors Inc.	Cont Soil	25.02 TN
11/05/2013	185551	014755 - Clearcreek Contractors Inc.	Cont Soil	30.85 TN
11/05/2013	185558	014755 - Clearcreek Contractors Inc.	Cont Soil	24.83 TN
11/05/2013	185607	014755 - Clearcreek Contractors Inc.	Cont Soil	26.46 TN
11/05/2013	185632	014755 - Clearcreek Contractors Inc.	Cont Soil	26.61 TN
11/05/2013	185640	014755 - Clearcreek Contractors Inc.	Cont Soil	27.80 TN
11/05/2013	185641	014755 - Clearcreek Contractors Inc.	Cont Soil	25.97 TN
11/05/2013	185643	014755 - Clearcreek Contractors Inc.	Cont Soil	27.04 TN
11/05/2013	185649	014755 - Clearcreek Contractors Inc.	Cont Soil	31.12 TN
11/05/2013	185654	014755 - Clearcreek Contractors Inc.	Cont Soil	27.75 TN
11/05/2013	185655	014755 - Clearcreek Contractors Inc.	Cont Soil	27.17 TN
11/06/2013	185679	014755 - Clearcreek Contractors Inc.	Cont Soil	27.09 TN

11/09/2013	185759	014755 - Clearcreek Contractors Inc.	Cont Soil	27.26 TN
11/09/2013	185760	014755 - Clearcreek Contractors Inc.	Cont Soil	28.37 TN
11/12/2013	185886	014755 - Clearcreek Contractors Inc.	Cont Soil	28.75 TN
11/12/2013	185919	014755 - Clearcreek Contractors Inc.	Cont Soil	25.71 TN
11/12/2013	185935	014755 - Clearcreek Contractors Inc.	Cont Soil	27.22 TN
11/30/2013	186793	014755 - Clearcreek Contractors Inc.	Cont Soil	26.81 TN
11/30/2013	186816	014755 - Clearcreek Contractors Inc.	Cont Soil	27.28 TN
11/30/2013	186826	014755 - Clearcreek Contractors Inc.	Cont Soil	27.01 TN
11/30/2013	186832	014755 - Clearcreek Contractors Inc.	Cont Soil	29.24 TN
11/30/2013	186838	014755 - Clearcreek Contractors Inc.	Cont Soil	23.79 TN
11/30/2013	186845	014755 - Clearcreek Contractors Inc.	Cont Soil	26.87 TN
12/02/2013	186885	014755 - Clearcreek Contractors Inc.	Cont Soil	28.16 TN
12/02/2013	186886	014755 - Clearcreek Contractors Inc.	Cont Soil	27.81 TN
12/02/2013	186890	014755 - Clearcreek Contractors Inc.	Cont Soil	28.39 TN
12/03/2013	186953	014755 - Clearcreek Contractors Inc.	Cont Soil	29.87 TN
12/03/2013	186954	014755 - Clearcreek Contractors Inc.	Cont Soil	27.20 TN
12/04/2013	187019	014755 - Clearcreek Contractors Inc.	Cont Soil	26.22 TN
01/03/2014	188390	014755 - Clearcreek Contractors Inc.	Cont Soil	7.56 TN
01/03/2014	188393	014755 - Clearcreek Contractors Inc.	Cont Soil	11.01 TN
01/04/2014	188415	014755 - Clearcreek Contractors Inc.	Cont Soil	22.83 TN
09/17/2013	666894	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/17/2013	666894	014755 - Clearcreek Contractors Inc.	Cont Soil	4.67 TN
09/17/2013	666894	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/17/2013	666918	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/17/2013	666918	014755 - Clearcreek Contractors Inc.	Cont Soil	0.90 TN
09/17/2013	666918	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/17/2013	666924	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/17/2013	666924	014755 - Clearcreek Contractors Inc.	Cont Soil	5.41 TN
09/17/2013	666924	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/17/2013	666926	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/17/2013	666926	014755 - Clearcreek Contractors Inc.	Cont Soil	4.15 TN
09/17/2013	666926	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/17/2013	666982	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/17/2013	666982	014755 - Clearcreek Contractors Inc.	Cont Soil	2.69 TN
09/17/2013	666982	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/17/2013	666992	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/17/2013	666992	014755 - Clearcreek Contractors Inc.	Cont Soil	4.28 TN
09/17/2013	666992	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/17/2013	667009	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/17/2013	667009	014755 - Clearcreek Contractors Inc.	Cont Soil	1.51 TN
09/17/2013	667009	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/18/2013	667294	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/18/2013	667294	014755 - Clearcreek Contractors Inc.	Cont Soil	1.06 TN
09/18/2013	667294	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/18/2013	667296	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/18/2013	667296	014755 - Clearcreek Contractors Inc.	Cont Soil	1.45 TN

09/18/2013	667296	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/18/2013	667303	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/18/2013	667303	014755 - Clearcreek Contractors Inc.	Cont Soil	0.43 TN
09/18/2013	667303	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/18/2013	667331	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/18/2013	667331	014755 - Clearcreek Contractors Inc.	Cont Soil	0.66 TN
09/18/2013	667331	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/18/2013	667334	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/18/2013	667334	014755 - Clearcreek Contractors Inc.	Cont Soil	1.65 TN
09/18/2013	667334	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/18/2013	667337	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/18/2013	667337	014755 - Clearcreek Contractors Inc.	Cont Soil	1.96 TN
09/18/2013	667337	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/18/2013	667342	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/18/2013	667342	014755 - Clearcreek Contractors Inc.	Cont Soil	2.09 TN
09/18/2013	667342	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/19/2013	667561	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/19/2013	667561	014755 - Clearcreek Contractors Inc.	Cont Soil	3.05 TN
09/19/2013	667561	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/19/2013	667584	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/19/2013	667584	014755 - Clearcreek Contractors Inc.	Cont Soil	2.03 TN
09/19/2013	667584	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/19/2013	667588	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/19/2013	667588	014755 - Clearcreek Contractors Inc.	Cont Soil	1.71 TN
09/19/2013	667588	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/19/2013	667597	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/19/2013	667597	014755 - Clearcreek Contractors Inc.	Cont Soil	1.34 TN
09/19/2013	667597	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/19/2013	667619	014755 - Clearcreek Contractors Inc.	Cont Soil	23.39 TN
09/19/2013	667619	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/19/2013	667620	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/19/2013	667620	014755 - Clearcreek Contractors Inc.	Cont Soil	1.68 TN
09/19/2013	667620	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/19/2013	667628	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/19/2013	667628	014755 - Clearcreek Contractors Inc.	Cont Soil	3.03 TN
09/19/2013	667628	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/19/2013	667653	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/19/2013	667653	014755 - Clearcreek Contractors Inc.	Cont Soil	1.39 TN
09/19/2013	667653	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/20/2013	667931	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/20/2013	667931	014755 - Clearcreek Contractors Inc.	Cont Soil	2.80 TN
09/20/2013	667931	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/20/2013	667935	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN
09/20/2013	667935	014755 - Clearcreek Contractors Inc.	Cont Soil	2.83 TN
09/20/2013	667935	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00 LD
09/21/2013	668211	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00 TN

09/21/2013	668211	014755 - Clearcreek Contractors Inc.	Cont Soil	3.02	TN
09/21/2013	668211	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/21/2013	668255	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/21/2013	668255	014755 - Clearcreek Contractors Inc.	Cont Soil	0.85	TN
09/21/2013	668255	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/21/2013	668258	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/21/2013	668258	014755 - Clearcreek Contractors Inc.	Cont Soil	4.19	TN
09/21/2013	668258	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/21/2013	668285	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/21/2013	668285	014755 - Clearcreek Contractors Inc.	Cont Soil	0.66	TN
09/21/2013	668285	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/21/2013	668287	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/21/2013	668287	014755 - Clearcreek Contractors Inc.	Cont Soil	1.56	TN
09/21/2013	668287	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/21/2013	668289	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/21/2013	668289	014755 - Clearcreek Contractors Inc.	Cont Soil	2.85	TN
09/21/2013	668289	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/24/2013	668767	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/24/2013	668767	014755 - Clearcreek Contractors Inc.	Cont Soil	2.21	TN
09/24/2013	668767	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/24/2013	668768	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/24/2013	668768	014755 - Clearcreek Contractors Inc.	Cont Soil	0.51	TN
09/24/2013	668768	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/24/2013	668769	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/24/2013	668769	014755 - Clearcreek Contractors Inc.	Cont Soil	1.93	TN
09/24/2013	668769	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/24/2013	668771	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/24/2013	668771	014755 - Clearcreek Contractors Inc.	Cont Soil	5.06	TN
09/24/2013	668771	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/24/2013	668772	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/24/2013	668772	014755 - Clearcreek Contractors Inc.	Cont Soil	2.48	TN
09/24/2013	668772	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/24/2013	668777	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/24/2013	668777	014755 - Clearcreek Contractors Inc.	Cont Soil	2.63	TN
09/24/2013	668777	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/24/2013	668780	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/24/2013	668780	014755 - Clearcreek Contractors Inc.	Cont Soil	1.38	TN
09/24/2013	668780	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/24/2013	668789	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/24/2013	668789	014755 - Clearcreek Contractors Inc.	Cont Soil	3.52	TN
09/24/2013	668789	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/25/2013	669157	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/25/2013	669157	014755 - Clearcreek Contractors Inc.	Cont Soil	1.27	TN
09/25/2013	669157	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/25/2013	669158	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/25/2013	669158	014755 - Clearcreek Contractors Inc.	Cont Soil	1.84	TN

09/25/2013	669158	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/25/2013	669164	014755 - Clearcreek Contractors Inc.	Cont Soil	24.21	TN
09/25/2013	669164	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
09/25/2013	669165	014755 - Clearcreek Contractors Inc.	Cont Soil	25.00	TN
09/25/2013	669165	014755 - Clearcreek Contractors Inc.	Cont Soil	0.95	TN
09/25/2013	669165	014755 - Clearcreek Contractors Inc.	Container Chasis	1.00	LD
11/07/2013	300038	014755 - Clearcreek Contractors Inc.	Cont Soil	25.81	TN
11/09/2013	300234	014755 - Clearcreek Contractors Inc.	Cont Soil	30.41	TN
11/09/2013	300239	014755 - Clearcreek Contractors Inc.	Cont Soil	26.45	TN
11/13/2013	300538	014755 - Clearcreek Contractors Inc.	Cont Soil	27.23	TN
11/02/2013	904315	014755 - Clearcreek Contractors Inc.	Cont Soil	26.13	TN
11/02/2013	904316	014755 - Clearcreek Contractors Inc.	Cont Soil	25.35	TN

Tickets Reported: Items Reported: 186

Material	Weight Inbound	Outbound	
66 - Cont Soil	3,874.32	0.00	T
BK - Container	0.00	0.00	T

REPUBLIC SERVICES

CERTIFICATE OF DESTRUCTION

I, Don Tibbets, of Regional Disposal Company (RSI facility), hereby certify that the entire product described in Section A has been properly and legally disposed of in Roosevelt Regional Landfill on November, 2013 (attach any appropriate documentation).

I understand that due to potential concerns related to such things as health, quality, and loss of goodwill, Clearcreek Contractors (Company) does not want this product to be distributed to consumers, even through so called "distressed merchandise" channels of trade, and I further certify that these items were destroyed in such a manner that it cannot be sold, and that the company has taken every reasonable step to prevent resale of said items.

Name (print): Don Tibbets

Signature:

Title: Roosevelt Regional LF General Manager

Date: 6/17/2014

Section A- Products Destroyed (attached additional sheets if needed):

Waste Profile Number (if applicable): 41781314885 / LW-13379

Description of Product	*Quantity or Weight*
Hog Fuel	231.67 Tons Total Disposed

Detail Contract Activity Report

All Ticket Types January 01, 2013 to June 09, 2014

History and Waiting Specific Contract: LW-13379

LW-13379

Ticket Date		Customer	Material	Billing Quantity	
11/25/2013	901627	014755 - Clearcreek Contractors	SW-CONT SOIL	17.21	TN
11/25/2013	901635	014755 - Clearcreek Contractors	SW-CONT SOIL	22.90	TN
11/25/2013	901637	014755 - Clearcreek Contractors	SW-CONT SOIL	23.98	TN
11/25/2013	901638	014755 - Clearcreek Contractors	SW-CONT SOIL	23.19	TN
11/25/2013	901647	014755 - Clearcreek Contractors	SW-CONT SOIL	23.11	TN
11/25/2013	901648	014755 - Clearcreek Contractors	SW-CONT SOIL	23.87	TN
11/25/2013	901649	014755 - Clearcreek Contractors	SW-CONT SOIL	25.74	TN
11/26/2013	901653	014755 - Clearcreek Contractors	SW-CONT SOIL	27.19	TN
11/26/2013	901659	014755 - Clearcreek Contractors	SW-CONT SOIL	26.54	TN
11/26/2013	901660	014755 - Clearcreek Contractors	SW-CONT SOIL	17.94	TN

Tickets Items Reported: 10

Material	Weight Inbound	Weight Outbound	
VG - SW-CONT	231.67	0.00	T

Documentation for Disposal of Waste Fluids Disposed by Emerald Services Inc.

CERTIFICATE OF DISPOSAL

On March 25th, 2014 the Emerald Recycling facility located at 1500 Airport Way S., Seattle WA 98134, received a shipment from:

Clear Creek
2600 Federal Ave
Everett, WA

On Manifest Number: 67366

Manifest Line	1A
Profile Number	G00501
Process	Waste Water
Date of Process:	3/26/14

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above described waste or material was managed in compliance with all applicable laws, regulations, permits, and licenses on the date listed above.

	6/13/14
Facility Representative	Date of Issue

EMERALD SERVICES INC
www.emeraldnw.com

CERTIFICATE OF DISPOSAL

On March 27th, 2014 the Emerald Recycling facility located at 1500 Airport Way S., Seattle WA 98134, received a shipment from:

Clear Creek
2600 Federal Ave
Everett, WA

On Manifest Number: 67956

Manifest Line	1A
Profile Number	G00501
Process	Waste Water
Date of Process:	3/28/14

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above described waste or material was managed in compliance with all applicable laws, regulations, permits, and licenses on the date listed above.

[signature]	6/13/14
Facility Representative	Date of Issue

www.emeraldnw.com

CERTIFICATE OF DISPOSAL

On March 31st, 2014 the Emerald Recycling facility located at 1500 Airport Way S., Seattle WA 98134, received a shipment from:

Clear Creek
2600 Federal Ave
Everett, WA

On Manifest Number: 67989

Manifest Line	1A
Profile Number	G00501
Process	Waste Water
Date of Process:	4/1/14

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above described waste or material was managed in compliance with all applicable laws, regulations, permits, and licenses on the date listed above.

[signature]	6/13/14
Facility Representative	Date of Issue

EMERALD SERVICES INC

www.emeraldnw.com

CERTIFICATE OF DISPOSAL

On March 28th, 2014 the Emerald Recycling facility located at 1500 Airport Way S., Seattle WA 98134, received a shipment from:

Clear Creek
2600 Federal Ave
Everett, WA

On Manifest Number: 69083

Manifest Line	1A
Profile Number	G00501
Process	Waste Water
Date of Process:	3/29/14

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above described waste or material was managed in compliance with all applicable laws, regulations, permits, and licenses on the date listed above.

	6/13/14
Facility Representative	Date of Issue

7343 E. MARGINAL WAY SOUTH
SEATTLE, WASHINGTON 98108
PH. (206) 832-3000
FAX (206) 832-3030
24 HOUR EMERGENCY PHONE: 1-888-832-3008

67366

213061 (190)

www.emeraldnw.com

BILL OF LADING AND GALLONAGE TICKET

SHIPPER/GENERATOR	Clear Creek.	CONTACT		JOB #	70600
ADDRESS	Kimbally Clark.	PHONE#		LOAD #	1
CITY, STATE, ZIP	Everett. WA.			DATE	03/25-14
CARRIER	Emerald Services.	PHONE#		DOCUMENT #	
CONSIGNEE	APW.	CONTACT		TRUCK #	788
ADDRESS	1500 Airport Way S.	PHONE#		PRODUCT TYPE	LiQ
CITY, STATE, ZIP	Seattle, WA			EST. GALLONS	

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	Non Hazardous Liquid.	1	TT	2285
	B	(oily water)			
	C				
	D				

A. WPQ # ______ DISP. CODE: G00501 C. WPQ # ______ DISP. CODE: ______

B. WPQ # ______ DISP. CODE: ______ D. WPQ # ______ DISP. CODE: ______

DISPOSAL

DUMP DELAY TIME ______

WASH OUT: YES ( ) NO (✓) TIME IN ______ TIME OUT ______

E. WATER ______ GALLONS LOCATION ______ TEST ______ DISP. CODE ______

F. SOLIDS ______ GALLONS LOCATION ______ TEST ______ DISP. CODE ______

______ % SUSPENDED SOLIDS BY CENTRIFUGE + ______ GALS SEDIMENT

G. OIL/DIESEL/GAS ______ GALLONS LOCATION ______ TEST ______ DISP. CODE ______

HOC'S ______ PCB'S ______ B.S.&W. ______ API ______ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR. Part 261 or 40 CFR Part 761.

X Matt Clayton — SHIPPER (PRINT NAME) — X [signature] SIGNATURE — DATE: 3-25-2014

X Sothorn — CARRIER - DRIVER 1 (PRINT NAME) — X [signature] SIGNATURE — DATE: 03/25-14.

X ______ CARRIER - DRIVER 2 (PRINT NAME) — X ______ SIGNATURE — DATE: ______

X ______ CONSIGNEE (PRINT NAME) — X ______ SIGNATURE — DATE: ______

G-2

CUSTOMER

213061

EMERALD SERVICES INC
www.emeraldnw.com

7343 E. MARGINAL WAY SOUTH
SEATTLE, WASHINGTON 98108
PH. (206) 832-3000
FAX (206) 832-3030
24 HOUR EMERGENCY PHONE: 1-888-832-3008

69083

BILL OF LADING AND GALLONAGE TICKET

SHIPPER/GENERATOR Clear Creek Cont.	CONTACT	JOB # 7000
ADDRESS 2600 Federal Ave	PHONE#	LOAD # 1
CITY, STATE, ZIP Everett WA		DATE 3/28/14
CARRIER EST	PHONE#	DOCUMENT # 69083
CONSIGNEE Emerald Recycling	CONTACT	TRUCK # 788
ADDRESS 1500 Airport Way S.	PHONE#	PRODUCT TYPE Liq
CITY, STATE, ZIP Seattle WA 98134		EST. GALLONS

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	Non-Regulated Material	1	TT	1050 gal
	B				
	C				
	D				

A. WPQ # 000501 DISP. CODE: ________ C. WPQ # ________ DISP. CODE: ________

B. WPQ # ________ DISP. CODE: ________ D. WPQ # ________ DISP. CODE: ________

DISPOSAL

DUMP DELAY TIME ________

WASH OUT: YES ( ) NO ( ) TIME IN ________ TIME OUT ________

E. WATER ________ GALLONS LOCATION ________ TEST ________ DISP. CODE ________

F. SOLIDS ________ GALLONS LOCATION ________ TEST ________ DISP. CODE ________

________ % SUSPENDED SOLIDS BY CENTRIFUGE + ________ GALS SEDIMENT

G. OIL/DIESEL/GAS ________ GALLONS LOCATION ________ TEST ________ DISP. CODE ________

HOC'S ________ PCB'S ________ B.S.&W. ________ API ________ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR. Part 261 or 40 CFR Part 761.

X Jim Burke
SHIPPER (PRINT NAME)
X [signature]
SIGNATURE
DATE: 3/28/14

X Scott Buhre
CARRIER - DRIVER 1 (PRINT NAME)
X Scott Buhre
SIGNATURE
DATE: 3/28/14

X ________
CARRIER - DRIVER 2 (PRINT NAME)
X ________
SIGNATURE
DATE: ________

X ________
CONSIGNEE (PRINT NAME)
X ________
SIGNATURE
DATE: ________

G-2

CUSTOMER

213061.200.200

67956

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SEATTLE, WASHINGTON 98108
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FAX (206) 832-3030
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EMERALD SERVICES INC
www.emeraldnw.com

BILL OF LADING AND GALLONAGE TICKET

SHIPPER/GENERATOR Clear Creek / Kimberly Clark	CONTACT Paul C.	JOB # 30-70600
ADDRESS 2600 Federal Ave.	PHONE#	LOAD # 1
CITY, STATE, ZIP Everett, WA	Scott U.	DATE 3-27-14
CARRIER Emerald Services Inc.	PHONE# (206) 832-3000	DOCUMENT # 67956
CONSIGNEE Emerald Recycling Inc.	CONTACT Harry U.	TRUCK # 788
ADDRESS 1500 Airport Way S.	PHONE# (206) 832-3000	PRODUCT TYPE Liq.
CITY, STATE, ZIP Seattle, WA 98108		EST. GALLONS

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	NON-Regulated Materials by D.O.T.	1	TT	1968
	B				
	C				
	D				

A. WPQ # G00501 DISP. CODE: ____
B. WPQ # ____ DISP. CODE: ____
C. WPQ # ____ DISP. CODE: ____
D. WPQ # ____ DISP. CODE: ____

DISPOSAL

DUMP DELAY TIME ____

WASH OUT: YES ( ) NO (✓)

TIME IN ____ TIME OUT ____

E. WATER ____ GALLONS LOCATION ____ TEST ____ DISP. CODE ____

F. SOLIDS ____ GALLONS LOCATION ____ TEST ____ DISP. CODE ____

____ % SUSPENDED SOLIDS BY CENTRIFUGE + ____ GALS SEDIMENT

G. OIL/DIESEL/GAS ____ GALLONS LOCATION ____ TEST ____ DISP. CODE ____

HOC'S ____ PCB'S ____ B.S.&W. ____ API ____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR. Part 261 or 40 CFR Part 761.

X Matt Clayton
SHIPPER (PRINT NAME)
X (signature) SIGNATURE DATE: ____

X Brian Jackson
CARRIER - DRIVER 1 (PRINT NAME)
X (signature) SIGNATURE DATE: 3-27-14

X ____
CARRIER - DRIVER 2 (PRINT NAME)
X ____ SIGNATURE DATE: ____

X ____
CONSIGNEE (PRINT NAME)
X ____ SIGNATURE DATE: ____

G-2

CUSTOMER

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FAX (206) 832-3030
24 HOUR EMERGENCY PHONE: 1-888-832-3008

67989

BILL OF LADING AND GALLONAGE TICKET

SHIPPER/GENERATOR Clear Creek	CONTACT	JOB # 7000
ADDRESS 2000 Federal Ave	PHONE#	LOAD # 1
CITY, STATE, ZIP Everett WA		DATE 3/31/14
CARRIER EST	PHONE#	DOCUMENT # 67989
CONSIGNEE Emerald Recycling	CONTACT	TRUCK # 755
ADDRESS 1500 Airport Way S.	PHONE#	PRODUCT TYPE LE
CITY, STATE, ZIP Seattle WA 98134		EST. GALLONS

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	Non-Regulated Material	1	TT	930
	B				
	C				
	D				

A. WPQ # 000501 DISP. CODE: ______ C. WPQ # ______ DISP. CODE: ______

B. WPQ # ______ DISP. CODE: ______ D. WPQ # ______ DISP. CODE: ______

DISPOSAL

DUMP DELAY TIME ______

WASH OUT: YES ( ) NO ( ) TIME IN ______ TIME OUT ______

E. WATER ______ GALLONS LOCATION ______ TEST ______ DISP. CODE ______

F. SOLIDS ______ GALLONS LOCATION ______ TEST ______ DISP. CODE ______

______ % SUSPENDED SOLIDS BY CENTRIFUGE + ______ GALS SEDIMENT

G. OIL/DIESEL/GAS ______ GALLONS LOCATION ______ TEST ______ DISP. CODE ______

HOC'S ______ PCB'S ______ B.S.&W. ______ API ______ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR. Part 261 or 40 CFR Part 761.

X Jim Curtz — SHIPPER (PRINT NAME) X [signature] — SIGNATURE DATE: 3/31/14

X Scott Buh — CARRIER - DRIVER 1 (PRINT NAME) X Scott B — SIGNATURE DATE: 3/31/14

X ______ CARRIER - DRIVER 2 (PRINT NAME) X ______ SIGNATURE DATE: ______

X ______ CONSIGNEE (PRINT NAME) X ______ SIGNATURE DATE: ______

G-2

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APPENDIX B

Photographs from Interim Action

Photograph 1 – BA-MW6 Area excavation: backfilling

Photograph 2 – Boiler Baghouse Area excavation: looking east

Photograph 3 – Boiler Baghouse Area excavation: looking east

Photograph 4 – Boiler Baghouse Area excavation: copper wire in east end

Photograph 5 – Bunker C ASTs excavation: bunker oil product

Photograph 6 – Bunker C ASTs excavation: pilings for former ASTs, with bunker oil

Photograph 7 – Bunker C ASTs excavation: east center of excavation looking southwest

Photograph 8 – CN-B2 excavation: looking southeast

Photograph 9 – CN-B2 excavation: looking south

Photograph 10– CN-B2 excavation: concrete foundation monolith and lumber

Photograph 11 – CN-B2 excavation: sawdust from deepest point of excavation

Photograph 12 – Heavy Duty Shop Sump excavation: looking north

Photograph 13 – Hydraulic Barker Vault excavation: oil at vault location

Photograph 14 – Naval Reserve Parcel UST excavation

Photograph 15 - Naval Reserve Parcel UST excavation: lumber in eastern sidewall

Photograph 16 – Naval Reserve South excavation: looking northwest

Photograph 17 – Naval Reserve South excavation: looking southwest

Photograph 18 – Naval Reserve South excavation: looking north

Photograph 19 – Naval Reserve South excavation: S-21/S22 area

Photograph 20 – Rail Car Dumper excavation: looking north

Photograph 21 – REC2-MW-5 excavation: looking east

Photograph 22 – SHB-MW-1 excavation

Photograph 23 – UST 29/Latex excavation: looking north

Photograph 24 – UST 29/Latex excavation: looking west

Photograph 25 – UST 29/Latex excavation: looking northeast

Photograph 26 – UST 29/Latex excavation: looking south

Photograph 27 – UST 70 excavation: looking south

Photograph 28– UST 70 excavation: looking west

Photograph 29 – USTs 71, 72, 73 excavation: looking east across USTs location to north-south-trending sheet pile wall

Photograph 30 – USTs 71, 72, 73 excavation: concrete tank saddles for former railroad car USTs

Photograph 31 – USTs 71, 72, 73 excavation: thin layer of bunker-contaminated soil under southern concrete monolith

Photograph 32 – USTs 71, 72, 73 excavation: bunker-contaminated soil beneath one concrete monolith on northeast side

Photograph 33 – USTs 71, 72, 73 excavation: looking northwest (backfill on left)

Photograph 34 – USTs 71, 72, 73 excavation: CSO pipe bypass and replacement

APPENDIX C

Data Validation Reports

Data Validation Report

Kimberly-Clark Everett, Washington Site
Upland Area Interim Action Soil Sampling
Batch #1 Soil Samples

Prepared for:

Aspect Consulting LLC
401 Second Ave South, Suite 201
Seattle, WA 98014

Prepared by:

Pyron Environmental, Inc.
3530 32nd Way, NW
Olympia, WA 98502

ACRONYMS

%D	percent difference
%D_f	percent drift
%R	percent recovery
%RSD	percent relative standard deviation
AMU	atomic mass unit
CCB	continuing calibration blank
CCC	calibration check compound
CCV	continuing calibration verification
CF	calibration factor
CLP	U.S. EPA Contract Laboratory Program
COC	chain-of-custody
CVAFS	cold vapor atomic fluorescent spectrometry
DFTPP	decafluorotriphenylphosphine
ECD	electron capture detector
EPA	U.S. Environmental Protection Agency
FID	Flame ionization detector
GC/MS	gas chromatograph/mass spectrometer
ICAL	initial calibration
ICB	initial calibration blank
ICP/MS	inductively coupled plasma/ mass spectrometer
ICV	initial calibration verification
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
MDL	method detection limit
µg/kg	microgram per kilogram
mg/kg	milligram per kilogram
MS	matrix spike
MSD	matrix spike duplicate
NFGs	CLP National Functional Guidelines for Data Review (EPA 2008 – Organics; EPA 2010 – Inorganics)
OPR	ongoing precision and recovery
PCBs	polychlorinated biphenyls
QA/QC	quality assurance/quality control
RF	response factor

RL	reporting limit
RPD	relative percent difference
RRT	relative retention time
SDG	sample delivery group
SIM	selective ion monitoring
SVOCs	semi-volatile organic compounds
VOCs	volatile organic compounds

INTRODUCTION

This report presents and discusses findings of the data validation performed on analytical data for soil samples collected during August and September 2013 for the referenced project. The laboratory reports validated herein were submitted by Friedman & Bruya, Inc.

A level III data validation was performed on this laboratory report. The validation followed the procedures specified in USEPA CLP Functional Guidelines ([NFGs], EPA 2008 – Organics; EPA 2010 – Inorganics), with modifications to accommodate project and analytical method requirements. The numerical quality assurance/quality control (QA/QC) criteria applied to the validation were in accordance with those specified in the quality assurance project plans ([QAPPs], Aspect, 2009) and the current performance-based control limits established by the laboratory (laboratory control limits). Instrument calibration, frequency of QC analyses, and analytical sequence requirements were evaluated against the respective analytical methods.

Validation findings are discussed in each section pertinent to the QC parameter for each type of analysis. Qualified data with applied data qualifiers are summarized in the **Summary** section at the end of this report.

Samples and the associated analyses validated herein are summarized as follows:

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis					
				VOC	SVOC PAHs	PCB	Metals	TPH-Gx	TPH-Dx
FARM-TP-1-10	308310-01	08/20/13	Soil	X			X	X	X
FARM-TP-1-25	308310-02	08/20/13	Soil	X			X		X
FARM-TP-2-15	308310-04	08/20/13	Soil	X				X	X
FARM-TP-3-6	308310-05	08/20/13	Soil	X			X	X	X
FARM-TP-4-12	308310-08	08/20/13	Soil	X			X	X	X
FARM-TP-5-10	308310-10	08/20/13	Soil	X			X	X	X
GF11-TP1-B-3	308371-01	08/22/13	Soil				X(A)		
GF11-TP1-S-0-3	308371-02	08/22/13	Soil				X(A)		
GF11-TP2-B-3	308371-03	08/22/13	Soil				X(A)		
GF11-TP2-S-0-3	308371-04	08/22/13	Soil				X(A)		
GF11-TP3-B-3	308371-05	08/22/13	Soil				X(A)		
GF11-TP3-S-0-3	308371-06	08/22/13	Soil				X(A)		
GF11-TP4-B-3	308371-07	08/22/13	Soil				X(A)		
GF11-TP4-S-0-3	308371-08	08/22/13	Soil				X(A)		
GF11-TP5-B-3	308371-09	08/22/13	Soil				X(A)		
GF11-TP5-S-0-3	308371-10	08/22/13	Soil				X(A)		

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis					
				VOC	SVOC PAHs	PCB	Metals	TPH-Gx	TPH-Dx
GF11-TP6-B-3	308371-11	08/22/13	Soil				X(A)		
GF11-TP6-S-0-3	308371-12	08/22/13	Soil				X(A)		
FARM-TP6-12	308386-01	08/23/13	Soil	X	SVOC	X	X	X	X
FARM-STOCKPILE-1	308386-02	08/23/13	Soil	X	SVOC	X	X	X	X
FARM-TP7-14	308386-03	08/23/13	Soil	X	SVOC	X	X	X	X
FARM-TP8-12	308386-04	08/23/13	Soil	X	SVOC	X	X	X	X
FARM-TP9-12	308386-05	08/23/13	Soil	X	SVOC	X	X	X	X
FARM-TP10-12	308386-06	08/23/13	Soil	X	SVOC	X	X	X	X
HA1-2	308474-01	08/29/13	Soil	X	SVOC	X	X	X	X
HA2-2	308474-02	08/29/13	Soil	X	SVOC	X	X	X	X
HA3-2	308474-03	08/29/13	Soil	X	SVOC	X	X	X	X
HA4-2	308474-04	08/29/13	Soil	X	SVOC	X	X	X	X
HA6-2	308474-06	08/29/13	Soil	X	SVOC	X	X	X	X
HA7-2	308474-07	08/29/13	Soil	X	SVOC	X	X	X	X
HA8-2	308474-08	08/29/13	Soil	X	SVOC	X	X	X	X
HA9-2	308474-09	08/29/13	Soil	X	SVOC	X	X	X	X
HDS-ESW-2	309241-01	09/12/13	Soil	X	X	X	X	X	X
HDS-NSW-2	309241-02	09/12/13	Soil	X	X	X	X	X	X
HDS-WSW-2	309241-03	09/12/13	Soil	X	X	X	X	X	X
HDS-SSW-2	309241-04	09/12/13	Soil	X	X	X	X	X	X
HDS-BTM-4	309241-05	09/12/13	Soil	X	X	X	X	X	X
HDS-SP-1	309241-06	09/12/13	Soil	X	X	X	X	X	X
DAST-B08-092713	309537-01	09/27/13	Soil		PAHs				X
DAST-B09-092713	309537-02	09/27/13	Soil		PAHs				X

Notes:
(A) - Arsenic, cadmium, chromium, copper, mercury, nickel, and zinc
Metals - Antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc, unless otherwise noted.
PAHs - Polycyclic aromatic hydrocarbons
PCB - Polychlorinated biphenyl
SVOC - Semivolatile organic compound
T – Total metals
TPH-Dx - Diesel and motor oil range total petroleum hydrocarbon
TPH-G - Gasoline range total petroleum hydrocarbon
VOC - Volatile organic compound
X - The analysis was requested and performed on the sample.

The analytical parameters requested for the samples, the respective analytical methods, and the analytical laboratories are summarized below:

Parameter	Analytical Method	Analytical Laboratory
Volatile Organic Compounds (VOCs)	SW846 Method 8260C	Friedman & Bruya, Inc. (F&BI) Seattle, WA
Semi-volatile Organic Compounds (SVOCs)	SW846 Method 8270D	
Polycyclic Aromatic Hydrocarbons (PAHs)	SW846 Method 8270D-SIM	
PCB Aroclors	SW846 Method 8082A	
TPH - Gasoline Range	NWTPH-Gx	
TPH - Diesel & Motor Oil Range	NWTPH-Dx	
Total Metals	EPA Method 200.8	
Mercury	EPA Method 1631E	

Notes:

1. SW846 - *USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,* SW-846, Third Edition, December 1996.
2. EPA Methods - *USEPA Methods for Chemical Analysis of Water and Wastes,* EPA–600/4-79-020, March 1983 Revision.
3. EPA Method 1631E - *Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry,* Office of Water, U.S. Environmental Protection Agency, August 2002, EPA-821-R-02-019.
4. NWTPH Methods – *Washington State Department of Ecology, Analytical Methods for Petroleum Hydrocarbons*, Publication No. ECY 97-602, June 1997.

DATA VALIDATION FINDINGS

1. VOCs by GC/MS (EPA Method SW8260C)

1.1 Sample Management and Holding Time

Samples were received in the laboratory intact and in consistence with the accompanying chain-of-custody (COC) documentation. In some cases where cooler temperature was outside the 4±2°C criteria; samples were hand-delivered to the laboratory the same day of collection. The cooler temperature exceedance had no significant effects on data quality. No other anomalies were identified in relation to sample preservation, handling, and transport.

Soil samples should be preserved at the time of collection. Soil and water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

Sample HDS-SP-1 was not preserved immediately upon collection as required by the method. Target compounds were not detected in this sample at or above their reporting limits. Since the analysis was performed in a relatively short holding time (4 days) of collection, rather than being rejected, VOCs results for this sample were qualified (UJ) as estimated.

1.2 GC/MS Instrument Performance Check

The method require that (1) gas chromatograph/mass spectrometer (GC/MS) tuning analysis be performed, using bromofluorobenzene (BFB), at the beginning of each 12-hour period prior to any analysis, and (2) specific mass ions meet the criteria provided in the method. All instrument performance checks met the requirements.

1.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the percent relative standard deviation (%RSD) of response factors (RFs) be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. ICALs either met the requirements or the outliers had no adverse effects on data usability (*e.g.,* %RSD >20% for a compound not detected in samples).

An initial calibration verification (ICV) standard (second source standard) was analyzed to verify the calibration curve. Percent difference (%D) values were either within ±30%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

1.4 Calibration Verification (CCV)

The CCV criteria requires that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D value be within ±20%.

Calibration verifications either met the requirements, or the exceedance had no adverse effects on data usability (*e.g.,* biased high CCV recovery for a compound not detected in samples).

1.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the reporting limits (RLs). Methylene chloride was consistently present in method blanks at levels greater than the method detection limits but less than RLs. Methylene chloride results greater than RLs but less than 10x the levels found in the method blanks were qualified (U) as non-detected at the reported values.

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

LCS and LCSD were prepared and analyzed as required by the method. Percent recovery (%R) and relative percent difference (RPD) values either met the project control limits, or the outliers had no adverse effects on data usability (*e.g.,* biased high recovery for a compound not detected in samples).

1.7 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits.

1.8 Matrix Spike (MS)

MS analyses were performed on project and batch QC samples at the proper frequency (≥5% of the samples analyzed for VOCs). All %R values were within the project control limits, except for the following:

SDG#	Parent Sample ID	Compound	MS %R	MSD %R	Control Limit	Data Qualifier
308474	HA1-2	Dichlorodifluoromethane	8%	8%	10-142%	**R**

1.9 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

1.10 Reporting Limit and Target Compound Quantitation

RLs were supported with adequate initial calibration concentrations. In cases where target compound concentrations exceeded ICAL calibration ranges, proper dilution analyses were performed for definitive quantitation of the compounds. Only affected compounds were to be reported from dilution analyses.

Naphthalene, 1,2,4-trichlorobenzene, 1,2-dichlioriobenzene, 1,3-dichlorobenzene, and 1,4-dichliorobenzene were also reported from SVOCs analysis (Method 8270D). These compounds were to be reported from the SVOCs analysis, in favor of the lower detection limits.

1.11 Field Duplicates

Field duplicates were not submitted for VOCs analyses in these SDGs.

1.12 Overall Assessment of VOCs Data Usability

VOCs data are of known quality and acceptable for use, as qualified.

2. SVOCs by GC/MS (EPA Method SW8270D)

2.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days and water samples within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

2.2 GC/MS Instrument Performance Check

The method require that a GC/MS tuning analysis be performed using decafluorotriphenylphosphine (DFTPP) at the beginning of each 12-hour period prior to any analysis, and specific mass ions meet the criteria provided in the method. All instrument performance checks met the requirements.

2.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99, and (4) the RF be >0.01 for poor response compounds and >0.05 for all other compounds.. All ICALs met the requirements.

An ICV standard (second source standard) was analyzed to verify the calibration curve. %D values were either within ±20%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

2.4 Calibration Verification (CCV)

The CCV criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the %D be within ±20%, and (3) the RF be >0.01 for poor response compounds and >0.05 for all other compounds.

Calibration verifications were performed at the required frequency. %D values were either within ±20%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high CCV recovery for a compound not detected in samples), with the exceptions as follows:

SDG	CCV ID	Compound	%D	Bias	Affected Sample	Data Qualifier
308310	GCMS8 8/22/13, 8:00	2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol	25.8% 23.8%	Low	FARM-TP-1-25	**UJ**

2.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

2.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All %R values were within the laboratory control limits.

2.7 Matrix Spike (MS) and MS Duplicate (MSD)

MS/MSD analyses were performed on project samples or batch QC samples at the required frequency. All %R and RPD values were within the laboratory control limits, except for the following:

SDG#	Parent Sample ID	Compound	MS %R	MSD %R	Control Limit	Data Qualifier
308474	HA1-2 HA9-2	Hexachlorocyclopentadiene	23% 14%	- 13%	50-150%	**UJ**
308474	HA9-2	2,4-Dichlorophenol	43%	35%	50-150%	**UJ**
309241	HDS-SP-1	Benzoic Acid	36%	44%	50-150%	**UJ**

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

LCS and LCSD were prepared and analyzed as required by the method. All %R and RPD values either met the laboratory control criteria, or the outliers had no adverse effects on data usability (*e.g.,* biased high %R or RPD value for a compound that was not detected in samples), except for the following:

SDG	Compound	RPD	Control Limit	Affected Sample	Data Qualifier
308474	2,4-Dinitrophenol	24%	20%	HA1-2 HA2-2 HA3-2 HA4-2 HA5-2 HA6-2 HA7-2 HA8-2	**UJ**

2.9 Laboratory Duplicate Analysis

Duplicate analyses were performed on project and batch QC samples at the proper frequency. All RPD or concentration difference values either met the laboratory control criteria or the outlier had no adverse effects on data usability (*e.g.,* high RPD value for a compound that was not detected in samples), except for the following:

SDG	Sample	Compound	Concentration Difference	Control Limit	Data Qualifier
309241	HDS-SSW-2	Benzo(b)fluoranthene	0.0047 µg/kg	0.002 µg/kg	**UJ**

2.10 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

2.11 Reporting Limits and Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

2.12 Field Duplicates

Field duplicates were not submitted for SVOCs analyses in these SDGs.

2.13 Overall Assessment of SVOCs Data Usability

SVOCs data are of known quality and acceptable for use, as qualified.

3. PAHs by GC/MS - SIM (EPA Method SW8270D-SIM)

3.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days and water within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

3.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

3.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. All ICALs met the requirements.

An ICV standard (second source standard) was analyzed to verify the calibration curve. %D values were either within ±20%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

3.4 Calibration Verification (CCV)

The analytical method requires that (1) continuing calibration verifications be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D be within ±20%.

3.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

3.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits or at levels that had no adverse effects on data quality (*e.g.,* biased-high recovery for compounds that were not detected in samples). In some cases surrogate spike %R values were not applicable for data evaluation because the samples contained high levels of target PAHs and required dilution analysis; no data were qualified in these cases.

3.7 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency (≥5% of samples analyzed). All %R and RPD values met the project control criteria.

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits.

3.9 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

3.10 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations. In some cases samples required dilution for definitive quantitation of target compounds; the RLs were raised accordingly.

3.11 Field Duplicates

One set of field duplicates were submitted for PAHs analyses. Field duplicate results for detected target compounds, RPD (or concentration difference) values, and data qualification were presented in **Appendix A**.

3.12 Overall Assessment of PAHs Data Usability

PAHs data are of known quality and acceptable for use, as qualified.

4. PCB Aroclors (EPA Method SW8082A)

4.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days of collection and extracts analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

4.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using the mixture of Aroclor 1016 and 1260, (2) a single-point calibration be performed for the other five Aroclors to establish calibration factors (CFs) and for Aroclor pattern recognition, (3) at least 3 peaks (preferably 5 peaks) must be chosen for each Aroclor for characterization, (4) the %RSD values of Aroclor 1016 and 1260 CFs must be ≤20%, and (5) if dual column analysis is chosen, both columns should meet the requirements. All ICALs met the requirements.

4.3 Calibration Verification

CCV analyses should be performed for each 12-hour analysis sequence prior to sample analyses, and the %D be within ±20%.

Calibration verifications were performed at the required frequency. All %D values either met the control criteria or biased high for target compounds that were not detected in the associated samples.

4.4 Method Blanks

Method blanks were prepared and analyzed as required. PCB Aroclors were not detected at or above the MDLs in the method blanks.

4.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

4.6 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on project samples or batch QC samples at the required frequency. All %R and RPD values were within the laboratory control limits, except that the Aroclor 1260 RPD value (25%) for the MS/MSD analyses performed on sample FARM-STOCKPILE-1 (SDG: 308386) was outside the control criteria (20%). The Aroclor 1260 result for this sample was qualified (J) as estimated.

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits.

4.8 Laboratory Duplicate Analysis

Duplicate analyses were performed on project and batch QC samples at the proper frequency. All RPD or concentration difference values met the laboratory control criteria.

4.9 Method Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations and achieved the project target quantitation limits.

4.10 Field Duplicates

Field duplicates were not submitted for PCB Aroclors analysis in these SDGs.

4.11 Overall Assessment of PCB Aroclors Data Usability

PCB Aroclor data are of known quality and acceptable for use.

5. TPH-Gasoline by GC/FID (Method NWTPH-Gx)

5.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be preserved at the time of collection. Soil and water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

Sample HDS-SP-1 was not preserved immediately upon collection as required by the method. TPH-Gasoline was not detected in this sample at or above their reporting limits. Since the analysis was performed in a relatively short holding time (4 days) of collection, rather than rejected, TPH-Gasoline result for this sample was qualified (UJ) as estimated.

5.2 Initial Calibration (ICAL)

The method criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be ≥0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be ≥0.990, and (4) the back-calculated %D value for each calibration standard be within ±15%. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

5.3 Calibration Verification

Continuing calibration verification (CCV) analyses were performed at the required frequency for all analytical sequences as required by the method. The %D values for all CCVs met the method criterion (±20%).

5.4 Method Blanks

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

5.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits, outside the control limits due to matrix interference, or diluted below quantitation limits due to high analyte concentrations. No data qualifying actions were taken in these cases.

5.6 Matrix Spike and Matrix Spike Duplicate

MS/MSD analyses were not performed for TPH-Gasoline analyses; instead, duplicate and LCS analyses in combination were performed.

5.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the laboratory control limits.

5.8 Laboratory Duplicate Analysis

Duplicate analyses were performed on project and batch QC samples at the proper frequency. All RPD and concentration difference values met the laboratory control criteria.

5.9 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

5.10 Field Duplicates

Field duplicates were not submitted for TPH-Gasoline analyses in these SDGs.

5.11 Overall Assessment of TPH-Gasoline Data Usability

TPH-Gasoline data are of known quality and acceptable for use, as qualified.

6. TPH-Diesel & Motor Oil by GC/FID (Method NWTPH-Dx)

6.1 Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days and water should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the recommended holding times.

6.2 Initial Calibration

The method criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be ≥0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be ≥0.990, and (4) the back-calculated %D value for each calibration standard be within ±15%. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

6.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift (%D) value be within ±20% of the true value.

Calibration verification was performed at required frequency. The %D values were either within the ±20% criterion or at levels that had no adverse effects on data quality (e.g., high-bias %D value where the target compound was not detected in associated sample).

6.4 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

6.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits, outside the control limits due to matrix interference, or diluted below quantitation limits due to high petroleum hydrocarbon concentrations. No data qualifying actions were taken in these cases.

6.6 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency. The %R and RPD values met the laboratory control criteria.

6.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required. All %R values met the project control limits.

6.8 Target Compound Identification

Selected sample extracts were cleaned up with acid and silica gel treatment to minimize the biogenic interference with target compound identification, as required by the project. The laboratory reported results as diesel #2 (C10 - C25) and motor oil (C25 - C36), as required by the method.

6.9 Reporting Limits and Target Compound Quantitation

The reported RLs were supported with adequate ICAL concentrations.

6.10 Field Duplicates

One set of field duplicates were submitted for TPH-Diesel and TPH-Motor Oil analyses. Field duplicate results, RPD (or concentration difference) values, and data qualification for detected TPH-Diesel or Motor Oil were presented in **Appendix A**.

6.11 Overall Assessment of TPH-Diesel and Motor Oil Data Usability

TPH-Diesel and TPH-Motor Oil data are of known quality and acceptable for use, as qualified.

7. Total Metals by ICP/MS and CVAFS (EPA Methods 200.8 and 1631E)

7.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Soil and water samples should be analyzed within 180 days for metals and 28 days for mercury. Samples were analyzed within the required holding times.

7.2 ICP/MS Tuning

Instrument tuning was performed at the required frequency. The stability check (%RSD <5%), mass calibration (mass difference <0.1 AMU), and resolution check (peak width <1.0 AMU at 5% peak height) met the NFG and method criteria.

7.3 Initial Calibration (ICAL)

The ICP/MS method requires that (1) a blank and one calibration standard be used in establishing the analytical curve, and (2) the average of replicate exposures be reported for all standards, QC, and sample analyses.

The CVAFS method require that (1) a blank and five calibration standards be employed to establish the analytical curve, (2) the linearity of the calibration curve should meet the criteria of correlation coefficient ≥ 0.995 for linear regression, and (3) the %RSD <15% if average response factor approach is employed.

All ICALs met the method requirements.

7.4 Calibration Verification (ICV and CCV)

Initial calibration verifications (ICVs) and continuing calibration verifications (CCVs) for ICP/MS and GFAA and ongoing precision recovery (OPR) were analyzed at the required frequency. The %R values either met the control criteria (90 – 110% for metals, 76 – 123% for mercury) or the exceedance had no adverse effects on data usability (e.g., high-bias %D value where the target compound was not detected in associated sample).

7.5 Blanks

Calibration Blanks: Initial calibration blanks (ICBs) and continuing calibration blanks (CCBs) were not analyzed after calibration verification standards. Target analytes were either not detected at or above the RLs in the ICBs and CCBs, or sample results affected by the ICB/CCB detections were qualified as results of detections in preparation blanks.

Preparation Blanks: Preparation blanks were prepared and analyzed as required. Target analytes were either not detected at or above the RLs in the preparation blanks, or sample results were greater than 10X the detection in the associated blank.

7.6 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the project control limits, or the exceedance had no adverse effects on data usability (e.g., high-bias %R value where the target compound was not detected in associated sample).

7.7 Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the adequate frequency (>5% of field sample). The %R and RPD values either met the laboratory control limits or the outliers were not applicable for matrix effect evaluation (e.g. sample concentration >4x spiking level), except for the following:

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	Affected Sample	Data Qualifier
308474	HA1-2	Nickel	66%	66%	69-112%	HA1-2 HA2-2 HA3-2 HA4-2 HA5-2 HA6-2 HA7-2 HA8-2 HA9-2	**J**
309241	Batch QC	Nickel	128%	121%	69-112%	HDS-ESW-2 HDS-NSW-2 HDS-WSW-2 HDS-SSW-2 HDS-BTM-4 HDS-SP-1	**J**

7.8 Internal Standards

At least three internal standards were added to all field and QC samples for ICP/MS analyses. All percent relative intensity values were within the method criteria (60 - 125%).

7.9 Method Reporting Limits and Analyte Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

7.10 Field Duplicates

Field duplicates were not submitted for metals analyses in these SDGs.

7.11 Overall Assessment of Metals Data Usability

Metal data are of known quality and acceptable for use, as qualified.

SUMMARY

Table I. Data Affected by QC Anomalies:

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
309241-01 309241-02 309241-03 309241-04 309241-05 309241-06 308474-01 308474-02 308474-03 308474-04 308474-05 308474-06 308474-07 308474-08 308474-09	HDS-ESW-2 HDS-NSW-2 HDS-WSW-2 HDS-SSW-2 HDS-BTM-4 HDS-SP-1 HA1-2 HA2-2 HA3-2 HA4-2 HA5-2 HA6-2 HA7-2 HA8-2 HA9-2	Nickel	**J**	MS/MSD %R values biased high
309241-06	HDS-SP-1	Gasoline Range TPH	**UJ**	Sample was not preserved in methanol upon collection
308386-02	FARM-STOCKPILE-1	Aroclor 1260	**UJ**	MS/MSD RPD value was >20%
308310-01 308310-04 308310-05 308310-08 308310-10 308386-04 308386-05 308386-06	FARM-TP-1-10 FARM-TP-2-15 FARM-TP-3-6 FARM-TP-4-12 FARM-TP-5-10 FARM-TP8-12 FARM-TP9-12 FARM-TP10-12	Methylene chloride	**U**	Laboratory contamination
308474-01	HA1-2	Dichlorodifluoromethane	**R**	MS/MSD %R values were <10%

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
308310-01 308310-02 308310-04 308310-05 308310-08 308310-10 308386-01 308386-02 308386-03 308386-04 308386-05 308386-06 308474-01 308474-02 308474-03 308474-04 308474-05 308474-06 308474-07 308474-08 308474-09 309241-01 309241-02 309241-03 309241-04 309241-05 309241-06	FARM-TP-1-10 FARM-TP-1-25 FARM-TP-2-15 FARM-TP-3-6 FARM-TP-4-12 FARM-TP-5-10 FARM-TP6-12 FARM-STOCKPILE-1 FARM-TP7-14 FARM-TP8-12 FARM-TP9-12 FARM-TP10-12 HA1-2 HA2-2 HA3-2 HA4-2 HA5-2 HA6-2 HA7-2 HA8-2 HA9-2 HDS-ESW-2 HDS-NSW-2 HDS-WSW-2 HDS-SSW-2 HDS-BTM-4 HDS-SP-1	1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2,4-Trichlorobenzene Hexachlorobutadiene Naphthalene	**DNR**	Report from EPA 8270D analysis for lower detection limit
309241-06	HDS-SP-1	All VOCs	**UJ**	Sample was not preserved in MeOH upon collection
308310-02	FARM-TP-1-25	2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol	**UJ**	CCV recovery biased low
308474-01 308474-02 308474-03 308474-04 308474-05 308474-06 308474-07 308474-08	HA1-2 HA2-2 HA3-2 HA4-2 HA5-2 HA6-2 HA7-2 HA8-2	2,4-Dichlorophenol	**UJ**	LCS/LCSD RPD value was >20%
308474-01	HA1-2	Hexachlorobutadiene	**UJ**	MS %R value biased low
308474-09	HA9-2	Hexachlorobutadiene	**UJ**	MS/MSD %R values biased low
309241-06	HDS-SP-1	Benzoic acid	**UJ**	MS/MSD %R values biased low
308474-09	HA9-2	2,4-Dichlorophenol	**UJ**	MS/MSD %R values biased low; LCS/LCSD RPD value was >20%

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
309537-01 309537-02	DAST-B08-092713 DAST-B09-092713	Anthracene Pyrene Benzo(g,h,i)perylene Indeno(1,2,3-cd)pyrene Benzo(b)fluoranthene Fluoranthene Benzo(k)fluoranthene Chrysene Benzo(a)pyrene Dibenzo(a,h)anthracene Benz(a)anthracene Acenaphthene Phenanthrene Fluorene	**UJ/J**	Field duplicate result was outside project advisory criteria
309241-04	HDS-SSW-2	Benzo(b)fluoranthene	**J**	Laboratory duplicate analysis concentration difference was >2xRL

Table II. Data Qualifiers are defined as follows:

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

Approved By: ______________________ Date: ***6/23/2014***
Mingta Lin, Senior Project Chemist

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Appendix A

Field duplicate RPD is indicative of field and laboratory precision and sample homogeneity in combination. The CLP National Functional Guidelines or *Work Plan* do not specify criteria for field duplicate evaluation. An advisory criterion of 35% was applied to evaluating the RPD values of field duplicate results that are ≥5xRL. For results that are <5xRL, an advisory criterion of ±2RL was applied to evaluating the concentration differences. The RPD (or concentration difference as applicable) values and data qualification for detected compounds in field duplicates are presented as follows:

Analyte	**Units**	**RL**	**Parent & Field Duplicate Sample Result**		**RPD**	**Delta**	**Data Qualifier**
			DAST-B08-092713	**DAST-B09-092713**			
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Anthracene	mg/kg	0.01	ND	0.074		0.074	**UJ/J**
Pyrene	mg/kg	0.01	0.036	0.69		0.654	**J/J**
Benzo(g,h,i)perylene	mg/kg	0.01	0.031	0.19		0.159	**J/J**
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.028	0.23		0.202	**J/J**
Benzo(b)fluoranthene	mg/kg	0.01	0.089	0.63	150%		**J/J**
Fluoranthene	mg/kg	0.01	0.037	0.76		0.723	**J/J**
Benzo(k)fluoranthene	mg/kg	0.01	0.021	0.19		0.169	**J/J**
Acenaphthylene	mg/kg	0.01	ND	0.01		0.01	
Chrysene	mg/kg	0.01	0.048	0.64		0.592	**J/J**
Benzo(a)pyrene	mg/kg	0.01	0.04	0.38		0.34	**J/J**
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	0.073		0.073	**UJ/J**
Benz(a)anthracene	mg/kg	0.01	0.031	0.52		0.489	**J/J**
Acenaphthene	mg/kg	0.01	ND	0.026		0.026	**UJ/J**
Phenanthrene	mg/kg	0.01	0.019	0.32		0.301	**J/J**
Fluorene	mg/kg	0.01	ND	0.024		0.024	**UJ/J**
Naphthalene	mg/kg	0.01	0.011	0.017		0.006	

Notes:
Delta – Concentration difference between the parent sample and its field duplicate
mg/kg – milligram per kilogram
ND – The analyte was not detected at or above the RL.
RL – Reporting limit
RPD – Relative percent difference

Data Validation Report

Kimberly-Clark Everett, Washington Site
Upland Area Interim Action Soil Sampling
Batch #2 Soil Samples

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ACRONYMS

%D	percent difference
$\%D_f$	percent drift
%R	percent recovery
%RSD	percent relative standard deviation
AMU	atomic mass unit
CCB	continuing calibration blank
CCC	calibration check compound
CCV	continuing calibration verification
CDD	chlorinated dibenzo-p-dioxin
CDF	chlorinated dibenzofuran
CF	calibration factor
CLP	U.S. EPA Contract Laboratory Program
COC	chain-of-custody
CVAFS	cold vapor atomic fluorescent spectrometry
DFTPP	decafluorotriphenylphosphine
ECD	electron capture detector
EDL	estimated detection limit
EMPC	estimated maximum possible concentration
EPA	U.S. Environmental Protection Agency
FID	Flame ionization detector
GC/MS	gas chromatograph/mass spectrometer
HRGC	high-resolution gas chromatograph
HRMS	high-resolution mass spectrometer
ICAL	initial calibration
ICB	initial calibration blank
ICP	inductively coupled plasma
ICP/MS	inductively coupled plasma/ mass spectrometer
ICSA	ICP interference check sample solution A
ICV	initial calibration verification
IPR	initial precision and recovery
ISC	isomer specificity check
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
m/z	mass-to-charge ratio

MDL	method detection limit
µg/kg	microgram per kilogram
mg/kg	milligram per kilogram
MS	matrix spike
MSD	matrix spike duplicate
NFGs	CLP National Functional Guidelines for Data Review (EPA 2008 – Organics; EPA 2010 – Inorganics; EPA 2011 – Dioxins/Furans)
OPR	ongoing precision and recovery
pg/g	pictogram per gram
PCBs	polychlorinated biphenyls
PCDD	polychlorinated dibenzo-*p*-dioxin
PCDF	polychlorinated dibenzofuran
PEM	performance evaluation mixture
QA/QC	quality assurance/quality control
QAPP	quality assurance project plan
RF	response factor
RL	reporting limit
RPD	relative percent difference
RRT	relative retention time
S/N	signal-to-noise ratio
SDG	sample delivery group
SICP	selected ion current profile
SIM	selective ion monitoring
SPLP	Synthetic precipitation procedure
WDM	window defining mixture

INTRODUCTION

This report presents and discusses findings of the data validation performed on analytical data for soil samples collected during August and September 2013 for the referenced project. The laboratory reports validated herein were submitted by Friedman & Bruya, Inc and ALS Environmental Services, Inc. in Houston, Texas.

A level III data validation was performed on this laboratory report. The validation followed the procedures specified in USEPA CLP Functional Guidelines ([NFGs], EPA 2008 – Organics; EPA 2010 – Inorganics), with modifications to accommodate project and analytical method requirements. The numerical quality assurance/quality control (QA/QC) criteria applied to the validation were in accordance with those specified in the quality assurance project plans ([QAPPs], Aspect, 2009) and the current performance-based control limits established by the laboratory (laboratory control limits). Instrument calibration, frequency of QC analyses, and analytical sequence requirements were evaluated against the respective analytical methods.

Validation findings are discussed in each section pertinent to the QC parameter for each type of analysis. Qualified data with applied data qualifiers are summarized in the **Summary** section at the end of this report.

Samples and the associated analyses validated herein are summarized as follows:

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis				
				PAHs	PCBs	Metals	TPH-Dx	Misc.
DAST-S01-092713	309515-01	09/27/13	Soil	X	X	X	X	
DAST-S02-092713	309515-02	09/27/13	Soil	X	X	X	X	
DAST-S03-092713	309515-03	09/27/13	Soil	X	X	X	X	
DAST-S04-092713	309515-04	09/27/13	Soil	X	X	X	X	
DAST-S05-092713	309515-05	09/27/13	Soil	X	X	X	X	
DAST-S06-092713	309515-06	09/27/13	Soil	X	X	X	X	
DAST-S07-092713	309515-07	09/27/13	Soil	X	X	X	X	
DAST-S08-092713	309515-08	09/27/13	Soil	X	X	X	X	
DAST-S09-092713	309515-09	09/27/13	Soil	X	X	X	X	
DAST-S10-092713	309515-10	09/27/13	Soil	X	X	X	X	
DAST-B01-092713	309515-11	09/27/13	Soil	X	X	X	X	
DAST-B02-092713	309515-12	09/27/13	Soil	X	X	X	X	
DAST-B03-092713	309515-13	09/27/13	Soil	X	X	X	X	SPLP
DAST-B04-092713	309515-14	09/27/13	Soil	X	X	X	X	
DAST-B05-092713	309515-15	09/27/13	Soil	X	X	X	X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis				
				PAHs	PCBs	Metals	TPH-Dx	Misc.
DAST-B06-092713	309515-16	09/27/13	Soil	X	X	X	X	
DAST-B07-092713	309515-17	09/27/13	Soil	X	X	X	X	SPLP
RCD-S01-1.5-093013	309532-01	09/30/13	Soil	X	X	X	X	
RCD-S01-1.5-093013	309532-01	09/30/13	Soil	X	X	X	X	
RCD-S02-2-093013	309532-02	09/30/13	Soil	X	X	X	X	
RCD-S02-4-093013	309532-03	09/30/13	Soil	X	X	X	X	
RCD-S03-1-093013	309532-04	09/30/13	Soil	X	X	X	X	
RCD-S04-1.5-093013	309532-05	09/30/13	Soil	X	X	X	X	
RCD-S05-2-093013	309532-06	09/30/13	Soil	X	X	X	X	
RCD-S06-1-093013	309532-07	09/30/13	Soil	X	X	X	X	
RCD-B01-3-093013	309532-08	09/30/13	Soil	X	X	X	X	
RCD-B02-4-093013	309532-09	09/30/13	Soil	X	X	X	X	
RCD-B03-2-093013	309532-10	09/30/13	Soil	X	X	X	X	
DAST-B08-092713	309537-01	09/27/13	Soil		X	X		
DAST-B09-092713	309537-02	09/27/13	Soil		X	X		
RCD-B02-6-100413	310092-01	10/04/13	Soil	X	X	X	X	
RCD-S07-1.5-100413	310092-02	10/04/13	Soil	X	X	X	X	
RCD-S08-2-100413	310092-03	10/04/13	Soil	X	X	X	X	
GF11-S01-1.5	310229-01	10/11/13	Soil	X		X		
GF11-S02-1.5	310229-02	10/11/13	Soil	X		X		SPLP
GF11-S03-1.5	310229-03	10/11/13	Soil	X		X		
GF11-S04-1.5	310229-04	10/11/13	Soil	X		X		
GF11-S06-1.5	310229-06	10/11/13	Soil	X		X		
GF11-S07-1.5	310229-07	10/11/13	Soil	X		X		
GF11-B01-3	310229-08	10/11/13	Soil	X		X		
GF11-B02-3	310229-09	10/11/13	Soil	X		X		
GF11-B03-3	310229-10	10/11/13	Soil	X		X		
BBH-S01-1.5-101513	310290-01	10/15/13	Soil	X		X[(A)]		
BBH-S02-1.5-101513	310290-02	10/15/13	Soil			X[(A)]		
BBH-S03-1.5-101513	310290-03	10/15/13	Soil			X[(A)]		
BBH-S04-1.5-101513	310290-04	10/15/13	Soil			X[(A)]		
BBH-S05-1.5-101513	310290-05	10/15/13	Soil			X[(A)]		
BBH-S06-1.5-101513	310290-06	10/15/13	Soil	X		X[(A)]		
BBH-S07-1.5-101513	310290-07	10/15/13	Soil			X[(A)]		

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis				
				PAHs	PCBs	Metals	TPH-Dx	Misc.
BBH-S08-1.5-101513	310290-08	10/15/13	Soil			X(A)		
BBH-S09-1.5-101513	310290-09	10/15/13	Soil			X(A)		
BBH-S10-1.5-101513	310290-10	10/15/13	Soil			X(A)		
BBH-S11-1.5-101513	310290-11	10/15/13	Soil	X		X(A)		
BBH-S12-1.5-101513	310290-12	10/15/13	Soil			X(A)		
BBH-S13-1.5-101513	310290-13	10/15/13	Soil			X(A)		
BBH-S14-1.5-101513	310290-14	10/15/13	Soil			X(A)		
BBH-S15-1.5-101513	310290-15	10/15/13	Soil			X(A)		
BBH-S16-1.5-101513	310290-16	10/15/13	Soil	X		X(A)		
BBH-S17-1.5-101513	310290-17	10/15/13	Soil			X(A)		
BBH-S18-1.5-101513	310290-18	10/15/13	Soil			X(A)		
BBH-S19-1.5-101513	310290-19	10/15/13	Soil			X(A)		
BBH-S20-1.5-101513	310290-20	10/15/13	Soil			X(A)		
BBH-S21-1.5-101513	310290-21	10/15/13	Soil	X		X(A)		
BBH-S22-1.5-101513	310290-22	10/15/13	Soil			X(A)		
BBH-S23-1.5-101513	310290-23	10/15/13	Soil			X(A)		
BBH-S24-1.5-101513	310290-24	10/15/13	Soil			X(A)		
BBH-S25-1.5-101513	310290-25	10/15/13	Soil			X(A)		
BBH-S26-1.5-101513	310290-26	10/15/13	Soil	X		X(A)		
BBH-S27-1.5-101513	310290-27	10/15/13	Soil			X(A)		
BBH-S28-1.5-101513	310290-28	10/15/13	Soil			X(A)		
BBH-S30-1.5-101513	310290-29	10/15/13	Soil	X		X(A)		
BBH-S31-1.5-101513	310290-30	10/15/13	Soil			X(A)		
BBH-B01-03-101613	310291-01	10/16/13	Soil	X		X(A)		
BBH-B02-02-101613	310291-02	10/16/13	Soil			X(A)		
BBH-B03-03-101613	310291-03	10/16/13	Soil			X(A)		
BBH-B04-02-101613	310291-04	10/16/13	Soil			X(A)		
BBH-B05-02-101613	310291-05	10/16/13	Soil	X		X(A)		
BBH-B06-03-101613	310291-06	10/16/13	Soil			X(A)		
BBH-B07-03-101613	310291-07	10/16/13	Soil			X(A)		
BBH-B08-03-101613	310291-08	10/16/13	Soil	X		X(A)		
BBH-B09-03-101613	310291-09	10/16/13	Soil			X(A)		
BBH-B10-04-101613	310291-10	10/16/13	Soil			X(A)		
BBH-B11-03-101613	310291-11	10/16/13	Soil			X(A)		

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis				
				PAHs	PCBs	Metals	TPH-Dx	Misc.
BBH-B12-03-101613	310291-12	10/16/13	Soil	X		X[(A)]		
BBH-B01-03-101613	E1301382-001	10/16/13	Soil					Dioxins
BBH-B04-02-101613	E1301382-002	10/16/13	Soil					Dioxins
BBH-B08-03-101613	E1301382-003	10/16/13	Soil					Dioxins
BBH-B12-03-101613	E1301382-004	10/16/13	Soil					Dioxins

Notes:
Laboratory sample ID prefixed with "E" was a laboratory identity assigned by ALS in Houston, Texas
[(A)] - Antimony, arsenic, cadmium, chromium, copper, mercury, nickel, and zinc
Dioxins - Polychlorinated dioxins and furans
Metals - Arsenic, cadmium, copper, lead, mercury, nickel, and zinc, unless otherwise noted.
Misc. - Miscellaneous
PAHs - Polycyclic aromatic hydrocarbons
PCB - Polychlorinated biphenyl
SPLP - Synthetic precipitation leaching procedure; leachate analyzed for copper, lead, and/or zinc
TPH-Dx - Diesel and motor oil range total petroleum hydrocarbon
TPH-G - Gasoline range total petroleum hydrocarbon
X - The analysis was requested and performed on the sample.

The analytical parameters requested for the samples, the respective analytical methods, and the analytical laboratories are summarized below:

Parameter	Analytical Method	Analytical Laboratory
Polycyclic Aromatic Hydrocarbons (PAHs)	SW846 Method 8270D-SIM	Friedman & Bruya, Inc. (F&BI) Seattle, WA
PCB Aroclors	SW846 Method 8082A	
TPH - Gasoline Range	NWTPH-Gx	
TPH - Diesel & Motor Oil Range	NWTPH-Dx	
Total Metals	EPA Method 200.8	
Mercury	EPA Method 1631E	
Synthetic Precipitation Leaching Procedure	SW846 Method 1312	
Polychlorinated dioxins and Furans	SW846 Method 8290A	ALS Environmental Services, Inc. Houston, Texas

Notes:

1. SW846 - *USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,* SW-846, Third Edition, December 1996.
2. EPA Methods - *USEPA Methods for Chemical Analysis of Water and Wastes,* EPA–600/4-79-020, March 1983 Revision.
3. EPA Method 1631E - *Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry,* Office of Water, U.S. Environmental Protection Agency, August 2002, EPA-821-R-02-019.
4. NWTPH Methods – *Washington State Department of Ecology, Analytical Methods for Petroleum Hydrocarbons*, Publication No. ECY 97-602, June 1997.

DATA VALIDATION FINDINGS

1. PAHs by GC/MS - SIM (EPA Method SW8270D-SIM)

1.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days and water within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

1.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

1.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. All ICALs met the requirements.

An ICV standard (second source standard) was analyzed to verify the calibration curve. %D values were either within ±20%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

1.4 Calibration Verification (CCV)

The analytical method requires that (1) continuing calibration verifications be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D be within ±20%.

1.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

1.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits or at levels that had no adverse effects on data quality (*e.g.,* biased-high recovery for compounds that were not detected in samples). In some cases surrogate spike %R values were not applicable for data evaluation because the samples contained high levels of target PAHs and required dilution analysis; no data were qualified in these cases.

1.7 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency (≥5% of samples analyzed). All %R and RPD values met the project control criteria, except for the following:

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Data Qualifier
309532	RCD-S01-1.5-093013	Benzo(b)fluoranthene Fluoranthene	88% 79%	115% 102%	50-125% 31-144%	25% 27%	**J**

Note: RPD control criterion = ±20%

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits.

1.9 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

1.10 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations. In some cases samples required dilution for definitive quantitation of target compounds; the RLs were raised accordingly. Results for remaining (un-diluted) target compounds were to be reported from the initial analysis in favor of the lower detection limits.

1.11 Field Duplicates

Field duplicates were not submitted for polychlorinated dioxins and furans analyses in these SDGs.

1.12 Overall Assessment of PAHs Data Usability

PAHs data are of known quality and acceptable for use, as qualified.

2. PCB Aroclors (EPA Method SW8082A)

2.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days of collection and extracts analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

2.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using the mixture of Aroclor 1016 and 1260, (2) a single-point calibration be performed for the other five Aroclors to establish calibration factors (CFs) and for Aroclor pattern recognition, (3) at least 3 peaks (preferably 5 peaks) must be chosen for each Aroclor for characterization, (4) the %RSD values of Aroclor 1016 and 1260 CFs must be ≤20%, and (5) if dual column analysis is chosen, both columns should meet the requirements. All ICALs met the requirements.

2.3 Calibration Verification

CCV analyses should be performed for each 12-hour analysis sequence prior to sample analyses, and the %D be within ±20%.

Calibration verifications were performed at the required frequency. All %D values either met the control criteria or biased high for target compounds that were not detected in the associated samples.

2.4 Method Blanks

Method blanks were prepared and analyzed as required. PCB Aroclors were not detected at or above the MDLs in the method blanks.

2.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

2.6 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on project samples or batch QC samples at the required frequency. All %R and RPD values were within the laboratory control limits.

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits.

2.8 Method Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations and achieved the project target quantitation limits.

2.9 Field Duplicates

One set of field duplicates were submitted for PAHs analyses. Field duplicate results for detected target compounds, RPD (or concentration difference) values, and data qualification were presented in **Appendix A**.

2.10 Overall Assessment of PCB Aroclors Data Usability

PCB Aroclor data are of known quality and acceptable for use.

3. TPH-Diesel & Motor Oil by GC/FID (Method NWTPH-Dx)

3.1 Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days and water should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the recommended holding times.

3.2 Initial Calibration

The method criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be ≥0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be ≥0.990, and (4) the back-calculated %D value for each calibration standard be within ±15%. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

3.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift (%D) value be within ±20% of the true value.

Calibration verification was performed at required frequency. The %D values were either within the ±20% criterion or at levels that had no adverse effects on data quality (e.g., high-bias %D value where the target compound was not detected in associated sample).

3.4 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

3.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits, outside the control limits due to matrix interference, or diluted below quantitation limits due to high petroleum hydrocarbon concentrations. No data qualifying actions were taken in these cases.

3.6 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency. The %R and RPD values met the laboratory control criteria.

3.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required. All %R values met the project control limits.

3.8 Target Compound Identification

Selected sample extracts were cleaned up with acid and silica gel treatment to minimize the biogenic interference with target compound identification, as required by the project. The laboratory reported results as diesel #2 (C10 - C25) and motor oil (C25 - C36), as required by the method.

3.9 Reporting Limits and Target Compound Quantitation

The reported RLs were supported with adequate ICAL concentrations.

3.10 Field Duplicates

Field duplicates were not submitted for polychlorinated dioxins and furans analyses in these SDGs.

3.11 Overall Assessment of TPH-Diesel and Motor Oil Data Usability

TPH-Diesel and TPH-Motor Oil data are of known quality and acceptable for use, as qualified.

4. Total & SPLP Metals by ICP/MS and CVAFS (EPA Methods 200.8 and 1631E)

4.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Soil and water samples should be analyzed within 180 days for metals and 28 days for mercury. Samples were analyzed within the required holding times.

4.2 ICP/MS Tuning

Instrument tuning was performed at the required frequency. The stability check (%RSD <5%), mass calibration (mass difference <0.1 AMU), and resolution check (peak width <1.0 AMU at 5% peak height) met the NFG and method criteria.

4.3 Initial Calibration (ICAL)

The ICP/MS method requires that (1) a blank and one calibration standard be used in establishing the analytical curve, and (2) the average of replicate exposures be reported for all standards, QC, and sample analyses.

The CVAFS method require that (1) a blank and five calibration standards be employed to establish the analytical curve, (2) the linearity of the calibration curve should meet the criteria of correlation coefficient ≥ 0.995 for linear regression, and (3) the %RSD <15% if average response factor approach is employed.

All ICALs met the method requirements.

4.4 Calibration Verification (ICV and CCV)

Initial calibration verifications (ICVs) and continuing calibration verifications (CCVs) for ICP/MS and GFAA and ongoing precision recovery (OPR) were analyzed at the required frequency. The %R values either met the control criteria (90 – 110% for metals, 76 – 123% for mercury) or the exceedance had no adverse effects on data usability (e.g., high-bias %D value where the target compound was not detected in associated sample).

4.5 Blanks

Calibration Blanks: Initial calibration blanks (ICBs) and continuing calibration blanks (CCBs) were not analyzed after calibration verification standards. Target analytes were either not detected at or above the RLs in the ICBs and CCBs, or sample results affected by the ICB/CCB detections were qualified as results of detections in preparation blanks.

Preparation Blanks: Preparation blanks were prepared and analyzed as required. Target analytes were either not detected at or above the RLs in the preparation blanks, or sample results were greater than 10X the detection in the associated blank.

4.6 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the project control limits, or the exceedance had no adverse effects on data usability (e.g., high-bias %R value where the target compound was not detected in associated sample).

4.7 Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the adequate frequency (>5% of field sample). The %R and RPD values either met the laboratory control limits or the outliers were not applicable for matrix effect evaluation (e.g. sample concentration >4x spiking level), except for the following:

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Affected Sample	Data Qualifier
309515	DAST-S01-092713	Zinc	128%	100%	55-129%	25%	All samples in this SDG	**J**
310229	GF11-S01-1.5	Copper Zinc	108% 140%	167% 269%	57-120% 59-148%	43% 63%	All samples in this SDG	**J**
310229	GF11-S02-1.5	SPLP/Lead	342%	28%	50-150%	170%	GF11-S02-1.5	**J**
310290	BBH-S01-1.5-101513 BBH-S21-1.5-101513	Zinc	135% 114%	105% 63%	55-129%	25% 58%	All samples in this SDG	**J**
310290	BBH-S01-1.5-101513	Mercury	72%	90%	62-140%	22%	BBH-S01-1.5-101513 BBH-S02-1.5-101513 BBH-S03-1.5-101513 BBH-S04-1.5-101513 BBH-S05-1.5-101513 BBH-S06-1.5-101513 BBH-S07-1.5-101513 BBH-S08-1.5-101513 BBH-S09-1.5-101513 BBH-S10-1.5-101513 BBH-S11-1.5-101513 BBH-S12-1.5-101513 BBH-S13-1.5-101513 BBH-S14-1.5-101513 BBH-S15-1.5-101513 BBH-S17-1.5-101513 BBH-S18-1.5-101513 BBH-S19-1.5-101513 BBH-S20-1.5-101513	**J**
310290	BBH-S21-1.5-101513	Antimony	88%	112%	54-116%	24%	BBH-S21-1.5-101513 BBH-S22-1.5-101513 BBH-S31-1.5-101513	**J**
310291	BBH-B12-03-101613	Mercury	95%	134%	62-140%	34%	BBH-B05-02-101613 BBH-B06-03-101613 BBH-B08-03-101613 BBH-B09-03-101613	**J**
310291	BBH-B12-03-101613	Nickel	91%	198%	69-112%	74%	BBH-B01-03-101613 BBH-B02-02-101613 BBH-B03-03-101613 BBH-B04-02-101613 BBH-B05-02-101613 BBH-B06-03-101613 BBH-B07-03-101613 BBH-B08-03-101613 BBH-B09-03-101613 BBH-B10-04-101613 BBH-B11-03-101613 BBH-B12-03-101613	**J**

Note: RPD control criterion = ±20%

4.8 Internal Standards

At least three internal standards were added to all field and QC samples for ICP/MS analyses. All percent relative intensity values were within the method criteria (60 - 125%).

4.9 Method Reporting Limits and Analyte Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

4.10 Field Duplicates

One set of field duplicates were submitted for PAHs analyses. Field duplicate results for detected target compounds, RPD (or concentration difference) values, and data qualification were presented in **Appendix A**.

4.11 Overall Assessment of Metals Data Usability

Metal data are of known quality and acceptable for use, as qualified.

5. Polychlorinated Dioxins/Furans by HRGC/HRMS (EPA Method SW8290)

5.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

EPA SW846 Method 8290 recommends a holding time of 30 days for solid samples stored in the dark at 4°C and completely analyzed within 45 days of extraction. All samples were extracted and analyzed within the recommended holding times.

5.2 HRGC/HRMS Instrument Performance Check

The method requires that (1) for mass calibration and resolution, the laboratory must provides evidence of mass spectrometer resolution > 10,000 at the beginning and end of each 12-hour analytical sequence. If mass calibration and resolution tuning are not correctly performed, interferences may degrade chlorinated dibenzo-*p*-dioxin and chlorinated dibenzofuran (CDD/CDF) identification and quantitation; (2) the mass spectrometer selected ion monitoring (SIM) scan descriptor switching times are determined by the analysis of the Window Defining Mixture (WDM) which contains the first and last eluting isomers in each homologue; and (3) chromatographic resolution is verified by analyzing one of two Isomer Specificity Check (ISC) solutions, depending on the Gas Chromatograph (GC) column used for analysis. All HRGC/HRMS instrument performance checks met the criteria.

5.3 Initial Calibration (ICAL)

The method requires that (1) the chromatographic peak separation between the 2,3,7,8-TCDD peak and the 1,2,3,8-TCDD peak and between the 2,3,7,8-TCDF peak and the 2,3,4,7-TCDF peak and must be resolved with a valley of < 25%; (2) the ion abundance ratio be within a ± 15% window around the theoretical abundance ratio; (3) the retention times (RTs) of the isomers must fall within the appropriate RT windows established by the WDM analysis. In addition, the absolute RT of the internal standard $^{13}C_{12}$-1,2,3,4-TCDD must exceed 25 minutes on the DB-5 (or equivalent) column and 15 minutes on the DB-225 (or equivalent) column; (4) the instrument sensitivity (signal-to-noise [S/N] ratio) must be >10:1; (5) the percent relative standard deviation (%RSD) be <20% for native isomers and < 30% for labeled isomers; (6) all initial calibration standards (CSs) must be analyzed at the correct concentration levels; (7) initial calibrations must be performed when the contract is awarded, whenever significant instrument maintenance is performed (e.g., ion source cleaning, GC column replacement, etc.), or if calibration verification criteria are not met. All ICALs met the method requirements.

5.4 Calibration Verification

The method requires that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the percent difference (%D) be within ±20% for native isomers and be within ±30% for labeled isomers, and (3) the ion abundance ratio, retention times, relative retention times, instrument sensitivity meet the criteria for initial calibrations. All calibration verification analyses met the criteria.

5.5 Method Blanks

Method blanks were prepared and analyzed as required for each preparation batch. Selected target compounds were detected in method blanks. Sample results less than 5x the level found in the associated method blank were qualified (U) as non-detects at the reported values. Qualified data were summarized in **SUAMMRY** section at the end of this report.

5.6 Laboratory Control Samples (LCS)

LCS analyses were performed as required by the method. The recovery met the method control limits for all target and labeled compounds.

5.7 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS and MSD analyses were not performed on a project sample in this SDG.

5.8 Labeled Compounds

Nine labeled internal standards and one cleanup recovery standard were added to all samples as required by the method. All %R values for internal standards and cleanup standard met the method requirement.

5.9 Target Compound Identification

All detected target congeners were properly identified. The ion ratios for a number of detection did not meet the method criteria; these results were qualified as non-detected at their reported values, as summarized in **SUMMARY, Table I.**

5.10 Reporting Limits, Estimated Detection Limits (EDLs), and Compound Quantitation

Correct internal standards, quantitation ions, and average RFs were used to quantitate target compound detections. The RLs were supported with adequate ICAL calibration concentrations. Sample-specific EDLs and RLs were adjusted with sample weights, internal standard peak height, and noise levels as required by the method.

Selected target congeners in a number of samples had chlorodiphenyl ether interference present in their retention time region. The affected results were qualified (J) as estimated.

5.11 Second Column Confirmation

All positive detection of 2,3,7,8-TCDF were re-analyzed on the DB-225 column for confirmation and results reported from the second column (DB-225) should be used for data interpretation.

5.12 Field Duplicates

Field duplicates were not submitted for polychlorinated dioxins and furans analyses in these SDGs.

5.13 Overall Assessment of Polychlorinated Dioxins/Furans Data Usability

Polychlorinated dioxins and furans data were of known quality and acceptable for use as qualified.

SUMMARY

Table I. Data Affected by QC Anomalies:

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
310290-01 310290-02 310290-03 310290-04 310290-05 310290-06 310290-07 310290-08 310290-09 310290-10 310290-11 310290-12 310290-13 310290-14 310290-15 310290-17 310290-18 310290-19 310290-20 310291-05 310291-06 310291-08 310291-09	BBH-S01-1.5-101513 BBH-S02-1.5-101513 BBH-S03-1.5-101513 BBH-S04-1.5-101513 BBH-S05-1.5-101513 BBH-S06-1.5-101513 BBH-S07-1.5-101513 BBH-S08-1.5-101513 BBH-S09-1.5-101513 BBH-S10-1.5-101513 BBH-S11-1.5-101513 BBH-S12-1.5-101513 BBH-S13-1.5-101513 BBH-S14-1.5-101513 BBH-S15-1.5-101513 BBH-S17-1.5-101513 BBH-S18-1.5-101513 BBH-S19-1.5-101513 BBH-S20-1.5-101513 BBH-B05-02-101613 BBH-B06-03-101613 BBH-B08-03-101613 BBH-B09-03-101613	Mercury	**J**	MS/MSD RPD value >20%
309537-01 309537-02	DAST-B08-092713 DAST-B09-092713	Arsenic	**J**	Field duplicate RPD >35%
310229-01 310229-02 310229-03 310229-04 310229-05 310229-06 310229-07 310229-08 310229-09 310229-10	GF11-S01-1.5 GF11-S02-1.5 GF11-S03-1.5 GF11-S04-1.5 GF11-S05-1.5 GF11-S06-1.5 GF11-S07-1.5 GF11-B01-3 GF11-B02-3 GF11-B03-3	Copper Zinc	**J**	MS/MSD %R and RPD value outside control criteria
310290-21 310290-22 310290-30	BBH-S21-1.5-101513 BBH-S22-1.5-101513 BBH-S31-1.5-101513	Antimony	**J**	MS/MSD RPD value >20%

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
310290-01	BBH-S01-1.5-101513			
310290-02	BBH-S02-1.5-101513			
310290-03	BBH-S03-1.5-101513			
310290-04	BBH-S04-1.5-101513			
310290-05	BBH-S05-1.5-101513			
310290-06	BBH-S06-1.5-101513			
310290-07	BBH-S07-1.5-101513			
310290-08	BBH-S08-1.5-101513			
310290-09	BBH-S09-1.5-101513			
310290-10	BBH-S10-1.5-101513			
310290-11	BBH-S11-1.5-101513			
310290-12	BBH-S12-1.5-101513			
310290-13	BBH-S13-1.5-101513	Zinc	**J**	MS and/or MSD %R and MS/MSD RPD values outside control criteria
310290-14	BBH-S14-1.5-101513			
310290-15	BBH-S15-1.5-101513			
310290-17	BBH-S17-1.5-101513			
310290-18	BBH-S18-1.5-101513			
310290-19	BBH-S19-1.5-101513			
310290-20	BBH-S20-1.5-101513			
310290-21	BBH-S21-1.5-101513			
310290-22	BBH-S22-1.5-101513			
310290-23	BBH-S23-1.5-101513			
310290-27	BBH-S27-1.5-101513			
310290-28	BBH-S28-1.5-101513			
310290-29	BBH-S30-1.5-101513			
310290-30	BBH-S31-1.5-101513			
309515-01	DAST-S01-092713			
309515-02	DAST-S02-092713			
309515-03	DAST-S03-092713			
309515-04	DAST-S04-092713			
309515-05	DAST-S05-092713			
309515-06	DAST-S06-092713			
309515-07	DAST-S07-092713			
309515-08	DAST-S08-092713			
309515-09	DAST-S09-092713	Zinc	**J**	MS/MSD RPD value >20%
309515-10	DAST-S10-092713			
309515-11	DAST-B01-092713			
309515-12	DAST-B02-092713			
309515-13	DAST-B03-092713			
309515-14	DAST-B04-092713			
309515-15	DAST-B05-092713			
309515-16	DAST-B06-092713			
309515-17	DAST-B07-092713			

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
310291-01 310291-02 310291-03 310291-04 310291-05 310291-06 310291-07 310291-08 310291-09 310291-10 310291-11 310291-12	BBH-B01-03-101613 BBH-B02-02-101613 BBH-B03-03-101613 BBH-B04-02-101613 BBH-B05-02-101613 BBH-B06-03-101613 BBH-B07-03-101613 BBH-B08-03-101613 BBH-B09-03-101613 BBH-B10-04-101613 BBH-B11-03-101613 BBH-B12-03-101613	Nickel	**J**	MSD %R and RPD values outside control criteria
310229-02	GF11-S02-1.5	SPLP/Lead	**J**	MS/MSD %R and RPD value outside control criteria
309532-01	RCD-S01-1.5-093013	Benzo(b)fluoranthene Fluoranthene	**J**	MS/MSD RPD value >20%
E1301382-002	BBH-B04-02-101613	1,2,3,4,6,7,8-HpCDF	**U**	Concentration <5x the detection in MB
E1301382-002	BBH-B04-02-101613	Total HpCDF	**U**	Concentration <5x the detection in MB
E1301382-003	BBH-B08-03-101613	1,2,3,4,7,8-HxCDF 1,2,3,7,8-PeCDF 2,3,4,6,7,8-HxCDF	**J**	Interference of chlorobiphenyl ether was present
E1301382-001	BBH-B01-03-101613	1,2,3,4,7,8-HxCDD 1,2,3,7,8-PeCDD 2,3,4,6,7,8-HxCDF	**U**	Ion abundance ratio did not meet method requirement
E1301382-002	BBH-B04-02-101613	1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8-PeCDF 2,3,4,6,7,8-HxCDF	**U**	Ion abundance ratio did not meet method requirement
E1301382-003	BBH-B08-03-101613	2,3,4,6,7,8-HxCDF	**U**	Ion abundance ratio did not meet method requirement
E1301382-004	BBH-B12-03-101613	1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,6,7,8-HxCDF 1,2,3,7,8-PeCDD 2,3,4,7,8-PeCDF	**U**	Ion abundance ratio did not meet method requirement

Table II. Data Qualifiers are defined as follows:

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

Approved By: __________________ Date: ***6/23/2014***

Mingta Lin, Senior Project Chemist

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Appendix A

Field duplicate RPD is indicative of field and laboratory precision and sample homogeneity in combination. The CLP National Functional Guidelines or *Work Plan* do not specify criteria for field duplicate evaluation. An advisory criterion of 35% was applied to evaluating the RPD values of field duplicate results that are ≥5xRL. For results that are <5xRL, an advisory criterion of ±2RL was applied to evaluating the concentration differences. The RPD (or concentration difference as applicable) values and data qualification for detected compounds in field duplicates are presented as follows:

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
			DAST-B08-092713	DAST-B09-092713			
Mercury	mg/kg	0.1	ND	0.1		0.1	
Lead	mg/kg	1	28.1	39.1	28%		
Nickel	mg/kg	1	21.4	21.5	0%		
Arsenic	mg/kg	1	8.49	13.7	38%		**J/J**
Cadmium	mg/kg	1	2.05	2.19		0.14	
Copper	mg/kg	1	55.7	64.4	14%		
Zinc	mg/kg	5	91	110	17%		
Aroclor 1260	mg/kg	0.1	0.31	0.34		0.03	
Aroclor 1254	mg/kg	0.1	0.29	0.4		0.11	
Aroclor 1221	mg/kg	0.1	ND	ND		0	
Aroclor 1232	mg/kg	0.1	ND	ND		0	
Aroclor 1248	mg/kg	0.1	ND	ND		0	
Aroclor 1016	mg/kg	0.1	ND	ND		0	
Aroclor 1242	mg/kg	0.1	ND	ND		0	

Notes:
Delta – Concentration difference between the parent sample and its field duplicate
mg/kg – milligram per kilogram
ND – The analyte was not detected at or above the RL.
RL – Reporting limit
RPD – Relative percent difference

Data Validation Report

Kimberly-Clark Everett, Washington Site
Upland Area Interim Action Soil Sampling
Batch #3 Soil Samples

Prepared for:

Aspect Consulting LLC
401 Second Ave South, Suite 201
Seattle, WA 98014

Prepared by:

Pyron Environmental, Inc.
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ACRONYMS

%D	percent difference
%D_f	percent drift
%R	percent recovery
%RSD	percent relative standard deviation
AMU	atomic mass unit
CCB	continuing calibration blank
CCC	calibration check compound
CCV	continuing calibration verification
CF	calibration factor
CLP	U.S. EPA Contract Laboratory Program
COC	chain-of-custody
CVAFS	cold vapor atomic fluorescent spectrometry
DFTPP	decafluorotriphenylphosphine
ECD	electron capture detector
EPA	U.S. Environmental Protection Agency
FID	Flame ionization detector
GC/MS	gas chromatograph/mass spectrometer
ICAL	initial calibration
ICB	initial calibration blank
ICP/MS	inductively coupled plasma/ mass spectrometer
ICV	initial calibration verification
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
MDL	method detection limit
µg/kg	microgram per kilogram
mg/kg	milligram per kilogram
MS	matrix spike
MSD	matrix spike duplicate
NFGs	CLP National Functional Guidelines for Data Review (EPA 2008 – Organics; EPA 2010 – Inorganics)
OPR	ongoing precision and recovery
PCBs	polychlorinated biphenyls
QA/QC	quality assurance/quality control
RF	response factor

RL	reporting limit
RPD	relative percent difference
RRT	relative retention time
SDG	sample delivery group
SIM	selective ion monitoring
SVOCs	semi-volatile organic compounds
VOCs	volatile organic compounds

INTRODUCTION

This report presents and discusses findings of the data validation performed on analytical data for soil samples collected during October and November 2013 for the referenced project. The laboratory reports validated herein were submitted by Friedman & Bruya, Inc.

A level III data validation was performed on this laboratory report. The validation followed the procedures specified in USEPA CLP Functional Guidelines ([NFGs], EPA 2008 – Organics; EPA 2010 – Inorganics), with modifications to accommodate project and analytical method requirements. The numerical quality assurance/quality control (QA/QC) criteria applied to the validation were in accordance with those specified in the quality assurance project plans ([QAPPs], Aspect, 2009) and the current performance-based control limits established by the laboratory (laboratory control limits). Instrument calibration, frequency of QC analyses, and analytical sequence requirements were evaluated against the respective analytical methods.

Validation findings are discussed in each section pertinent to the QC parameter for each type of analysis. Qualified data with applied data qualifiers are summarized in the **Summary** section at the end of this report.

Samples and the associated analyses validated herein are summarized as follows:

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis					
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx
RCD-S09-2	310226-01	10/11/13	Soil		X	X	X		X
DAST-B10-4	310227-01	10/11/13	Soil		X	X	X		X
DAST-S11-2	310227-02	10/11/13	Soil		X	X	X		X
BAST-B01-3.5	310228-01	10/10/13	Soil		X				X
BAST-S01-2	310228-02	10/10/13	Soil		X				X
BAST-S02-2	310228-03	10/10/13	Soil		X				X
BAST-B002-04-101713	310361-01	10/17/13	Soil		X				X
BAST-B003-05-101713	310361-02	10/17/13	Soil		X				X
BAST-B004-05-101713	310361-03	10/17/13	Soil		X				X
BAST-B005-06-101713	310361-04	10/17/13	Soil		X				X
BAST-B006-06-101713	310361-05	10/17/13	Soil		X		X(A)		X
BAST-B011-04-101713	310361-06	10/17/13	Soil		X				X
BAST-B012-04-101713	310361-07	10/17/13	Soil		X				X
BAST-B013-04-101713	310361-08	10/17/13	Soil		X				X
BAST-B014-04-101713	310361-09	10/17/13	Soil		X				X
BAST-B031-04-101713	310361-10	10/17/13	Soil		X				X

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis					
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx
BAST-B021-04-101713	310361-11	10/17/13	Soil		X				X
BAST-B041-3.5-101713	310361-12	10/17/13	Soil		X				X
BAST-B007-05-101713	310361-13	10/17/13	Soil		X				X
BAST-B008-06-101713	310361-14	10/17/13	Soil		X				X
BAST-B009-05-101713	310361-15	10/17/13	Soil		X		X[(A)]		X
BAST-B009-05-101713	310361-15	10/17/13	Soil		X				X
BAST-B015-05-101713	310361-16	10/17/13	Soil		X				X
BAST-B016-05-101713	310361-17	10/17/13	Soil		X				X
BAST-B017-05-101713	310361-18	10/17/13	Soil		X				X
BAST-B018-05-101713	310361-19	10/17/13	Soil		X				X
BAST-B024-05-101713	310361-20	10/17/13	Soil		X		X[(A)]		X
BAST-B30-3.5	310361-21	10/17/13	Soil		X				X
BAST-S03-3.5	310361-22	10/17/13	Soil		X				X
BAST-S04-3.5	310361-23	10/17/13	Soil		X				X
BAST-S05-3.5	310361-24	10/17/13	Soil		X				X
BAST-S06-3.5	310361-25	10/17/13	Soil		X		X[(A)]		X
BAST-S07-3.5	310361-26	10/17/13	Soil		X				X
BAST-B500-3.5	310361-27	10/17/13	Soil		X				X
BAST-S08-3.5	310387-01	10/18/13	Soil		X				X
BAST-S09-3.5	310387-02	10/18/13	Soil		X				X
BAST-B042-06	310387-03	10/18/13	Soil		X				X
BAST-S25-03	310387-04	10/18/13	Soil		X				X
BAST-S16-03	310387-05	10/18/13	Soil		X		X[(A)]		X
BAST-B010-05	310387-06	10/18/13	Soil		X				X
BAST-B023-04	310387-07	10/18/13	Soil		X				X
BAST-B501-04	310387-08	10/18/13	Soil		X				X
BAST-B036-7.0	310406-01	10/21/13	Soil		X				X
BAST-502-3.2	310406-02	10/21/13	Soil		X				X
BAST-S010-3.5	310406-03	10/21/13	Soil		X		X		X
BAST-S011-3.0	310406-04	10/21/13	Soil		X				X
BAST-S012-3.0	310406-05	10/21/13	Soil		X				X
BAST-S013-3.0	310406-06	10/21/13	Soil		X				X
BAST-S014-3.0	310406-07	10/21/13	Soil		X				X
BAST-S015-3.0	310406-08	10/21/13	Soil		X		X		X

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis					
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx
BAST-B039-3.0	310406-09	10/21/13	Soil		X				X
BAST-S017-3.0	310406-10	10/21/13	Soil		X				X
BAST-S018-3.0	310406-11	10/21/13	Soil		X				X
BAST-B022-7.0	310407-01	10/22/13	Soil		X				X
BAST-B026-6.0	310407-02	10/22/13	Soil		X				X
BAST-B027-7.0	310407-03	10/22/13	Soil		X		X		X
BAST-B028-7.0	310407-04	10/22/13	Soil		X				X
BAST-B029-7.0	310407-05	10/22/13	Soil		X				X
BAST-B034-7.0	310407-06	10/22/13	Soil		X				X
BAST-B035-7.0	310407-07	10/22/13	Soil		X				X
BAST-B037-7.0	310407-08	10/22/13	Soil		X		X		X
BAST-B038-7.0	310407-09	10/22/13	Soil		X				X
BBH-B13-4	310456-01	10/23/13	Soil				X[(A)]		
BBH-B14-4	310456-02	10/23/13	Soil				X[(A)]		
BBH-B15-4	310456-03	10/23/13	Soil				X[(A)]		
BBH-B16-3	310456-04	10/23/13	Soil				X[(A)]		
BBH-S29-1.5	310456-05	10/23/13	Soil				X[(A)]		
BAST-S034-3.0	310457-01	10/23/13	Soil		X		X		X
BAST-S026-3.0	310457-02	10/23/13	Soil		X				X
BAST-S027-3.0	310457-03	10/23/13	Soil	X	X			X	X
BAST-S028-3.0	310457-04	10/23/13	Soil	X	X			X	X
BAST-S029-3.0	310457-05	10/23/13	Soil	X	X			X	X
BAST-B032-3.0	310457-06	10/23/13	Soil	X	X			X	X
BAST-B043-9.0	310486-01	10/24/13	Soil		X				X
BAST-B044-9.0	310486-02	10/24/13	Soil		X				X
BAST-B045-9.0	310486-03	10/24/13	Soil		X				X
BAST-S030-3.0	310510-01	10/25/13	Soil		X		X		X
BAST-S030-3.0	310510-01	10/25/13	Soil						X
BAST-S031-3.0	310510-02	10/25/13	Soil						X
BAST-B046-7.0	310510-03	10/25/13	Soil						X
BAST-S032-3.0	310510-04	10/25/13	Soil						X
BAST-B047-8.0	310510-05	10/25/13	Soil						X
BAST-S033-3.0	310510-06	10/25/13	Soil		X		X		X
BAST-B503-3.0	310605-01	10/30/13	Soil		X				X

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis					
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx
BAST-B048-3.0	310605-02	10/30/13	Soil		X				X
BAST-B049-3.0	310605-03	10/30/13	Soil		X				X
BAST-B050-3.0	310605-04	10/30/13	Soil		X				X
BBH-B19-5-103013	310606-01	10/30/13	Soil		X		X[(A)]		
BBH-B17-5-103013	310606-02	10/30/13	Soil				X[(A)]		
BBH-B18-5-103013	310606-03	10/30/13	Soil				X[(A)]		
BAST-B051-5.0	311028-01	11/01/13	Soil		X		X		X
BAST-B504-5.0	311028-02	11/01/13	Soil		X		X		X
BAST-S034B-3.0	311028-03	11/01/13	Soil		X				X
BAST-S036-3.0	311028-04	11/01/13	Soil		X				X
BAST-S035-3.0	311028-05	11/01/13	Soil		X				X
BUST-B01-8-110713	311165-01	11/07/13	Soil		X		X		X
BUST-B02-8-110713	311165-02	11/07/13	Soil		X				X
BUST-B03-16-110713	311165-03	11/07/13	Soil		X				X
BUST-B04-16-110713	311165-04	11/07/13	Soil		X				X
BUST-500-110713	311165-05	11/07/13	Soil		X		X		X
BUST-S01-6-110713	311165-06	11/07/13	Soil		X				X
BUST-S02-10-110713	311165-07	11/07/13	Soil		X				X
BUST-S03-10-110713	311165-08	11/07/13	Soil		X				X
BUST-S04-10-110713	311165-09	11/07/13	Soil		X				X
BUST-S05-7-110713	311165-10	11/07/13	Soil		X		X		X
BUST-S06-8-110713	311165-11	11/07/13	Soil		X		X		X
BUST-S07-4-110713	311165-12	11/07/13	Soil		X				X
BUST-S08-10-110713	311165-13	11/07/13	Soil		X				X
BUST-S09-5-110713	311165-14	11/07/13	Soil		X				X
BUST-S10-10-110713	311165-15	11/07/13	Soil		X				X
BUST-S11-5-110713	311165-16	11/07/13	Soil		X		X		X
BUST-S12-10-110713	311165-17	11/07/13	Soil		X				X
BUST-S13-5-110713	311165-18	11/07/13	Soil		X				X
BUST-S14-9-110713	311165-19	11/07/13	Soil		X				X
BUST-S15-5-110713	311165-20	11/07/13	Soil		X				X
BUST-B05-18-110813	311184-01	11/08/13	Soil		X				X
BUST-B06-18-110813	311184-02	11/08/13	Soil		X				X
BUST-B07-19-110813	311184-03	11/08/13	Soil		X		X		X

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis					
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx
BUST-B08-19-110813	311184-04	11/08/13	Soil		X				X
BUST-B09-21-110813	311184-05	11/08/13	Soil		X				X
BUST-B10-19-110813	311184-06	11/08/13	Soil		X				X
BUST-B11-19-110813	311184-07	11/08/13	Soil		X				X

Notes:
[(A)] - Antimony, arsenic, cadmium, chromium, copper, mercury, nickel, and zinc
Metals - Arsenic, cadmium, chromium, copper, mercury, nickel, and zinc, unless otherwise noted.
PAHs - Polycyclic aromatic hydrocarbons
PCBs - Polychlorinated biphenyl
TPH-Dx - Diesel and motor oil range total petroleum hydrocarbon
TPH-Gx - Gasoline range total petroleum hydrocarbon
VOC - Volatile organic compound
X - The analysis was requested and performed on the sample.

The analytical parameters requested for the samples, the respective analytical methods, and the analytical laboratories are summarized below:

Parameter	Analytical Method	Analytical Laboratory
Volatile Organic Compounds (VOCs)	SW846 Method 8260C	Friedman & Bruya, Inc. (F&BI) Seattle, WA
Polycyclic Aromatic Hydrocarbons (PAHs)	SW846 Method 8270D-SIM	
PCB Aroclors	SW846 Method 8082A	
TPH - Gasoline Range	NWTPH-Gx	
TPH - Diesel & Motor Oil Range	NWTPH-Dx	
Total Metals	EPA Method 200.8	
Mercury	EPA Method 1631E	

Notes:
1. SW846 - *USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,* SW-846, Third Edition, December 1996.
2. EPA Methods - *USEPA Methods for Chemical Analysis of Water and Wastes,* EPA–600/4-79-020, March 1983 Revision.
3. EPA Method 1631E - *Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry,* Office of Water, U.S. Environmental Protection Agency, August 2002, EPA-821-R-02-019.
4. NWTPH Methods – *Washington State Department of Ecology, Analytical Methods for Petroleum Hydrocarbons*, Publication No. ECY 97-602, June 1997.

DATA VALIDATION FINDINGS

1. VOCs by GC/MS (EPA Method SW8260C)

1.1 Sample Management and Holding Time

Samples were received in the laboratory intact and in consistence with the accompanying chain-of-custody (COC) documentation. In some cases where cooler temperature was outside the 4±2°C criteria; samples were hand-delivered to the laboratory the same day of collection. The cooler temperature exceedance had no significant effects on data quality. No other anomalies were identified in relation to sample preservation, handling, and transport.

Soil samples should be preserved at the time of collection. Soil and water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

1.2 GC/MS Instrument Performance Check

The method require that (1) gas chromatograph/mass spectrometer (GC/MS) tuning analysis be performed, using bromofluorobenzene (BFB), at the beginning of each 12-hour period prior to any analysis, and (2) specific mass ions meet the criteria provided in the method. All instrument performance checks met the requirements.

1.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the percent relative standard deviation (%RSD) of response factors (RFs) be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. ICALs either met the requirements or the outliers had no adverse effects on data usability (*e.g.,* %RSD >20% for a compound not detected in samples).

An initial calibration verification (ICV) standard (second source standard) was analyzed to verify the calibration curve. Percent difference (%D) values were either within ±30%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

1.4 Calibration Verification (CCV)

The CCV criteria requires that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D value be within ±20%.

Calibration verifications either met the requirements, or the exceedance had no adverse effects on data usability (*e.g.,* biased high CCV recovery for a compound not detected in samples).

1.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the reporting limits (RLs).

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

LCS and LCSD were prepared and analyzed as required by the method. Percent recovery (%R) and relative percent difference (RPD) values either met the project control limits, or the outliers had no adverse effects on data usability (*e.g.,* biased high recovery for a compound not detected in samples).

1.7 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits.

1.8 Matrix Spike (MS)

MS analyses were performed on project and batch QC samples at the proper frequency (≥5% of the samples analyzed for VOCs). All %R values were within the project control limits.

1.9 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

1.10 Reporting Limit and Target Compound Quantitation

RLs were supported with adequate initial calibration concentrations. In cases where target compound concentrations exceeded ICAL calibration ranges, proper dilution analyses were performed for definitive quantitation of the compounds. Only affected compounds were to be reported from dilution analyses.

1.11 Field Duplicates

Field duplicates were not submitted for VOCs analyses in these SDGs.

1.12 Overall Assessment of VOCs Data Usability

VOCs data are of known quality and acceptable for use, as qualified.

2. PAHs by GC/MS - SIM (EPA Method SW8270D-SIM)

2.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days and water within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

2.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

2.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. All ICALs met the requirements.

An ICV standard (second source standard) was analyzed to verify the calibration curve. %D values were either within ±20%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

2.4 Calibration Verification (CCV)

The analytical method requires that (1) continuing calibration verifications be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D be within ±20%.

2.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

2.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits or at levels that had no adverse effects on data quality (*e.g.,* biased-high recovery for compounds that were not detected in samples). In some cases surrogate spike %R values were not applicable for data evaluation because the samples contained high levels of target PAHs and required dilution analysis; no data were qualified in these cases.

2.7 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency (≥5% of samples analyzed). All %R and RPD values met the project control criteria.

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits.

2.9 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

2.10 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations. In some cases samples required dilution for definitive quantitation of target compounds; the RLs were raised accordingly, and the compounds reported from the dilution analysis. The remaining (un-diluted) target compounds were to be reported from the initial analysis for the lower detection limits.

2.11 Field Duplicates

Six sets of field duplicates were submitted for PAHs analyses. Field duplicate results for detected target compounds, RPD (or concentration difference) values, and data qualification were presented in **Appendix A**.

2.12 Overall Assessment of PAHs Data Usability

PAHs data are of known quality and acceptable for use, as qualified.

3. PCB Aroclors (EPA Method SW8082A)

3.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days of collection and extracts analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

3.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using the mixture of Aroclor 1016 and 1260, (2) a single-point calibration be performed for the other five Aroclors to establish calibration factors (CFs) and for Aroclor pattern recognition, (3) at least 3 peaks (preferably 5 peaks) must be chosen for each Aroclor for characterization, (4) the %RSD values of Aroclor 1016 and 1260 CFs must be ≤20%, and (5) if dual column analysis is chosen, both columns should meet the requirements. All ICALs met the requirements.

3.3 Calibration Verification

CCV analyses should be performed for each 12-hour analysis sequence prior to sample analyses, and the %D be within ±20%.

Calibration verifications were performed at the required frequency. All %D values either met the control criteria or biased high for target compounds that were not detected in the associated samples.

3.4 Method Blanks

Method blanks were prepared and analyzed as required. PCB Aroclors were not detected at or above the MDLs in the method blanks.

3.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

3.6 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on project samples or batch QC samples at the required frequency. All %R and RPD values were within the laboratory control limits.

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits.

3.8 Method Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations and achieved the project target quantitation limits.

3.9 Field Duplicates

Field duplicates were not submitted for PCB Aroclors analysis in these SDGs.

3.10 Overall Assessment of PCB Aroclors Data Usability

PCB Aroclor data are of known quality and acceptable for use.

4. TPH-Gasoline by GC/FID (Method NWTPH-Gx)

4.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be preserved at the time of collection. Soil and water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

4.2 Initial Calibration (ICAL)

The method criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be ≥0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be ≥0.990, and (4) the back-calculated %D value for each calibration standard be within ±15%. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

4.3 Calibration Verification

Continuing calibration verification (CCV) analyses were performed at the required frequency for all analytical sequences as required by the method. The %D values for all CCVs met the method criterion (±20%).

4.4 Method Blanks

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

4.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits, outside the control limits due to matrix interference, or diluted below quantitation limits due to high analyte concentrations. No data qualifying actions were taken in these cases.

4.6 Matrix Spike and Matrix Spike Duplicate

MS/MSD analyses were not performed for TPH-Gasoline analyses; instead, duplicate and LCS analyses in combination were performed.

4.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the laboratory control limits.

4.8 Laboratory Duplicate Analysis

Duplicate analyses were performed on project and batch QC samples at the proper frequency. All RPD and concentration difference values met the laboratory control criteria.

4.9 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

4.10 Field Duplicates

Field duplicates were not submitted for TPH-Gasoline analyses in these SDGs.

4.11 Overall Assessment of TPH-Gasoline Data Usability

TPH-Gasoline data are of known quality and acceptable for use, as qualified.

5. TPH-Diesel & Motor Oil by GC/FID (Method NWTPH-Dx)

5.1 Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days and water should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the recommended holding times.

5.2 Initial Calibration

The method criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be ≥0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be ≥0.990, and (4) the back-calculated %D value for each calibration standard be within ±15%. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

5.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift (%D) value be within ±20% of the true value.

Calibration verification was performed at required frequency. The %D values were either within the ±20% criterion or at levels that had no adverse effects on data quality (e.g., high-bias %D value where the target compound was not detected in associated sample).

5.4 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

5.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits, outside the control limits due to matrix interference, or diluted below quantitation limits due to high petroleum hydrocarbon concentrations. No data qualifying actions were taken in these cases.

5.6 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency. The %R and RPD values met the laboratory control criteria.

5.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required. All %R values met the project control limits.

5.8 Target Compound Identification

Selected sample extracts were cleaned up with acid and silica gel treatment to minimize the biogenic interference with target compound identification, as required by the project. The laboratory reported results as diesel #2 (C10 - C25) and motor oil (C25 - C36), as required by the method.

5.9 Reporting Limits and Target Compound Quantitation

The reported RLs were supported with adequate ICAL concentrations.

5.10 Field Duplicates

Four sets of field duplicates were submitted for TPH-Diesel and TPH-Motor Oil analyses. Field duplicate results, RPD (or concentration difference) values, and data qualification for detected TPH-Diesel or Motor Oil were presented in **Appendix A**.

5.11 Overall Assessment of TPH-Diesel and Motor Oil Data Usability

TPH-Diesel and TPH-Motor Oil data are of known quality and acceptable for use, as qualified.

6. Total Metals by ICP/MS and CVAFS (EPA Methods 200.8 and 1631E)

6.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Soil and water samples should be analyzed within 180 days for metals and 28 days for mercury. Samples were analyzed within the required holding times.

6.2 ICP/MS Tuning

Instrument tuning was performed at the required frequency. The stability check (%RSD <5%), mass calibration (mass difference <0.1 AMU), and resolution check (peak width <1.0 AMU at 5% peak height) met the NFG and method criteria.

6.3 Initial Calibration (ICAL)

The ICP/MS method requires that (1) a blank and one calibration standard be used in establishing the analytical curve, and (2) the average of replicate exposures be reported for all standards, QC, and sample analyses.

The CVAFS method require that (1) a blank and five calibration standards be employed to establish the analytical curve, (2) the linearity of the calibration curve should meet the criteria of correlation coefficient ≥ 0.995 for linear regression, and (3) the %RSD <15% if average response factor approach is employed.

All ICALs met the method requirements.

6.4 Calibration Verification (ICV and CCV)

Initial calibration verifications (ICVs) and continuing calibration verifications (CCVs) for ICP/MS and GFAA and ongoing precision recovery (OPR) were analyzed at the required frequency. The %R values either met the control criteria (90 – 110% for metals, 76 – 123% for mercury) or the exceedance had no adverse effects on data usability (e.g., high-bias %D value where the target compound was not detected in associated sample).

6.5 Blanks

Calibration Blanks: Initial calibration blanks (ICBs) and continuing calibration blanks (CCBs) were not analyzed after calibration verification standards. Target analytes were either not detected at or above the RLs in the ICBs and CCBs, or sample results affected by the ICB/CCB detections were qualified as results of detections in preparation blanks.

Preparation Blanks: Preparation blanks were prepared and analyzed as required. Target analytes were either not detected at or above the RLs in the preparation blanks, or sample results were greater than 10X the detection in the associated blank, except for the following:

SDG	Blank ID	Analyte	Concentration in Blank (mg/kg)	Affected Sample	Sample Result (mg/kg)	Data Qualifier
311028	I3-748mb	Arsenic	0.358 J	BAST-B051-5.0 BAST-B504-5.0	1.92 1.37	**J**
310510	I3-730mb	Arsenic	0.83 J	BAST-S030-3.0 BAST-S033-3.0	7.31 1.69	**J**

6.6 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the project control limits, or the exceedance had no adverse effects on data usability (e.g., high-bias %R value where the target compound was not detected in associated sample).

6.7 Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the adequate frequency (>5% of field sample). The %R and RPD values either met the laboratory control limits or the outliers were not applicable for matrix effect evaluation (e.g. sample concentration >4x spiking level), except for the following:

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Affected Sample	Data Qualifier
310510	Batch QC	Copper Lead	97% 59%	137% 81%	57-120% 59-148%	34% 31%	BAST-S030-3.0 BAST-S033-3.0	**J**
310406 310407	BAST-S015-3.0	Zinc	78%	61%	55-129%	24%	BAST-S010-3.5 BAST-S015-3.0 BAST-B027-7.0 BAST-B037-7.0	**J**
310226 310227	Batch QC	Copper Lead	108% 140%	167% 269%	57-120% 59-148%	43% 63%	RCD-S09-2 DAST-B10-4 DAST-S11-2	**J**

Note: RPD control criteria = ±20%

6.8 Internal Standards

At least three internal standards were added to all field and QC samples for ICP/MS analyses. All percent relative intensity values were within the method criteria (60 - 125%).

6.9 Method Reporting Limits and Analyte Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

6.10 Field Duplicates

Two sets of field duplicates were submitted for metals analyses. Field duplicate results, RPD (or concentration difference) values, and data qualification for detected TPH-Diesel or Motor Oil were presented in **Appendix A**.

6.11 Overall Assessment of Metals Data Usability

Metal data are of known quality and acceptable for use, as qualified.

SUMMARY

Table I. Data Affected by QC Anomalies:

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
310510-01 310510-06 311028-01 311028-02	BAST-S030-3.0 BAST-S033-3.0 BAST-B051-5.0 BAST-B504-5.0	Arsenic	**J**	Analyte detected in MB and sample was <10x the MB
310226-01 310227-01 310227-02	RCD-S09-2 DAST-B10-4 DAST-S11-2	Copper	**J**	MS/MSD %R and RPD values outside control criteria
310226-01 310227-01 310227-02	RCD-S09-2 DAST-B10-4 DAST-S11-2	Lead	**J**	MS/MSD %R and RPD values outside control criteria
310406-03 310406-08 310407-03 310407-08	BAST-S010-3.5 BAST-S015-3.0 BAST-B027-7.0 BAST-B037-7.0	Zinc	**J**	MS/MSD RPD value >20%
310510-01 310510-06	BAST-S030-3.0 BAST-S033-3.0	Lead	**J**	MS/MSD RPD value outside control criteria
310510-01 310510-06	BAST-S030-3.0 BAST-S033-3.0	Copper	**J**	MSD %R and MS/MSD RPD values outside control criteria
310361-26 310361-27	BAST-S07-3.5 BAST-B500-3.5	Benz(a)anthracene	**J**	Field duplicate RPD >35%

Table II. Data Qualifiers are defined as follows:

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

Approved By: Mingta Lin Date: ***6/23/2014***

Mingta Lin, Senior Project Chemist

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PSEP *Recommended Guidelines for Measuring Organic Compounds in Puget Sound Water, Sediment and Tissue Samples,* Puget Sound Water Quality Authority, April 1997.

Appendix A

Field duplicate RPD is indicative of field and laboratory precision and sample homogeneity in combination. The CLP National Functional Guidelines or *Work Plan* do not specify criteria for field duplicate evaluation. An advisory criterion of 35% was applied to evaluating the RPD values of field duplicate results that are ≥5xRL. For results that are <5xRL, an advisory criterion of ±2RL was applied to evaluating the concentration differences. The RPD (or concentration difference as applicable) values and data qualification for detected compounds in field duplicates are presented as follows:

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
			BAST-S07-3.5	BAST-B500-3.5			
Bunker C	mg/kg	250	9300	9700	4%		
Acenaphthene	mg/kg	0.01	0.63	0.77	20%		
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	0.62	0.64	3%		
Benz(a)anthracene	mg/kg	0.01	0.58	0.85		0.27	**J/J**
Benzo(a)pyrene	mg/kg	0.01	0.35	0.36	3%		
Benzo(b)fluoranthene	mg/kg	0.01	0.17	0.21	21%		
Benzo(g,h,i)perylene	mg/kg	0.01	0.17	0.2	16%	0.03	
Benzo(k)fluoranthene	mg/kg	0.01	0.024	0.028		0.004	
Chrysene	mg/kg	0.01	0.98	1.1	12%		
Dibenzo(a,h)anthracene	mg/kg	0.01	0.061	0.07	14%		
Fluoranthene	mg/kg	0.01	0.25	0.23	8%		
Fluorene	mg/kg	0.01	1.3	1.6	21%	0.3	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.046	0.055		0.009	
Naphthalene	mg/kg	0.01	ND	ND		0	
Phenanthrene	mg/kg	0.01	ND	ND		0	
Pyrene	mg/kg	0.1	2	2.2	10%		
			BAST-B023-04	BAST-B501-04			
Bunker C	mg/kg	250	ND	ND		0	
Benzo(a)pyrene	mg/kg	0.01	ND	ND		0	
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	ND	ND		0	
Acenaphthene	mg/kg	0.01	ND	ND		0	
Phenanthrene	mg/kg	0.01	ND	ND		0	
Fluorene	mg/kg	0.01	ND	ND		0	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Naphthalene	mg/kg	0.01	ND	ND		0	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Anthracene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	ND	ND		0	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	ND	ND		0	
Benzo(b)fluoranthene	mg/kg	0.01	ND	ND		0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	ND		0	
Benzo(g,h,i)perylene	mg/kg	0.01	ND	ND		0	
Pyrene	mg/kg	0.01	ND	ND		0	
			BAST-S010-3.5	**BAST-502-3.2**			
Acenaphthene	mg/kg	0.01	0.039	0.037		0.002	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	ND	ND		0	
Benzo(a)pyrene	mg/kg	0.01	ND	ND		0	
Benzo(b)fluoranthene	mg/kg	0.01	ND	ND		0	
Benzo(g,h,i)perylene	mg/kg	0.01	ND	ND		0	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	ND	ND		0	
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	ND	ND		0	
Fluorene	mg/kg	0.01	0.079	0.085	7%		
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	ND		0	
Naphthalene	mg/kg	0.01	ND	ND		0	
Phenanthrene	mg/kg	0.01	0.071	0.077	8%		
Pyrene	mg/kg	0.01	ND	ND		0	
			BAST-B048-3.0	**BAST-B503-3.0**			
Bunker C	mg/kg	250	ND	ND		0	
Acenaphthene	mg/kg	0.01	ND	ND		0	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	ND	ND		0	
Benzo(a)pyrene	mg/kg	0.01	ND	ND		0	
Benzo(b)fluoranthene	mg/kg	0.01	ND	ND		0	
Benzo(g,h,i)perylene	mg/kg	0.01	ND	ND		0	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	ND	ND		0	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	ND	ND		0	
Fluorene	mg/kg	0.01	ND	ND		0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	ND		0	
Naphthalene	mg/kg	0.01	0.014	0.011		0.003	
Phenanthrene	mg/kg	0.01	ND	ND		0	
Pyrene	mg/kg	0.01	ND	ND		0	
			BAST-B051-5.0	**BAST-B504-5.0**			
Mercury	mg/kg	0.1	ND	ND		0	
Nickel	mg/kg	1	9.98	10.1	1%	0.12	
Zinc	mg/kg	1	30.6	23	28%		
Copper	mg/kg	1	42.7	40.4	6%	2.3	
Arsenic	mg/kg	1	1.92	1.37		0.55	
Lead	mg/kg	1	15.8	16.3	3%		
Cadmium	mg/kg	1	ND	ND		0	
Acenaphthene	mg/kg	0.01	1.4	1.1	24%		
Acenaphthylene	mg/kg	0.01	0.01	ND		0	
Anthracene	mg/kg	0.01	0.056	0.051	9%		
Benz(a)anthracene	mg/kg	0.01	0.033	0.031		0.002	
Benzo(a)pyrene	mg/kg	0.01	0.03	0.027		0.003	
Benzo(b)fluoranthene	mg/kg	0.01	0.028	0.027		0.001	
Benzo(g,h,i)perylene	mg/kg	0.01	0.027	0.025		0.002	
Benzo(k)fluoranthene	mg/kg	0.01	ND	0.01		0.01	
Chrysene	mg/kg	0.01	0.053	0.05	6%		
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	0.047	0.041		0.006	
Fluorene	mg/kg	0.1	2.3	1.7	30%		
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.019	0.02		0.001	
Naphthalene	mg/kg	0.01	0.11	0.13	17%		
Phenanthrene	mg/kg	0.01	0.63	0.57	10%		
Pyrene	mg/kg	0.01	0.1	0.087	14%		
			BUST-S05-7-110713	**BUST-500-110713**			
Mercury	mg/kg	0.1	ND	ND		0	
Arsenic	mg/kg	1	ND	ND		0	
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	5.23	5.09		0.14	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Lead	mg/kg	1	4.58	4.85		0.27	
Nickel	mg/kg	1	7.98	9.09	13%		
Zinc	mg/kg	1	11.3	11.4	1%		
Bunker C	mg/kg	250	ND	ND		0	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Fluorene	mg/kg	0.01	ND	ND		0	
Phenanthrene	mg/kg	0.01	ND	ND		0	
Acenaphthene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	ND	ND		0	
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	ND	ND		0	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	ND	ND		0	
Benzo(b)fluoranthene	mg/kg	0.01	ND	ND		0	
Benzo(g,h,i)perylene	mg/kg	0.01	ND	ND		0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	ND		0	
Naphthalene	mg/kg	0.01	ND	ND		0	
Benzo(a)pyrene	mg/kg	0.01	ND	ND		0	
Pyrene	mg/kg	0.01	ND	ND		0	

Notes:
Delta – Concentration difference between the parent sample and its field duplicate
mg/kg – milligram per kilogram
ND – The analyte was not detected at or above the RL.
RL – Reporting limit
RPD – Relative percent difference

Data Validation Report

Kimberly-Clark Everett, Washington Site
Upland Area Interim Action Soil Sampling
Batch #4 Soil Samples

Prepared for:

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ACRONYMS

%D	percent difference
%D_f	percent drift
%R	percent recovery
%RSD	percent relative standard deviation
AMU	atomic mass unit
BTEX	benzene, toluene, ethylbenzene, and *m-*, *p-*, & *o*-xylenes
CCB	continuing calibration blank
CCC	calibration check compound
CCV	continuing calibration verification
CF	calibration factor
CLP	U.S. EPA Contract Laboratory Program
COC	chain-of-custody
CVAFS	cold vapor atomic fluorescent spectrometry
DFTPP	decafluorotriphenylphosphine
ECD	electron capture detector
EPA	U.S. Environmental Protection Agency
EPH	extractable petroleum hydrocarbon
FID	Flame ionization detector
GC/MS	gas chromatograph/mass spectrometer
ICAL	initial calibration
ICB	initial calibration blank
ICP/MS	inductively coupled plasma/ mass spectrometer
ICV	initial calibration verification
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
MDL	method detection limit
µg/kg	microgram per kilogram
mg/kg	milligram per kilogram
MS	matrix spike
MSD	matrix spike duplicate
NFGs	CLP National Functional Guidelines for Data Review (EPA 2008 – Organics; EPA 2010 – Inorganics)
OPR	ongoing precision and recovery
PCBs	polychlorinated biphenyls

PID	photo-ionization detector
QA/QC	quality assurance/quality control
RF	response factor
RL	reporting limit
RPD	relative percent difference
RRT	relative retention time
SDG	sample delivery group
SIM	selective ion monitoring
SVOCs	semi-volatile organic compounds
VOCs	volatile organic compounds
VPH	volatile petroleum hydrocarbon

INTRODUCTION

This report presents and discusses findings of the data validation performed on analytical data for soil samples collected during September 2013 to January 2014 for the referenced project. The laboratory reports validated herein were submitted by Friedman & Bruya, Inc. and Fremont Aanlytical, Inc. in Seattle, Washington and ALS Environmental Services, Inc. in Kelso, Washington.

A level III data validation was performed on this laboratory report. The validation followed the procedures specified in USEPA CLP Functional Guidelines ([NFGs], EPA 2008 – Organics; EPA 2010 – Inorganics), with modifications to accommodate project and analytical method requirements. The numerical quality assurance/quality control (QA/QC) criteria applied to the validation were in accordance with those specified in the quality assurance project plans ([QAPPs], Aspect, 2009) and the current performance-based control limits established by the laboratory (laboratory control limits). Instrument calibration, frequency of QC analyses, and analytical sequence requirements were evaluated against the respective analytical methods.

Validation findings are discussed in each section pertinent to the QC parameter for each type of analysis. Qualified data with applied data qualifiers are summarized in the **Summary** section at the end of this report.

Samples and the associated analyses validated herein are summarized as follows:

				Analysis						
Field Sample ID	**Laboratory Sample ID**	**Sampling Date**	**Sample Type**	**VOC**	**PAHs**	**PCBs**	**Metals**	**TPH-Gx**	**TPH-Dx**	**Misc.**
DAST-S01-092713	309515-01	09/27/13	Soil		X	X	X		X	
DAST-S02-092713	309515-02	09/27/13	Soil		X	X	X		X	
DAST-S03-092713	309515-03	09/27/13	Soil		X	X	X		X	
DAST-S04-092713	309515-04	09/27/13	Soil		X	X	X		X	
DAST-S05-092713	309515-05	09/27/13	Soil		X	X	X		X	
DAST-S06-092713	309515-06	09/27/13	Soil		X	X	X		X	
DAST-S07-092713	309515-07	09/27/13	Soil		X	X	X		X	
DAST-S08-092713	309515-08	09/27/13	Soil		X	X	X		X	
DAST-S09-092713	309515-09	09/27/13	Soil		X	X	X		X	
DAST-S10-092713	309515-10	09/27/13	Soil		X	X	X		X	
DAST-B01-092713	309515-11	09/27/13	Soil		X	X	X		X	
DAST-B02-092713	309515-12	09/27/13	Soil		X	X	X		X	
DAST-B03-092713	309515-13	09/27/13	Soil		X	X	X		X	
DAST-B04-092713	309515-14	09/27/13	Soil		X	X	X		X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx	Misc.
DAST-B05-092713	309515-15	09/27/13	Soil		X	X	X		X	
DAST-B06-092713	309515-16	09/27/13	Soil		X	X	X		X	
DAST-B07-092713	309515-17	09/27/13	Soil		X	X	X		X	
BAST-B040-7.0	310430-01	10/22/13	Soil		X				X	
BAST-S019-3.0	310430-02	10/22/13	Soil		X				X	
BAST-S020-3.0	310430-03	10/22/13	Soil		X				X	
BAST-S021-3.0	310430-04	10/22/13	Soil		X		X[(A)]		X	
BAST-S022-3.0	310430-05	10/22/13	Soil		X				X	
BAST-S023-3.0	310430-06	10/22/13	Soil		X				X	
BAST-S024-3.0	310430-07	10/22/13	Soil		X				X	
BAST-B033-7.0	310430-08	10/22/13	Soil		X				X	
BUST-S16-8-111213	311258-01	11/12/13	Soil		X		X[(A)]		X	EPH
BUST-S17-8-111213	311258-02	11/12/13	Soil		X				X	EPH
BUST-S18-8-111213	311258-03	11/12/13	Soil		X				X	
BUST-S19-5-111213	311258-04	11/12/13	Soil		X				X	
BUST-S20-8-111213	311258-05	11/12/13	Soil		X				X	
BUST-501-111213	311258-06	11/12/13	Soil		X		X[(A)]		X	
BUST-S21-10-111213	311258-07	11/12/13	Soil		X				X	
BUST-S22-10-111213	311258-08	11/12/13	Soil		X		X[(A)]		X	
BUST-B20-6-111213	311258-09	11/12/13	Soil		X				X	
BUST-S23-16	311289-01	11/13/13	Soil		X		X[(A)]		X	
BUST-B21-18	311289-02	11/13/13	Soil		X				X	
PM-B2-6.5-111313	311294-18	11/13/13	Soil							SPLP/Cu
BUST-S24-3-111513	311338-01	11/15/13	Soil		X		X		X	
BUST-S25-3-111513	311338-02	11/15/13	Soil		X		X		X	
BUST-S26-5-111513	311338-03	11/15/13	Soil		X		X		X	
BUST-S27-5-111513	311338-04	11/15/13	Soil		X		X		X	
BUST-S28-3-111513	311338-05	11/15/13	Soil		X		X		X	
BUST-S29-5-111513	311338-06	11/15/13	Soil		X		X		X	
BUST-S30-3-111513	311338-07	11/15/13	Soil		X		X		X	
BUST-S31-3-111513	311338-08	11/15/13	Soil		X		X		X	
BUST-B22-5-111513	311338-09	11/15/13	Soil		X		X		X	
BUST-B23-6-111513	311338-10	11/15/13	Soil		X		X		X	
BUST-502-111513	311338-11	11/15/13	Soil		X		X		X	

				Analysis						
Field Sample ID	**Laboratory Sample ID**	**Sampling Date**	**Sample Type**	**VOC**	**PAHs**	**PCBs**	**Metals**	**TPH-Gx**	**TPH-Dx**	**Misc.**
BUST-B24-4-111513	311338-12	11/15/13	Soil		X		X		X	
BUST-B25-4-111513	311338-13	11/15/13	Soil		X		X		X	
BUST-B26-6-111513	311338-14	11/15/13	Soil		X		X		X	
BUST-B27-6-111513	311338-15	11/15/13	Soil		X		X		X	
BBH-B20-C-111813	311390-01	11/18/13	Soil		X		X			
BUST-S48-4	311391-02	11/19/13	Soil		X		X		X	
BUST-S49-8	311391-02	11/19/13	Soil		X		X		X	
BUST-S50-12	311391-03	11/19/13	Soil		X		X		X	
BUST-S51-4	311391-04	11/19/13	Soil		X		X		X	
BUST-S52-8	311391-05	11/19/13	Soil		X		X		X	
BUST-S53-12	311391-06	11/19/13	Soil		X		X		X	
BUST-S46-4	311391-07	11/19/13	Soil		X		X		X	
BUST-S46A-8	311391-08	11/19/13	Soil		X		X		X	
BUST-S47-12	311391-09	11/19/13	Soil		X		X		X	
BUST-S43-4	311391-10	11/19/13	Soil		X		X		X	
BUST-S44-8	311391-11	11/19/13	Soil		X		X		X	
BUST-S45-12	311391-12	11/19/13	Soil		X		X		X	
BUST-S40-4	311391-13	11/19/13	Soil		X		X		X	
BUST-S40-4	311391-13	11/19/13	Soil		X		X		X	
BUST-S40-4	311391-13	11/19/13	Soil		X		X		X	
BUST-S40-4	311391-13	11/19/13	Soil		X		X		X	
BUST-S41-8	311391-14	11/19/13	Soil		X		X		X	
BUST-S42-12	311391-15	11/19/13	Soil		X		X		X	
BUST-B29-12	311391-16	11/19/13	Soil		X		X		X	
BUST-B30-12	311391-17	11/19/13	Soil		X		X		X	
BUST-B31-12	311391-18	11/19/13	Soil		X		X		X	
BUST-B32-12	311391-19	11/19/13	Soil		X		X		X	
BUST-B503-12	311391-20	11/19/13	Soil		X		X		X	
BUST-B33-12	311391-21	11/19/13	Soil		X		X		X	
BUST-S37-4	311391-22	11/19/13	Soil		X		X		X	
BUST-S38-8	311391-23	11/19/13	Soil		X		X		X	
BUST-S39-12	311391-24	11/19/13	Soil		X		X		X	
UST70-S11-4-112113	311428-01	11/21/13	Soil		X		X[(A)]		X	
UST70-S12-8-112113	311428-02	11/21/13	Soil		X				X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx	Misc.
UST70-S13-4-112113	311428-03	11/21/13	Soil		X				X	
UST70-S14-8-112113	311428-04	11/21/13	Soil		X				X	
UST70-S15-4-112113	311428-05	11/21/13	Soil		X				X	
UST70-S16-8-112113	311428-06	11/21/13	Soil		X		X[(A)]		X	
UST70-B01-11-112113	311428-07	11/21/13	Soil		X				X	
UST70-B02-11-112113	311428-08	11/21/13	Soil		X				X	
UST70-B03-11-112113	311428-09	11/21/13	Soil		X				X	
UST70-B04-11-112113	311428-10	11/21/13	Soil		X				X	
UST70-S01-4-112113	311428-11	11/21/13	Soil		X		X[(A)]		X	
UST70-S02-8-112113	311428-12	11/21/13	Soil		X				X	
UST70-S03-4-112113	311428-13	11/21/13	Soil		X				X	
UST70-S04-8-112113	311428-14	11/21/13	Soil		X				X	
UST70-S05-4-112113	311428-15	11/21/13	Soil		X				X	
UST70-S06-8-112113	311428-16	11/21/13	Soil		X		X[(A)]		X	
UST70-S07-4-112113	311428-17	11/21/13	Soil		X				X	
UST70-S08-8-112113	311428-18	11/21/13	Soil		X				X	
UST70-S09-4-112113	311428-19	11/21/13	Soil		X				X	
UST70-S10-8-112113	311428-20	11/21/13	Soil		X				X	
UST70-B05-11-112113	311428-21	11/21/13	Soil		X		X[(A)]		X	
UST70-500	311428-22	11/21/13	Soil		X				X	
UST70-501	311428-23	11/21/13	Soil		X		X[(A)]		X	
BUST-S54-8	311453-01	11/20/13	Soil		X		X		X	
BUST-S55-12	311453-02	11/20/13	Soil		X		X		X	
BUST-S56-8	311453-03	11/20/13	Soil		X		X		X	
BUST-S57-12	311453-04	11/20/13	Soil		X		X		X	
BUST-S34-4	311454-01	11/21/13	Soil		X		X		X	
BUST-S35-8	311454-02	11/21/13	Soil		X		X		X	
BUST-S36-12	311454-03	11/21/13	Soil		X		X		X	
BUST-S32-8	311454-04	11/21/13	Soil		X		X		X	
BUST-S33-12	311454-05	11/21/13	Soil		X		X		X	
BUST-B34-12	311454-06	11/21/13	Soil		X		X		X	
BUST-B35-12	311454-07	11/21/13	Soil		X		X		X	
BUST-B36-6	311454-08	11/21/13	Soil		X		X		X	
BUST-B37-10	311454-09	11/21/13	Soil		X		X		X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx	Misc.
BUST-B38-8	311454-10	11/21/13	Soil		X		X		X	
BUST-B39-12	312058-01	12/03/13	Soil		X		X		X	EPH
BUST-B40-12	312058-02	12/03/13	Soil		X		X		X	
BUST-B41-12	312058-03	12/03/13	Soil		X		X		X	
BUST-S58-12	312058-04	12/03/13	Soil		X		X		X	EPH
BUST-S59-12	312058-05	12/03/13	Soil		X		X		X	
BUST-S60-6	312058-06	12/03/13	Soil		X		X		X	
BUST-S61-12	312058-07	12/03/13	Soil		X		X		X	
BUST-S62-3	312200-01	12/12/13	Soil		X		X		X	
BUST-S63-3	312200-02	12/12/13	Soil		X		X		X	
BUST-S64-6	312200-03	12/12/13	Soil		X		X		X	
BUST-S65-9	312200-04	12/12/13	Soil		X		X		X	
BUST-S66-3	312200-05	12/12/13	Soil		X		X		X	
BUST-S67-3	312200-06	12/12/13	Soil		X		X		X	
BUST-504-FD	312200-07	12/12/13	Soil		X		X		X	
UST70-S17-4	312335-01	12/19/13	Soil		X				X	
UST70-S18-8	312335-02	12/19/13	Soil		X				X	
UST70-S19-8	312335-03	12/19/13	Soil		X				X	
BUST-S68-3	312336-01	12/19/13	Soil		X		X[(A)]		X	
BAST- S038-5	312362-02	12/23/13	Soil		X		X[(A)]		X	
BAST- S039-3	312362-03	12/23/13	Soil		X				X	
BAST- S040-5	312362-04	12/23/13	Soil		X				X	
BAST- S041-3	312362-05	12/23/13	Soil		X				X	
BAST- S042-5	312362-06	12/23/13	Soil		X				X	
BAST-B052-7	312362-07	12/23/13	Soil		X		X[(A)]		X	
BAST-B054-7	312362-08	12/23/13	Soil		X				X	
BAST- 505-FD	312362-09	12/23/13	Soil		X				X	
UST29-S01-3-122313	312363-01	12/23/13	Soil	X	X		X	X	X	FRM
UST29-S02-3-122313	312363-02	12/23/13	Soil	X	X			X	X	FRM
UST29-S03-3-122313	312363-03	12/23/13	Soil	X	X			X	X	FRM
UST29-S04-3-122313	312363-04	12/23/13	Soil	X	X			X	X	FRM
UST29-S05-3-122313	312363-05	12/23/13	Soil	X	X			X	X	FRM
UST29-S06-3-122313	312363-06	12/23/13	Soil	X	X		X	X	X	FRM
UST29-S07-3-122313	312363-07	12/23/13	Soil	X	X			X	X	FRM

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx	Misc.
UST29-500-122313	312363-08	12/23/13	Soil	X	X		X	X	X	FRM
UST29-B01-5-122313	312363-09	12/23/13	Soil	X	X			X	X	FRM
UST29-B02-5-122313	312363-10	12/23/13	Soil	X	X		X	X	X	FRM
UST29-B03-5-122313	312363-11	12/23/13	Soil	X	X			X	X	FRM
UST29-B04-5-122313	312363-12	12/23/13	Soil	X	X			X	X	FRM
UST29-B05-5-122313	312363-13	12/23/13	Soil	X	X			X	X	FRM
UST29-B06-5-122313	312363-14	12/23/13	Soil	X	X		X	X	X	FRM
UST29-501-122313	312363-15	12/23/13	Soil	X	X			X	X	FRM
UST29-S08-8-123013	312433-01	12/30/13	Soil	X	X		X	X	X	FRM
UST29-S09-8-123013	312433-02	12/30/13	Soil	X	X		X	X	X	FRM
UST29-S10-8-123013	312433-03	12/30/13	Soil	X	X		X	X	X	FRM
UST29-S11-8-123013	312433-04	12/30/13	Soil	X	X		X	X	X	FRM
UST29-B07-18-123013	312433-05	12/30/13	Soil	X	X		X	X	X	FRM
BAST-S43-3-123013	312434-01	12/30/13	Soil	X	X		X	X	X	
BAST-S44-5-123013	312434-02	12/30/13	Soil	X	X			X	X	
BAST-S45-3-123013	312434-03	12/30/13	Soil	X	X			X	X	
BAST-S47-3-123013	312434-05	12/30/13	Soil	X	X			X	X	
BAST-S48-5-123013	312434-06	12/30/13	Soil	X	X			X	X	
UST29-B08-15-010214	401024-01	01/02/14	Soil	X	X		X	X	X	FRM
UST29-S12-3-010314	401024-02	01/03/14	Soil	X	X			X	X	FRM
UST29-S13-6-010314	401024-03	01/03/14	Soil	X	X			X	X	FRM
UST29-S14-9-010314	401024-04	01/03/14	Soil	X	X			X	X	FRM
UST29-S15-3-010314	401024-05	01/03/14	Soil	X	X			X	X	FRM
UST29-S16-6-010314	401024-06	01/03/14	Soil	X	X		X	X	X	FRM
UST29-S17-9-010314	401024-07	01/03/14	Soil	X	X			X	X	FRM
UST29-S18-3-010314	401024-08	01/03/14	Soil	X	X			X	X	FRM
UST29-S19-6-010314	401024-09	01/03/14	Soil	X	X			X	X	FRM
UST29-S20-9-010314	401024-10	01/03/14	Soil	X	X		X	X	X	FRM
UST29-S21-3-010314	401024-11	01/03/14	Soil	X	X			X	X	FRM
UST29-B09-15-010314	401024-12	01/03/14	Soil	X	X			X	X	FRM
UST29-B10-15-010314	401024-13	01/03/14	Soil	X	X			X	X	FRM
UST29-B11-15-010314	401024-14	01/03/14	Soil	X	X			X	X	FRM
UST70-S20-010314	401025-01	01/03/14	Soil						X	
UST70-S21-010314	401025-02	01/03/14	Soil						X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx	Misc.
BAST-B53-10-010214	401026-01	01/02/14	Soil	X	X			X	X	
BAST-B55-10-010214	401026-02	01/02/14	Soil	X	X			X	X	
BAST-S49-8-010214	401026-03	01/02/14	Soil	X	X			X	X	
BAST-S50-8-010314	401026-04	01/03/14	Soil	X	X			X	X	
BUST-S69-3-010314	401027-01	01/03/14	Soil						X	
BAST-S51-8-010714	401054-01	01/07/14	Soil	X	X			X	X	
BAST-S52-8-010714	401054-02	01/07/14	Soil	X	X			X	X	
BAST-S53-5-010714	401054-03	01/07/14	Soil	X	X			X	X	
BAST-S54-8-010714	401054-04	01/07/14	Soil	X	X		X	X	X	
UST70-S22-8-010614	401055-01	01/06/14	Soil		X				X	
UST70-502	401055-02	01/06/14	Soil		X				X	
UST29-B12-17-010614	401057-01	01/06/14	Soil	X	X		X	X	X	FRM
UST29-S22-9-010714	401069-01	01/07/14	Soil	X	X			X	X	
UST29-B13-16-010714	401069-02	01/07/14	Soil	X	X			X	X	
UST29-S23-12-010714	401069-03	01/07/14	Soil	X	X			X	X	
UST29-S24-3-010814	401069-04	01/08/14	Soil	X	X			X	X	
UST29-S25-6-010814	401069-05	01/08/14	Soil	X	X			X	X	
UST29-S26-9-010814	401069-06	01/08/14	Soil	X	X		X	X	X	
UST29-S27-6-010814	401069-07	01/08/14	Soil	X	X			X	X	
UST29-S28-3-010814	401069-08	01/08/14	Soil	X	X			X	X	
UST29-S29-9-010814	401069-09	01/08/14	Soil	X	X			X	X	
UST29-S30-6-010814	401069-10	01/08/14	Soil	X	X			X	X	
UST29-S31-3-010814	401069-11	01/08/14	Soil	X	X		X	X	X	
UST29-S32-9-010814	401069-12	01/08/14	Soil	X	X			X	X	
UST29-S33-6-010814	401069-13	01/08/14	Soil	X	X			X	X	
UST29-S34-3-010814	401069-14	01/08/14	Soil	X	X			X	X	
UST29-B14-17-010814	401069-15	01/08/14	Soil	X	X			X	X	
UST29-S35-6-010814	401069-16	01/08/14	Soil	X	X		X	X	X	
UST29-S36-3-010814	401069-17	01/08/14	Soil	X	X			X	X	
UST29-B15-17-010814	401069-18	01/08/14	Soil	X	X			X	X	
UST29-B502	401069-19	01/08/14	Soil	X	X			X	X	
UST29-B16-17-010814	401069-20	01/08/14	Soil	X	X			X	X	
UST29-S37-6-010914	401108-01	01/09/14	Soil	X	X			X	X	FRM
UST29-S38-6-010914	401108-02	01/09/14	Soil	X	X			X	X	FRM

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx	Misc.
UST29-S39-9-010914	401108-03	01/09/14	Soil	X	X			X	X	FRM
UST29-S40-9-010914	401108-04	01/09/14	Soil	X	X			X	X	FRM
UST29-S41-6-011014	401108-05	01/10/14	Soil	X	X			X	X	FRM
BAST-S055-3-012014	401211-01	01/20/14	Soil		X				X	
BAST-S056-3-012014	401211-02	01/20/14	Soil		X				X	
BV-S01-6-011714	401212-01	01/17/14	Soil		X		X		X	
BV-B01-8-011714	401212-02	01/17/14	Soil		X		X		X	
BV-S02-6-011714	401212-03	01/17/14	Soil		X		X		X	
BV-S03-6-011714	401212-04	01/17/14	Soil		X		X		X	
BV-S03-6-011714	401212-04	01/17/14	Soil		X		X		X	
BV-B02-8-011714	401212-05	01/17/14	Soil		X		X		X	
BV-S04-6-011714	401212-06	01/17/14	Soil		X				X	
NRU-S03-12-012214	401247-01	01/22/14	Soil		X				X	
NRU-S09-12-012214	401247-02	01/22/14	Soil		X				X	
NRU-S12-12-012214	401247-03	01/22/14	Soil		X				X	
NRU-B01-14-012214	401247-04	01/22/14	Soil		X				X	
NRU-B02-14-012214	401247-05	01/22/14	Soil		X				X	
NRU-S06-12-012314	401292-01	01/23/14	Soil		X				X	
NRU-B03-14-012314	401292-02	01/23/14	Soil		X				X	
NRU-S07-4-012314	401292-03	01/23/14	Soil		X				X	
NRU-S08-8-012314	401292-04	01/23/14	Soil		X				X	
NRU-S01-4-012314	401292-05	01/23/14	Soil		X				X	
NRU-S02-8-012314	401292-06	01/23/14	Soil		X				X	
NRU-S13-4-012314	401292-07	01/23/14	Soil		X				X	
NRU-S14-8-012314	401292-08	01/23/14	Soil		X				X	
NRU-S15-12-012314	401292-09	01/23/14	Soil		X				X	
NRU-S21-4-012414	401292-10	01/24/14	Soil		X				X	
NRU-S22-8-012414	401292-11	01/24/14	Soil		X				X	
NRU-S23-12-012414	401292-12	01/24/14	Soil		X				X	
NRU-S20-12-012414	401292-13	01/24/14	Soil		X				X	
NRU-B04-14-012414	401292-14	01/24/14	Soil		X				X	
NRU-501-012414	401292-15	01/24/14	Soil		X				X	
NRU-S04-4-012414	401293-01	01/24/14	Soil		X				X	
NRU-S05-8-012414	401293-02	01/24/14	Soil		X				X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx	Misc.
NRU-S10-4-012414	401293-03	01/24/14	Soil		X				X	
NRU-S11-8-012414	401293-04	01/24/14	Soil		X				X	
NRU-S16-12-012414	401293-05	01/24/14	Soil		X				X	
NRU-S17-8-012414	401293-06	01/24/14	Soil		X				X	
NRU-S18-4-012414	401293-07	01/24/14	Soil		X				X	
NRU-S19-8-012414	401293-08	01/24/14	Soil		X				X	
NRU-500-012414	401293-09	01/24/14	Soil		X				X	
NRU-SP01-1-012414	401294-01	01/24/14	Soil	X	SVOC	X	pp	X	X	SPLP/As
NRU-SP01-2-012414	401294-02	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP01-3-012414	401294-03	01/24/14	Soil	X	SVOC	X	pp	X	X	SPLP/As
NRU-SP02-1-012414	401294-04	01/24/14	Soil	X	SVOC	X	pp	X	X	SPLP/As
NRU-SP02-2-012414	401294-05	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP02-3-012414	401294-06	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP03-1-012414	401294-07	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP03-2-012414	401294-08	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP03-3-012414	401294-09	01/24/14	Soil	X	SVOC	X	pp	X	X	SPLP/Cu
NRU-SP04-1-012414	401294-10	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP04-2-012414	401294-11	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP04-3-012414	401294-12	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP05-1-012414	401294-13	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP05-2-012414	401294-14	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP05-3-012414	401294-15	01/24/14	Soil	X	SVOC	X	pp	X	X	SPLP/Cu
NRU-SP06-1-012414	401294-16	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP06-2-012414	401294-17	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-SP06-3-012414	401294-18	01/24/14	Soil	X	SVOC	X	pp	X	X	
NRU-B5-16-012714	401318-01	01/27/14	Soil		X			X	X	BTEX/EPH /VPH
BAST-B66-7-012814	401341-01	01/28/14	Soil	X	X			X	X	
BAST-S67-4-012814	401341-02	01/28/14	Soil	X	X			X	X	
BAST-S68-4-012814	401341-03	01/28/14	Soil	X	X			X	X	
NRU-S24-4-013014	401367-01	01/30/14	Soil	X	X			X	X	
NRU-S25-8-013014	401367-02	01/30/14	Soil	X	X			X	X	
NRU-S26-12-013014	401367-03	01/30/14	Soil	X	X			X	X	
NRU-S27-4-013014	401367-04	01/30/14	Soil	X	X			X	X	
NRU-S28-8-013014	401367-05	01/30/14	Soil	X	X			X	X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH-Gx	TPH-Dx	Misc.
NRU-S29-12-013014	401367-06	01/30/14	Soil	X	X			X	X	
NRU-B06-14-013014	401367-07	01/30/14	Soil	X	X			X	X	
NRU-B07-14-013014	401367-08	01/30/14	Soil	X	X			X	X	
NRU-502-013014	401367-09	01/30/14	Soil	X				X		

Notes:

[A] - Arsenic, cadmium, chromium, copper, mercury, nickel, and zinc
EPH - Extractable petroleum hydrocarbon
FMR - Formaldehyde
Metals - Antimony, arsenic, cadmium, chromium, copper, mercury, nickel, and zinc, unless otherwise noted.
Misc. - Miscellaneous
PAHs - Polycyclic aromatic hydrocarbons
PCBs - Polychlorinated biphenyl
pp - Priority pollutant metals, *i.e.,* antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc
SPLP - Synthetic precipitation leaching procedure; the leachates were analyzed for copper (SPLP/Cu) and/or arsenic (SPLP/As).
TPH-Dx - Diesel and motor oil range total petroleum hydrocarbon
TPH-Gx - Gasoline range total petroleum hydrocarbon
VOC - Volatile organic compound
VPH - Volatile petroleum hydrocarbon
X - The analysis was requested and performed on the sample.

The analytical parameters requested for the samples, the respective analytical methods, and the analytical laboratories are summarized below:

Parameter	Analytical Method	Analytical Laboratory
Volatile Organic Compounds (VOCs)	SW846 Method 8260C	Friedman & Bruya, Inc. (F&BI) Seattle, WA
Polycyclic Aromatic Hydrocarbons (PAHs)	SW846 Method 8270D-SIM	
PCB Aroclors	SW846 Method 8082A	
BTEX	SW846 Method 8021B	
TPH - Gasoline Range	NWTPH-Gx	
TPH - Diesel & Motor Oil Range	NWTPH-Dx	
Total Metals	EPA Method 200.8	
Mercury	EPA Method 1631E	
Extractable Petroleum Hydrocarbon	NWTPH-EPH	Fremont Analytical, Inc. Seattle, WA
Volatile Petroleum Hydrocarbon	NWTPH-VPH	
Formaldehyde	SW846 Method 8315A	ALS Environmental Services, Inc. Kelso, Washington

Notes:

1. SW846 - *USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,* SW-846, Third Edition, December 1996.
2. EPA Methods - *USEPA Methods for Chemical Analysis of Water and Wastes,* EPA–600/4-79-020, March 1983 Revision.
3. EPA Method 1631E - *Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry,* Office of Water, U.S. Environmental Protection Agency, August 2002, EPA-821-R-02-019.
4. NWTPH Methods – *Washington State Department of Ecology, Analytical Methods for Petroleum Hydrocarbons*, Publication No. ECY 97-602, June 1997.

DATA VALIDATION FINDINGS

1. VOCs by GC/MS (EPA Method SW8260C)

1.1 Sample Management and Holding Time

Samples were received in the laboratory intact and in consistence with the accompanying chain-of-custody (COC) documentation. In some cases where cooler temperature was outside the 4±2°C criteria; samples were hand-delivered to the laboratory the same day of collection. The cooler temperature exceedance had no significant effects on data quality. No other anomalies were identified in relation to sample preservation, handling, and transport.

All samples in SDG: 401294 were not preserved in methanol upon collection. The analyses were performed within a relatively short period of time (3 days) of collection. VOCs results for these samples, rather than being rejected, were qualified (UJ) for non-detects and (J) for detects as estimated.

Soil samples should be preserved at the time of collection. Soil samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

1.2 GC/MS Instrument Performance Check

The method require that (1) gas chromatograph/mass spectrometer (GC/MS) tuning analysis be performed, using bromofluorobenzene (BFB), at the beginning of each 12-hour period prior to any analysis, and (2) specific mass ions meet the criteria provided in the method. All instrument performance checks met the requirements.

1.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the percent relative standard deviation (%RSD) of response factors (RFs) be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. ICALs either met the requirements or the outliers had no adverse effects on data usability (*e.g.,* %RSD >20% for a compound not detected in samples).

An initial calibration verification (ICV) standard (second source standard) was analyzed to verify the calibration curve. Percent difference (%D) values were either within ±30%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

1.4 Calibration Verification (CCV)

The CCV criteria requires that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D value be within ±20%.

Calibration verifications either met the requirements, or the exceedance had no adverse effects on data usability (*e.g.,* biased high CCV recovery for a compound not detected in samples), except for the following:

SDG	CCV ID	Compound	%D	Bias	Affected Sample	Data Qualifier
401108	GCMS9 1/10/14, 11:34	Bromomethane	40.9%	Low	UST29-S37-6-010914 UST29-S38-6-010914 UST29-S39-9-010914 UST29-S40-9-010914 UST29-S41-6-011014	**UJ**

1.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the reporting limits (RLs). Methylene chloride was detected in selected method blanks at levels greater than their method detection limits but less than the RLs. Methylene chloride results for samples associated with these blanks were evaluated and qualified (U) as non-detected at the reported values, as summarized in **SUMMARY, Table I.**

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

LCS and LCSD were prepared and analyzed as required by the method. Percent recovery (%R) and relative percent difference (RPD) values either met the project control limits, or the outliers had no adverse effects on data usability (*e.g.,* biased high recovery for a compound not detected in samples), except for the following:

SDG#	LCS ID	Analyte	LCS %R	LCSD %R	Control Limit	Affected Sample	Data Qualifier
401069	LCS	Methylene Chloride	56%	-	62-119%	All samples in this SDG	**UJ**

1.7 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits.

1.8 Matrix Spike (MS)

MS analyses were performed on project and batch QC samples at the proper frequency (≥5% of the samples analyzed for VOCs). All %R values were within the project control limits.

1.9 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

1.10 Reporting Limit and Target Compound Quantitation

RLs were supported with adequate initial calibration concentrations.

1,4-dioxane and vinyl acetate were reported from the mass spectrum library search, the reported RLs were considered estimated. These compounds were not detected in any of the field samples; the results were qualified (UJ) to indicate that the RLs were estimated values.

In cases where a sample was analyzed for both VOCs (Method 8260C) and SVOCs (Method 8270D), the results for 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, hexachlorobutadiene, and naphthalene were to be reported from the SVOCs analysis, in favor of the lower detection limits.

In cases where a sample was analyzed for both VOCs (Method 8260C) and PAHs (Method 8270-SIM), the result for naphthalene was to be reported from the PAHs analysis, in favor of the lower detection limit.

1.11 Field Duplicates

Three sets of field duplicates were submitted for VOCss analyses. VOCs were not detected at or above RLs in these sample; the field precision met the project advisory criteria.

1.12 Overall Assessment of VOCs Data Usability

VOCs data are of known quality and acceptable for use, as qualified.

2. SVOCs and PAHs by GC/MS and GC/MS - SIM (EPA Method SW8270D and SIM)

2.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days and water within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

2.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

2.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. All ICALs met the requirements.

An ICV standard (second source standard) was analyzed to verify the calibration curve. %D values were either within ±30%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

2.4 Calibration Verification (CCV)

The analytical method requires that (1) continuing calibration verifications be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D be within ±20%. The CCVs met the requirements, except for the following:

SDG	CCV ID	Compound	%D	Bias	Affected Sample	Data Qualifier
401108	GCMS6 1/10/14, 23:53	Indeno(1,2,3-cd)perylene	24.3%	Low	UST29-S37-6-010914	**UJ**

2.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

2.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits or at levels that had no adverse effects on data quality (*e.g.,* biased-high recovery for compounds that were not detected in samples). In some cases surrogate spike %R values were not applicable for data evaluation because the samples contained high levels of target PAHs and required dilution analysis; no data were qualified in these cases.

2.7 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency (≥5% of samples analyzed). All %R and RPD values met the project control criteria, except for the following:

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Data Qualifier
312363	UST29-S01-3-122313	Naphthalene	99%	78%	44-129%	24%	J
		Acenaphthene	106%	78%	51-123%	30%	
		Fluorene	109%	82%	37-137%	28%	
		Phenanthrene	150%	1%	45-124%	197%	
		Anthracene	108%	61%	32-124%	56%	
		Fluoranthene	127%	0%	50-125%	217%	
		Pyrene	133%	0%	41-135%	273%	
		Benz(a)anthracene	106%	33%	23-144%	105%	
		Chrysene	103%	21%	45-122%	132%	
		Benzo(b)fluoranthene	122%	45%	31-144%	92%	
		Benzo(k)fluoranthene	94%	64%	45-130%	38%	
		Benzo(a)pyrene	113%	47%	39-128%	82%	
		Indeno(1,2,3-cd)pyrene	111%	73%	28-146%	41%	
		Benzo(g,h,i)perylene	103%	70%	37-133%	38%	
401024	UST29-B08-15-010214	Phenanthrene	96%	153%	45-124%	46%	J
		Fluoranthene	76%	134%	50-125%	55%	
		Pyrene	73%	129%	41-135%	55%	
		Benz(a)anthracene	79%	104%	23-144%	27%	
		Chrysene	83%	121%	45-122%	37%	
401054	BAST-S53-5-010714	Benzo(k)fluoranthene	75%	60%	45-130%	22%	J
401212	BV-B01-8-011714	Phenanthrene	70%	53%	45-124%	28%	J

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Data Qualifier
401292	NRU-S06-12-012314	Phenanthrene	91%	185%	45-124%	68%	J
		Anthracene	86%	112%	32-124%	26%	
		Fluoranthene	117%	302%	50-125%	88%	
		Pyrene	119%	344%	41-135%	97%	
		Benz(a)anthracene	87%	192%	23-144%	75%	
		Chrysene	89%	218%	45-122%	84%	
		Benzo(b)fluoranthene	96%	241%	31-144%	86%	
		Benzo(k)fluoranthene	87%	159%	45-130%	59%	
		Benzo(a)pyrene	95%	237%	39-128%	86%	
		Indeno(1,2,3-cd)pyrene	108%	198%	28-146%	59%	
		Benzo(g,h,i)perylene	95%	177%	37-133%	60%	
401293	NRU-S05-8-012414	Fluoranthene	-	-	-	51%	J
		Pyrene				55%	
		Benz(a)anthracene				24%	
		Chrysene				26%	
		Benzo(b)fluoranthene				73%	
		Benzo(k)fluoranthene				51%	
		Benzo(a)pyrene				69%	
		Indeno(1,2,3-cd)pyrene				45%	
		Dibenz(a,h)anthracene				36%	
		Benzo(g,h,i)perylene				54%	
401294	NRU-SP01-1-012414	2,4-Dinitrophenol	29%	37%	50-150%	24%	UJ
		4,6-Dinitro-2-methylphenol	32%	42%		27%	
		4-Nitrophenol	9%	136%		175%	
		Hexachlorocyclopentadiene	12%	21%		55%	

Note: RPD control criteria = ±20%

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits, except for the following:

SDG#	LCS ID	Analyte	LCS %R	LCSD %R	Control Limit	RPD	Affected Sample	Data Qualifier
401212	LCS/LCSD	Indeno(1,2,3-cd)pyrene	77%	60%	62-119%	25%	BV-S01-6-011714 BV-S04-6-011714	UJ

Note: RPD control criteria = ±20%

2.9 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria, except for the following:

Sample ID	Internal Standard	Sample Response Area	CCV Response Area	Affected Compound	Data Qualifier
UST70-S03-4-112113	Phenanthrene-d_{10} Chrysene-d_{12} Perylene-d_{12}	227614 223106 174616	460769 494494 421270	Benzo(b)fluoranthene Chrysene Fluoranthene Pyrene	**J**
BUST-504-FD	Perylene-d_{12}	279707	126697	Benzo(k)fluoranthene Dibenzo(a,h)anthracene Indeno(1,2,3-cd)pyrene	**J**
UST29-S23-12-010714 (Diluted Analysis)	Chrysene-d_{12}	202737	406511	Benz(a)anthracene Chrysene	**J**

2.10 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations. In some cases samples required dilution for definitive quantitation of target compounds; the RLs were raised accordingly, and the compounds reported from the dilution analysis. The remaining (un-diluted) target compounds were to be reported from the initial analysis for the lower detection limits.

2.11 Field Duplicates

Fourteen sets of field duplicates were submitted for PAHs analyses. Field duplicate results for detected target compounds, RPD (or concentration difference) values, and data qualification were presented in **Appendix A**.

2.12 Overall Assessment of PAHs Data Usability

PAHs data are of known quality and acceptable for use, as qualified.

3. PCB Aroclors (EPA Method SW8082A)

3.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days of collection and extracts analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

3.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using the mixture of Aroclor 1016 and 1260, (2) a single-point calibration be performed for the other five Aroclors to establish calibration factors (CFs) and for Aroclor pattern recognition, (3) at least 3 peaks (preferably 5 peaks) must be chosen for each Aroclor for characterization, (4) the %RSD values of Aroclor 1016 and 1260 CFs must be ≤20%, and (5) if dual column analysis is chosen, both columns should meet the requirements. All ICALs met the requirements.

3.3 Calibration Verification

CCV analyses should be performed for each 12-hour analysis sequence prior to sample analyses, and the %D be within ±20%.

Calibration verifications were performed at the required frequency. All %D values either met the control criteria or biased high for target compounds that were not detected in the associated samples.

3.4 Method Blanks

Method blanks were prepared and analyzed as required. PCB Aroclors were not detected at or above the MDLs in the method blanks.

3.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

3.6 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on project samples or batch QC samples at the required frequency. All %R and RPD values were within the laboratory control limits.

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits.

3.8 Method Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations and achieved the project target quantitation limits.

3.9 Field Duplicates

Field duplicates were not submitted for PCB Aroclors analysis in these SDGs.

3.10 Overall Assessment of PCB Aroclors Data Usability

PCB Aroclor data are of known quality and acceptable for use.

4. TPH-Gasoline by GC/FID (Method NWTPH-Gx)

4.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

All samples in SDG: 401294 were not preserved in methanol upon collection. The analyses were performed within a relatively short period of time (3 days) of collection. TPH-Gasoline results for these samples, rather than being rejected, were qualified (UJ) for non-detects and (J) for detects as estimated.

Soil samples should be preserved in methanol at the time of collection. Soil samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

4.2 Initial Calibration (ICAL)

The method criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be ≥0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be ≥0.990, and (4) the back-calculated %D value for each calibration standard be within ±15%. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

4.3 Calibration Verification

Continuing calibration verification (CCV) analyses were performed at the required frequency for all analytical sequences as required by the method. The %D values for all CCVs met the method criterion (±20%).

4.4 Method Blanks

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

4.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits, or outside the control limits due to matrix interference, or diluted below quantitation limits due to high levels of target or non-target compounds in the samples. No data qualifying actions were taken in these cases.

4.6 Matrix Spike and Matrix Spike Duplicate

MS/MSD analyses were not performed for TPH-Gasoline analyses; instead, duplicate and LCS analyses in combination were performed.

4.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the laboratory control limits.

4.8 Laboratory Duplicate Analysis

Duplicate analyses were performed on project and batch QC samples at the proper frequency. All RPD and concentration difference values met the laboratory control criteria.

4.9 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

4.10 Field Duplicates

Three sets of field duplicates were submitted for PAHs analyses. Field duplicate results for detected target compounds, RPD (or concentration difference) values, and data qualification were presented in **Appendix A**.

4.11 Overall Assessment of TPH-Gasoline Data Usability

TPH-Gasoline data are of known quality and acceptable for use, as qualified.

5. TPH-Diesel & Motor Oil by GC/FID (Method NWTPH-Dx)

5.1 Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the recommended holding times.

5.2 Initial Calibration

The method criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be ≥0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be ≥0.990, and (4) the back-calculated %D value for each calibration standard be within ±15%. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

5.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift (%D) value be within ±20% of the true value.

Calibration verification was performed at required frequency. The %D values were either within the ±20% criterion or at levels that had no adverse effects on data quality (e.g., high-bias %D value where the target compound was not detected in associated sample).

5.4 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

5.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits, or outside the control limits due to matrix interference, or diluted below quantitation limits due to high levels of target or non-target compounds in the samples. No data qualifying actions were taken in these cases.

5.6 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency. The %R and RPD values met the laboratory control criteria.

5.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required. All %R values met the project control limits.

5.8 Target Compound Identification

Selected sample extracts were cleaned up with acid and silica gel treatment to minimize the biogenic interference with target compound identification, as required by the project. The laboratory reported results as diesel #2 (C10 - C25) and motor oil (C25 - C36), as required by the method. In some cases where sample chromatographic patterns resembled Bunker C fuel, the results were quantitated and reported as Bunker C fuel accordingly. No anomalies were identified relative to target compound identification.

5.9 Reporting Limits and Target Compound Quantitation

The reported RLs were supported with adequate ICAL concentrations.

The Bunker C fuel concentration in sample BUST-S67-3 exceeded instrument calibration range; the result was qualified (J) as estimated.

5.10 Field Duplicates

Fourteen sets of field duplicates were submitted for TPH-Diesel and TPH-Motor Oil analyses. Field duplicate results, RPD (or concentration difference) values, and data qualification for detected TPH-Diesel or Motor Oil were presented in **Appendix A**.

5.11 Overall Assessment of TPH-Diesel and Motor Oil Data Usability

TPH-Diesel and TPH-Motor Oil data are of known quality and acceptable for use, as qualified.

6. Total Metals by ICP/MS and CVAFS (EPA Methods 200.8 and 1631E)

6.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Soil and water samples should be analyzed within 180 days for metals and 28 days for mercury. Samples were analyzed within the required holding times.

6.2 ICP/MS Tuning

Instrument tuning was performed at the required frequency. The stability check (%RSD <5%), mass calibration (mass difference <0.1 AMU), and resolution check (peak width <1.0 AMU at 5% peak height) met the NFG and method criteria.

6.3 Initial Calibration (ICAL)

The ICP/MS method requires that (1) a blank and one calibration standard be used in establishing the analytical curve, and (2) the average of replicate exposures be reported for all standards, QC, and sample analyses.

The CVAFS method require that (1) a blank and five calibration standards be employed to establish the analytical curve, (2) the linearity of the calibration curve should meet the criteria of correlation coefficient ≥ 0.995 for linear regression, and (3) the %RSD <15% if average response factor approach is employed.

All ICALs met the method requirements.

6.4 Calibration Verification (ICV and CCV)

Initial calibration verifications (ICVs) and continuing calibration verifications (CCVs) for ICP/MS and GFAA and ongoing precision recovery (OPR) were analyzed at the required frequency. The %R values either met the control criteria (90 – 110% for metals, 76 – 123% for mercury) or the exceedance had no adverse effects on data usability (e.g., high-bias %D value where the target compound was not detected in associated sample), except for the following:

SDG	CCV ID	Analyte	%R	Affected Sample	Data Qualifier
311391	11/20/13, 15:11	Zinc	111%	BUST-S46-4 BUST-S46A-8 BUST-S47-12 BUST-S44-8	J

SDG	CCV ID	Analyte	%R	Affected Sample	Data Qualifier
				BUST-S45-12 BUST-S40-4 BUST-S41-8 BUST-S42-12 BUST-B29-12 BUST-B30-12 BUST-B31-12 BUST-B32-12	
312058	12/5/2013, 12:02	Lead	112.7%	BUST-S60-6	J
401212	1/20/14, 13:26 1/20/14, 13:42	Zinc	112.5% 111.3%	BV-B02-8-011714	J

6.5 Blanks

Calibration Blanks: Initial calibration blanks (ICBs) and continuing calibration blanks (CCBs) were not analyzed after calibration verification standards. Target analytes were either not detected at or above the RLs in the ICBs and CCBs, or sample results affected by the ICB/CCB detections were qualified as results of detections in preparation blanks.

Preparation Blanks: Preparation blanks were prepared and analyzed as required. Target analytes were either not detected at or above the RLs in the preparation blanks, or sample results were greater than 10X the detection in the associated blank.

6.6 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the project control limits, or the exceedance had no adverse effects on data usability (e.g., high-bias %R value where the target compound was not detected in associated sample).

6.7 Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the adequate frequency (>5% of field sample). The %R and RPD values either met the laboratory control limits or the outliers were not applicable for matrix effect evaluation (e.g. sample concentration >4x spiking level), except for the following:

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Affected Sample	Data Qualifier
312336	BUST-S68-3	Copper	41%	39%	57-120%	5%	BUST-S68-3	J

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Affected Sample	Data Qualifier
401294	NRU-SP04-2-012414	Zinc Arsenic	134% 113%	91% 90%	55-129% 70-118%	38% 23%	NRU-SP01-1-012414 NRU-SP01-2-012414 NRU-SP01-3-012414 NRU-SP02-1-012414 NRU-SP02-2-012414 NRU-SP02-3-012414 NRU-SP03-1-012414 NRU-SP03-2-012414 NRU-SP03-3-012414 NRU-SP04-1-012414 NRU-SP04-2-012414 NRU-SP04-3-012414 NRU-SP05-1-012414 NRU-SP05-2-012414 NRU-SP05-3-012414 NRU-SP06-1-012414 NRU-SP06-2-012414 NRU-SP06-3-012414	**J**

Note: RPD control criteria = ±20%

6.8 Internal Standards

At least three internal standards were added to all field and QC samples for ICP/MS analyses. All percent relative intensity values were within the method criteria (60 - 125%).

6.9 Method Reporting Limits and Analyte Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

6.10 Field Duplicates

Two sets of field duplicates were submitted for metals analyses. Field duplicate results, RPD (or concentration difference) values, and data qualification for detected TPH-Diesel or Motor Oil were presented in **Appendix A**.

6.11 Overall Assessment of Metals Data Usability

Metal data are of known quality and acceptable for use, as qualified.

7. Formaldehyde by HPLC/UV (EPA Method 8315A)

7.1 Sample Management and Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Soil samples should be derivatized and extracted within seven days of sample collection. All derivatized sample extracts should be analyzed within three days after preparation. The sample was prepared and analyzed within the required holding times.

7.2 Instrument Calibration

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.990. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

7.3 Calibration Verification

CCV analyses were performed at the required frequency for all analytical sequences as required by the method. The %D values for all CCVs met the method criterion (±20%).

7.4 Method Blanks

A method blank was prepared and analyzed in each preparation batch as required. Formaldehyde was not detected at or above the RL in method blanks.

7.5 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency. The %R and RPD values met the laboratory control criteria.

7.6 Laboratory Control Samples (LCS)

LCS analyses were performed as required by the methods. The %R values were within the laboratory control limits.

7.7 Field Duplicates

Field duplicates were not submitted for formaldehyde analysis in these SDGs.

7.8 Overall Assessment of Formaldehyde Data Usability

Formaldehyde data are of known quality and acceptable for use, as qualified.

8. Extractable Petroleum Hydrocarbon (EPH) by GC/FID (Method NWTPH-EPH)

8.1 Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the recommended holding times.

8.2 Initial Calibration

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.990, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.990. Initial calibration met the criteria for all target compounds.

Initial calibration information was not submitted for review in these SDGs.

8.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift (%D) value be within ±20% of the true value.

Calibration verification was performed at required frequency. The %D values were either within the ±30% criterion or at levels that had no adverse effects on data quality (e.g., high-bias %D value where the target compound was not detected in associated sample).

8.4 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks, except for the following:

SDG	Method Blank ID	Compound	MB Conc.	Affected Sample	Original Result	Qualified Result	Unit
312058	6129	Aliphatic C8-C10	0.499 J	BUST-B39-12 BUST-S58-12	1.04 J 1.18 J	**5.63 U** **5.64 U**	**mg/kg**
312058	6129	Aromatic C8-C10	1.0 J	BUST-B39-12 BUST-S58-12	2.65 J 3.76 J	**5.63 U** **5.64 U**	**mg/kg**

8.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits, or outside the control limits due to matrix interference, or diluted below quantitation limits due to high levels of target or non-target compounds in the samples. No data qualifying actions were taken in these cases.

8.6 Matrix Spike (MS)

MS analyses were performed on project and batch QC samples at the proper frequency. The %R values met the laboratory control criteria.

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

LCS and LCSD analyses were performed as required. All %R and RPD values met the project control limits, except for the following:

SDG#	LCS ID	Analyte	LCS %R	LCSD %R	Control Limit	RPD	Affected Sample	Data Qualifier
311258	5838	Aromatic C8-C10	-	67.4%	70-130%	5.25%	BUST-S16-8-111213 BUST-S17-8-111213	**J**
312058	6129	Aromatic C8-C10 Aromatic C10-C12	55.5 33.4	57.5 19.6	70-130%	-	BUST-B39-12 BUST-S58-12	**J**
401318	6467	Aliphatic C8-C10	60.5%	52.1%	70-130%	-	NRU-B5-16-012714	**J**

Note: RPD criteria = ±20%.

8.8 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were adjusted with sample volumes and moisture contents.

8.9 Field Duplicates

Field duplicates were not submitted for EPH analysis in these SDGs.

8.10 Overall Assessment of EPH Data Usability

EPH data are acceptable for use as qualified, based on the information submitted by the laboratory.

9. Volatile Petroleum Hydrocarbon by GC/FID (Method NWTPH-VPH)

9.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be preserved with methanol at the time of collection, and analyzed within 14 days of collection. All samples were analyzed within the required holding times.

9.2 Initial Calibration (ICAL)

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20%, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.990, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.990. Initial calibration met the criteria for all target compounds.

Initial calibration information was not submitted for review in these SDGs.

9.3 Calibration Verification

Continuing calibration verification (CCV) analyses were performed at the required frequency for all analytical sequences as required by the method. The %D values for all CCVs met the method criterion (% value within ±20% for the carbon range components and ±15% for individual target compounds).

9.4 Method Blanks

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

9.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits, or outside the control limits due to matrix interference, or diluted below quantitation limits due to high levels of target or non-target compounds in the samples. No data qualifying actions were taken in these cases.

9.6 Matrix Spike (MS)

MS analyses were performed on project or batch QC samples at the required frequency. The %R values were within the laboratory control limits, except for the following:

SDG#	Parent Sample ID	Compound	MS %R	Control Limit	Affected Sample	Data Qualifier
401318	NRU-B5-16-012714	Aliphatics C10-C12 Aromatics C10-C12	-18.5% 43.8%	57-120%	NRU-B5-16-012714	J

9.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the laboratory control limits.

9.8 Laboratory Duplicate Analysis

Duplicate analyses were performed on project and batch QC samples at the proper frequency. All RPD and concentration difference values met the laboratory control criteria.

9.9 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were consistent with method-recommended practical quantitation limits, and were adjusted with sample volumes and moisture contents.

9.10 Field Duplicates

Field duplicates were not submitted for VPH analysis in these SDGs.

9.11 Overall Assessment of VPH Data Usability

VPH data are acceptable for use as qualified, based on the information submitted by the laboratory.

10. BTEX by GC/PID (EPA Method SW8021B)

10.1 Sample Management and Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be preserved in methanol at the time of collection. Soil and water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

10.2 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the percent relative standard deviation (%RSD) of response factors (RFs) be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. The ICAL met the requirements.

An initial calibration verification (ICV) standard (second source standard) was analyzed to verify the calibration curve. Percent difference (%D) values were either within ±20%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

10.3 Calibration Verification (CCV)

The CCV criteria requires that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D be within ±20. Calibration verifications met the requirements.

10.4 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs.

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

LCS and LCSD were prepared and analyzed as required by the method. The %R and RPD values met the project control limits.

10.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits.

10.7 Matrix Spike (MS)

MS analyses were performed on project and batch QC samples at the proper frequency. All %R values were within the project control limits.

10.8 Reporting Limit and Target Compound Quantitation

RLs were supported with adequate initial calibration concentrations.

10.9 Field Duplicates

Field duplicates were not submitted for BTEX analysis in these SDGs.

10.10 Overall Assessment of BTEX Data Usability

BTEX data are of known quality and acceptable for use.

SUMMARY

Table I. Data Affected by QC Anomalies:

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
311391-07 311391-08 311391-09 311391-11 311391-12 311391-13 311391-14 311391-15 311391-16 311391-17 311391-18 311391-19	BUST-S46-4 BUST-S46A-8 BUST-S47-12 BUST-S44-8 BUST-S45-12 BUST-S40-4 BUST-S41-8 BUST-S42-12 BUST-B29-12 BUST-B30-12 BUST-B31-12 BUST-B32-12	Zinc	**J**	CCV %R >UCL
312058-06	BUST-S60-6	Lead	**J**	CCV %R >UCL
401212-05	BV-B02-8-011714	Zinc	**J**	CCV %R >UCL
311391-10	BUST-S43-4	Zinc	**J**	CCV %R >UCL; Field duplicate RPD >50%
311391-20	BUST-B503-12	Zinc	**J**	CCV %R >UCL; Field duplicate RPD >50%
401294-01 401294-02 401294-03 401294-04 401294-05 401294-06 401294-07 401294-08 401294-09 401294-10 401294-11 401294-12 401294-13 401294-14 401294-15 401294-16 401294-17 401294-18	NRU-SP01-1-012414 NRU-SP01-2-012414 NRU-SP01-3-012414 NRU-SP02-1-012414 NRU-SP02-2-012414 NRU-SP02-3-012414 NRU-SP03-1-012414 NRU-SP03-2-012414 NRU-SP03-3-012414 NRU-SP04-1-012414 NRU-SP04-2-012414 NRU-SP04-3-012414 NRU-SP05-1-012414 NRU-SP05-2-012414 NRU-SP05-3-012414 NRU-SP06-1-012414 NRU-SP06-2-012414 NRU-SP06-3-012414	Zinc	**J**	MS %R >UCL; MS/MSD RPD >20%
312336-01	BUST-S68-3	Copper	**J**	MS/MSD %R <LCL

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
401294-01 401294-02 401294-03 401294-04 401294-05 401294-06 401294-07 401294-08 401294-09 401294-10 401294-11 401294-12 401294-13 401294-14 401294-15 401294-16 401294-17 401294-18	NRU-SP01-1-012414 NRU-SP01-2-012414 NRU-SP01-3-012414 NRU-SP02-1-012414 NRU-SP02-2-012414 NRU-SP02-3-012414 NRU-SP03-1-012414 NRU-SP03-2-012414 NRU-SP03-3-012414 NRU-SP04-1-012414 NRU-SP04-2-012414 NRU-SP04-3-012414 NRU-SP05-1-012414 NRU-SP05-2-012414 NRU-SP05-3-012414 NRU-SP06-1-012414 NRU-SP06-2-012414 NRU-SP06-3-012414	Arsenic	**J**	MS/MSD RPD >20%
311391-10 311391-20	BUST-S43-4 BUST-B503-12	Arsenic Lead	**J/UJ**	Field duplicate difference >2xRL
312363-01 312363-08	UST29-S01-3-122313 UST29-500-122313	Copper Lead Zinc	**J**	Field duplicate RPD >50%
311391-10 311391-20	BUST-S43-4 BUST-B503-12	Copper Nickel	**J**	Field duplicate RPD >50%
NRU-B5-16-012714	NRU-B5-16-012714	Aliphatics C8-C10 (EPH)	**J**	LCS/LCSD %R <LCL
311258-01 311258-02	BUST-S16-8-111213 BUST-S17-8-111213	Aromatics C8-C10 (EPH)	**UJ**	LCSD %R <LCL
NRU-B5-16-012714	NRU-B5-16-012714	Aliphatics C10-C12 (VPH)	**J**	MS %R <LCL
NRU-B5-16-012714	NRU-B5-16-012714	Aromatics C10-C12 (VPH)	**J**	MS %R <LCL
312200-06	BUST-S67-3	Bunker C	**J**	Exceeded calibration range
401069-18 401069-19	UST29-B15-17-010814 UST29-B502	Gasoline Range TPH	**J/UJ**	Field duplicate difference >2xRL
401294-01 401294-02 401294-03 401294-04 401294-05 401294-06 401294-07	NRU-SP01-1-012414 NRU-SP01-2-012414 NRU-SP01-3-012414 NRU-SP02-1-012414 NRU-SP02-2-012414 NRU-SP02-3-012414 NRU-SP03-1-012414	Gasoline Range TPH	**J/UJ**	Sample was not preserved in methanol.

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
401294-08 401294-09 401294-10 401294-11 401294-12 401294-13 401294-14 401294-15 401294-16 401294-17 401294-18	NRU-SP03-2-012414 NRU-SP03-3-012414 NRU-SP04-1-012414 NRU-SP04-2-012414 NRU-SP04-3-012414 NRU-SP05-1-012414 NRU-SP05-2-012414 NRU-SP05-3-012414 NRU-SP06-1-012414 NRU-SP06-2-012414 NRU-SP06-3-012414	Gasoline Range TPH	**J/UJ**	Sample was not preserved in methanol.
401294-01 401294-02 401294-03 401294-04 401294-05 401294-06 401294-07 401294-08 401294-09 401294-10 401294-11 401294-12 401294-13 401294-14 401294-15 401294-15 401294-16 401294-17 401294-18	NRU-SP01-1-012414 NRU-SP01-2-012414 NRU-SP01-3-012414 NRU-SP02-1-012414 NRU-SP02-2-012414 NRU-SP02-3-012414 NRU-SP03-1-012414 NRU-SP03-2-012414 NRU-SP03-3-012414 NRU-SP04-1-012414 NRU-SP04-2-012414 NRU-SP04-3-012414 NRU-SP05-1-012414 NRU-SP05-2-012414 NRU-SP05-3-012414 NRU-SP05-3-012414 NRU-SP06-1-012414 NRU-SP06-2-012414 NRU-SP06-3-012414	All VOCs	**J/UJ**	Sample not preserved in MeOH
401108-01 401108-02 401108-03 401108-04 401108-05	UST29-S37-6-010914 UST29-S38-6-010914 UST29-S39-9-010914 UST29-S40-9-010914 UST29-S41-6-011014	Bromomethane	**UJ**	CCV %D <LCL
312363-02 312363-03 312363-04 312363-05 312363-06 312363-07 312363-08	UST29-S02-3-122313 UST29-S03-3-122313 UST29-S04-3-122313 UST29-S05-3-122313 UST29-S06-3-122313 UST29-S07-3-122313 UST29-500-122313	Methylene chloride	**U**	Detected in MB
312363-01	UST29-S01-3-122313	Methylene chloride	**UJ**	Detected in MB; MS/MSD %R <LCL

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
401069-01	UST29-S22-9-010714	Methylene chloride	**UJ**	LCS %R <LCL
401069-02	UST29-B13-16-010714			
401069-03	UST29-S23-12-010714			
401069-04	UST29-S24-3-010814			
401069-06	UST29-S26-9-010814			
401069-07	UST29-S27-6-010814			
401069-08	UST29-S28-3-010814			
401069-09	UST29-S29-9-010814			
401069-10	UST29-S30-6-010814			
401069-11	UST29-S31-3-010814			
401069-12	UST29-S32-9-010814			
401069-13	UST29-S33-6-010814			
401069-14	UST29-S34-3-010814			
401069-15	UST29-B14-17-010814			
401069-16	UST29-S35-6-010814			
401069-17	UST29-S36-3-010814			
401069-18	UST29-B15-17-010814			
401069-19	UST29-B502			
401069-20	UST29-B16-17-010814			
312433-01	UST29-S01-3-122313	1,4-Dioxane Vinyl acetate	**UJ**	Based on library search; RL estimated
312433-02	UST29-S02-3-122313			
312433-03	UST29-S03-3-122313			
312433-04	UST29-S04-3-122313			
312433-05	UST29-S05-3-122313			
401024-01	UST29-S06-3-122313			
401024-02	UST29-S07-3-122313			
401024-03	UST29-500-122313			
401024-04	UST29-B01-5-122313			
401024-05	UST29-B02-5-122313			
401024-06	UST29-B03-5-122313			
401024-07	UST29-B04-5-122313			
401024-08	UST29-B05-5-122313			
401024-09	UST29-B06-5-122313			
401024-10	UST29-501-122313			
401024-11	UST29-S08-8-123013			
401024-12	UST29-S09-8-123013			
401024-13	UST29-S10-8-123013			
401024-14	UST29-S11-8-123013			
312363-01	UST29-B07-18-123013			
312363-02	UST29-B08-15-010214			
312363-03	UST29-S12-3-010314			
312363-04	UST29-S13-6-010314			
312363-05	UST29-S14-9-010314			
312363-06	UST29-S15-3-010314			
312363-07	UST29-S16-6-010314			
312363-08	UST29-S17-9-010314			
312363-09	UST29-S18-3-010314			
312363-10	UST29-S19-6-010314			

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
312363-11 312363-12 312363-13 312363-14 312363-15 401057-01 401069-01 401069-02 401069-03 401069-04 401069-05 401069-06 401069-07 401069-08 401069-09 401069-10 401069-11 401069-12 401069-13 401069-14 401069-15 401069-16 401069-17 401069-18 401069-19 401069-20 401108-01 401108-02 401108-03 401108-04 401108-05	UST29-S20-9-010314 UST29-S21-3-010314 UST29-B09-15-010314 UST29-S24-3-010814 UST29-S25-6-010814 UST29-S26-9-010814 UST29-S27-6-010814 UST29-S28-3-010814 UST29-S29-9-010814 UST29-S30-6-010814 UST29-B10-15-010314 UST29-B11-15-010314 UST29-B12-17-010614 UST29-S22-9-010714 UST29-B13-16-010714 UST29-S23-12-010714 UST29-S31-3-010814 UST29-S32-9-010814 UST29-S33-6-010814 UST29-S34-3-010814 UST29-B14-17-010814 UST29-S35-6-010814 UST29-S36-3-010814 UST29-B15-17-010814 UST29-B502 UST29-B16-17-010814 UST29-S37-6-010914 UST29-S38-6-010914 UST29-S39-9-010914 UST29-S40-9-010914 UST29-S41-6-011014	1,4-Dioxane Vinyl acetate	**UJ**	Based on library search; RL estimated
401294-01	NRU-SP01-1-012414	2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol 4-Nitrophenol Hexachlorocyclopentadiene	**UJ**	MS/MSD %R <LCL
401108-01	UST29-S37-6-010914	Indeno(1,2,3-cd)pyrene	**UJ**	CCV %D <LCL
311258-01	BUST-S16-8-111213	Phenanthrene	**J**	Field duplicate difference >2xRL
311258-06	BUST-501-111213	Fluorene	**J**	Field duplicate difference >2xRL
311428-06 311428-23	UST70-S16-8-112113 UST70-501	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Fluoranthene Indeno(1,2,3-cd)pyrene Pyrene	**J/UJ**	Field duplicate difference >2xRL

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
311338-10 311338-11	BUST-B23-6-111513 BUST-502-111513	Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	**J/UJ**	Field duplicate difference >2xRL
312200-01	BUST-S62-3	Indeno(1,2,3-cd)pyrene	**J**	Field duplicate difference >2xRL
312200-01 312200-07	BUST-S62-3 BUST-504-FD	Naphthalene	**J**	Field duplicate difference >2xRL
312363-08	UST29-500-122313	Anthracene Benzo(g,h,i)perylene Benzo(k)fluoranthene Dibenzo(a,h)anthracene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene	**UJ**	Field duplicate difference >2xRL
312363-14 312363-15	UST29-B06-5-122313 UST29-501-122313	Fluoranthene Naphthalene	**J**	Field duplicate difference >2xRL
401069-18 401069-19	UST29-B15-17-010814 UST29-B502	Naphthalene Phenanthrene	**J**	Field duplicate difference >2xRL
401293-01 401293-09	NRU-S04-4-012414 NRU-500-012414	Acenaphthene Fluorene Naphthalene	**UJ**	Field duplicate difference >2xRL
312200-01	BUST-S62-3	Acenaphthene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene	**J**	Field duplicate RPD >50%

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
312200-07	BUST-504-FD	Acenaphthene Anthracene Benz(a)anthracene Chrysene Fluoranthene Phenanthrene Pyrene	**J**	Field duplicate RPD >50%
312363-01	UST29-S01-3-122313	Dibenzo(a,h)anthracene	**J**	Field duplicate RPD >50%
312363-08	UST29-500-122313	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Chrysene Fluoranthene Phenanthrene Pyrene	**J**	Field duplicate RPD >50%
401292-13 401292-15	NRU-S20-12-012414 NRU-501-012414	Fluoranthene Pyrene	**J**	Field duplicate RPD >50%
401293-01 401293-09	NRU-S04-4-012414 NRU-500-012414	Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Chrysene Fluoranthene Phenanthrene Pyrene	**J**	Field duplicate RPD >50%
311258-01	BUST-S16-8-111213	Chrysene Fluorene	**J**	Field duplicate RPD >50%
311258-06	BUST-501-111213	Chrysene Phenanthrene	**J**	Field duplicate RPD >50%
311428-13	UST70-S03-4-112113	Benzo(b)fluoranthene Chrysene Fluoranthene Pyrene	**J**	Internal standard recovery high
312200-07	BUST-504-FD	Benzo(k)fluoranthene Dibenzo(a,h)anthracene	**J**	Internal standard recovery high
312200-07	BUST-504-FD	Indeno(1,2,3-cd)pyrene	**J**	Internal standard recovery high; Field duplicate Difference >2xRL
401069-03DL	UST29-S23-12-010714	Benz(a)anthracene Chrysene	**J**	Internal standard recovery low
401212-01 401212-06	BV-S01-6-011714 BV-S04-6-011714	Indeno(1,2,3-cd)pyrene	**J**	LCS/LCSD RPD >20%
312363-01	UST29-S01-3-122313	Phenanthrene	**J**	MS/MSD %R & RPD outside criteria; Field duplicate RPD >50%
312363-01	UST29-S01-3-122313	Acenaphthene	**J**	MS/MSD RPD >20%
401024-01	UST29-B08-15-010214	Benz(a)anthracene Chrysene Pyrene	**J**	MS/MSD RPD >20%

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
401054-03	BAST-S53-5-010714	Benzo(k)fluoranthene	**J**	MS/MSD RPD >20%
401212-02	BV-B01-8-011714	Phenanthrene	**J**	MS/MSD RPD >20%
401293-02	NRU-S05-8-012414	Benz(a)anthracene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Indeno(1,2,3-cd)pyrene Pyrene	**J**	MS/MSD RPD >20%
312363-01	UST29-S01-3-122313	Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene	**J**	MS/MSD RPD >20%; Field duplicate RPD >50%
312363-01	UST29-S01-3-122313	Benzo(b)fluoranthene Chrysene Fluoranthene Pyrene	**J**	MSD %R & MS/MSD RPD outside criteria; Field duplicate RPD >50%
401292-01	NRU-S06-12-012314	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Fluoranthene Indeno(1,2,3-cd)pyrene Phenanthrene Pyrene	**J**	MSD %R >UCL; MS/MSD RPD >20%
401024-01	UST29-B08-15-010214	Fluoranthene Phenanthrene	**J**	MSD %R>UCL; MS/MSD RPD >20%
401293-02	NRU-S05-8-012414	Benzo(a)pyrene	**J**	MSD %R>UCL; MS/MSD RPD >20%

Table II. Data Affected by Detections in Method Blank

SDG#	Sample ID	Compound	Original Result	Adjusted Result	Unit	Report Section
312058	BUST-B39-12 BUST-S58-12	Aliphatic C8-C10	1.04 J 1.18 J	**5.63 U** **5.64 U**	mg/kg	**8.4**
312058	BUST-B39-12 BUST-S58-12	Aromatic C8-C10	2.65 J 3.76 J	**5.63 U** **5.64 U**	mg/kg	**8.4**

Table III. Data Qualifiers are defined as follows:

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

Approved By: Mingta Lin Date: ***6/23/2014***

Mingta Lin, Senior Project Chemist

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Appendix A

Field duplicate RPD is indicative of field and laboratory precision and sample homogeneity in combination. The CLP National Functional Guidelines or *Work Plan* do not specify criteria for field duplicate evaluation. An advisory criterion of 35% was applied to evaluating the RPD values of field duplicate results that are ≥5xRL. For results that are <5xRL, an advisory criterion of ±2RL was applied to evaluating the concentration differences. The RPD (or concentration difference as applicable) values and data qualification for detected compounds in field duplicates are presented as follows:

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
			BAST-B052-7	BAST- 505-FD			
Mercury	mg/kg	0.1	ND	ND			
Antimony	mg/kg	1	ND	ND			
Arsenic	mg/kg	1	2.99	3.44	0%	0.45	
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	6.32	6.11		0.21	**J/J**
Lead	mg/kg	1	2.22	2.39		0.17	
Nickel	mg/kg	1	12	12.9	7%		
Zinc	mg/kg	1	11.2	11.8	5%		
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Acenaphthene	mg/kg	0.01	0.027	0.025		0.002	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	ND	ND		0	
Benzo(a)pyrene	mg/kg	0.01	ND	ND		0	
Benzo(b)fluoranthene	mg/kg	0.01	ND	ND		0	
Benzo(g,h,i)perylene	mg/kg	0.01	ND	ND		0	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	ND	ND		0	
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	ND	ND		0	
Fluorene	mg/kg	0.01	ND	ND		0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	ND		0	
Naphthalene	mg/kg	0.01	ND	ND		0	
Phenanthrene	mg/kg	0.01	ND	ND		0	
Pyrene	mg/kg	0.01	ND	ND		0	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
			BUST-S16-8-111213	**BUST-501-111213**			
Mercury	mg/kg	0.1	ND	ND			
Antimony	mg/kg	1	ND	ND			
Arsenic	mg/kg	1	3.62	4.37		0.75	
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	8.35	9.96	18%		
Lead	mg/kg	1	2.26	3.42		1.16	
Nickel	mg/kg	1	16.3	17.6	8%		
Zinc	mg/kg	1	18.5	22.4	19%		
Bunker C	mg/kg	50	8400	8600	2%		
Acenaphthene	mg/kg	0.1	0.76	0.59	25%		
Acenaphthylene	mg/kg	0.1	ND	ND		0	
Anthracene	mg/kg	0.1	1.2	1.1	9%		
Benz(a)anthracene	mg/kg	0.1	0.99	0.86	14%		
Benzo(a)pyrene	mg/kg	0.1	0.52	0.48		0.04	
Benzo(b)fluoranthene	mg/kg	0.1	0.17	0.16		0.01	
Benzo(g,h,i)perylene	mg/kg	0.1	0.28	0.26		0.02	
Benzo(k)fluoranthene	mg/kg	0.1	ND	ND		0	
Chrysene	mg/kg	0.1	1.7	1	52%		**J/J**
Dibenzo(a,h)anthracene	mg/kg	0.1	ND	ND		0	
Fluoranthene	mg/kg	0.1	0.36	0.35		0.01	
Fluorene	mg/kg	0.1	0.59	0.37		0.22	**J/J**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	ND	ND		0	
Naphthalene	mg/kg	0.1	0.12	ND		0	
Phenanthrene	mg/kg	0.1	1.8	1	57%		**J/J**
Pyrene	mg/kg	0.1	2.2	2.1	5%		
			BUST-B23-6-111513	**BUST-502-111513**			
Mercury	mg/kg	0.1	ND	ND			
Antimony	mg/kg	1	ND	ND			
Arsenic	mg/kg	1	3.29	3.6	9%	0.31	
Cadmium	mg/kg	1	1	ND		1	
Copper	mg/kg	1	9.71	10.4	7%		
Lead	mg/kg	1	1.79	1.91		0.12	
Nickel	mg/kg	1	14.2	16.1	13%		
Zinc	mg/kg	1	18.2	22.6	22%		
Bunker C	mg/kg	250	ND	380		380	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Acenaphthene	mg/kg	0.01	0.067	ND		0.067	**J/UJ**
Acenaphthylene	mg/kg	0.01	ND	ND		0	**J/UJ**
Anthracene	mg/kg	0.01	0.11	ND		0.11	**J/UJ**
Benz(a)anthracene	mg/kg	0.01	0.11	ND		0.11	**J/UJ**
Benzo(a)pyrene	mg/kg	0.01	0.087	ND		0.087	**J/UJ**
Benzo(b)fluoranthene	mg/kg	0.01	0.097	ND		0.097	**J/UJ**
Benzo(g,h,i)perylene	mg/kg	0.01	0.038	ND		0.038	**J/UJ**
Benzo(k)fluoranthene	mg/kg	0.01	0.043	ND		0.043	**J/UJ**
Chrysene	mg/kg	0.01	0.12	ND		0.12	**J/UJ**
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	**J/UJ**
Fluoranthene	mg/kg	0.01	0.29	ND		0.29	**J/UJ**
Fluorene	mg/kg	0.01	0.057	ND		0.057	**J/UJ**
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.041	ND		0.041	**J/UJ**
Naphthalene	mg/kg	0.01	0.026	ND		0.026	**J/UJ**
Phenanthrene	mg/kg	0.01	0.35	ND		0.35	**J/UJ**
Pyrene	mg/kg	0.01	0.27	ND		0.27	**J/UJ**
			BUST-S62-3	**BUST-504-FD**			
Mercury	mg/kg	0.1	0	0.13		0.13	
Antimony	mg/kg	1	0	0		0	
Arsenic	mg/kg	1	2.57	3.14		0.57	
Cadmium	mg/kg	1	0	0		0	
Copper	mg/kg	1	18.6	15.7	17%		
Lead	mg/kg	1	35.5	27	27%		
Nickel	mg/kg	1	18.1	16.6	9%		
Zinc	mg/kg	1	46.5	62.4	29%		
Bunker C	mg/kg	250	3100	7100	78%		**J/J**
Acenaphthene	mg/kg	0.01	0.053	0.14	90%		**J/J**
Acenaphthylene	mg/kg	0.01	0	0		0	
Anthracene	mg/kg	0.01	0.068	0.13	63%		**J/J**
Benz(a)anthracene	mg/kg	0.01	0.11	0.26	81%		**J/J**
Benzo(a)pyrene	mg/kg	0.01	0.08	0.17	72%		**J/J**
Benzo(b)fluoranthene	mg/kg	0.01	0.083	0.16	63%		**J/J**
Benzo(g,h,i)perylene	mg/kg	0.01	0.059	0.11	60%		**J/J**
Benzo(k)fluoranthene	mg/kg	0.01	0.019	0.015		0.004	
Chrysene	mg/kg	0.01	0.21	0.43	69%		**J/J**
Dibenzo(a,h)anthracene	mg/kg	0.01	0.014	0.017		0.003	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Fluoranthene	mg/kg	0.01	0.12	0.29	83%		**J/J**
Fluorene	mg/kg	0.01	0	0		0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.037	0.075		0.038	**J/J**
Naphthalene	mg/kg	0.01	0.012	0.033		0.021	**J/J**
Phenanthrene	mg/kg	0.01	0.077	0.2	89%		**J/J**
Pyrene	mg/kg	0.01	0.33	0.82	85%		**J/J**
			BUST-S43-4	**BUST-B503-12**			
Mercury	mg/kg	0.1	ND	ND		0	
Antimony	mg/kg	1	ND	ND		0	
Arsenic	mg/kg	1	ND	2.44	#VALUE!		**UJ/J**
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	19.1	3.62	136%		**J/J**
Lead	mg/kg	1	6.16	ND		6.16	**J/UJ**
Nickel	mg/kg	1	22.3	10.4	73%		**J/J**
Zinc	mg/kg	1	25.6	6.46	119%		**J/J**
Bunker C	mg/kg	250	ND	ND		0	
Acenaphthene	mg/kg	0.01	ND	ND		0	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	ND	ND		0	
Benzo(a)pyrene	mg/kg	0.01	ND	ND		0	
Benzo(b)fluoranthene	mg/kg	0.01	ND	ND		0	
Benzo(g,h,i)perylene	mg/kg	0.01	ND	ND		0	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	ND	ND		0	
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	ND	ND		0	
Fluorene	mg/kg	0.01	ND	ND		0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	ND		0	
Naphthalene	mg/kg	0.01	ND	ND		0	
Phenanthrene	mg/kg	0.01	ND	ND		0	
Pyrene	mg/kg	0.01	ND	ND		0	
			NRU-S04-4-012414	**NRU-500-012414**			
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Acenaphthene	mg/kg	0.01	ND	0.85		0.85	**UJ/J**
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	0.012	0.32		0.308	**J/J**
Benz(a)anthracene	mg/kg	0.01	0.064	0.18	95%		**J/J**
Benzo(a)pyrene	mg/kg	0.01	0.062	0.12	64%		**J/J**
Benzo(b)fluoranthene	mg/kg	0.01	0.08	0.14	55%		**J/J**
Benzo(g,h,i)perylene	mg/kg	0.01	0.038	0.056		0.018	
Benzo(k)fluoranthene	mg/kg	0.01	0.03	0.037		0.007	
Chrysene	mg/kg	0.01	0.073	0.22	100%		**J/J**
Dibenzo(a,h)anthracene	mg/kg	0.01	0.011	0.015		0.004	
Fluoranthene	mg/kg	0.01	0.15	0.57	117%		**J/J**
Fluorene	mg/kg	0.01	ND	0.49		0.49	**UJ/J**
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.038	0.038		0	
Naphthalene	mg/kg	0.01	ND	0.061		0.061	**UJ/J**
Phenanthrene	mg/kg	0.01	0.043	0.084		0.041	**J/J**
Pyrene	mg/kg	0.01	0.17	0.62	114%		**J/J**
			NRU-S20-12-012414	**NRU-501-012414**			
Diesel Range TPH	mg/kg	50	ND	65		65	
Oil Range TPH	mg/kg	250	ND	ND		0	
Acenaphthene	mg/kg	0.01	0.025	0.035		0.01	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	0.02	0.035		0.015	
Benz(a)anthracene	mg/kg	0.01	0.023	0.037		0.014	
Benzo(a)pyrene	mg/kg	0.01	0.023	0.032		0.009	
Benzo(b)fluoranthene	mg/kg	0.01	0.025	0.039		0.014	
Benzo(g,h,i)perylene	mg/kg	0.01	0.018	0.02		0.002	
Benzo(k)fluoranthene	mg/kg	0.01	ND	0.012		0.012	
Chrysene	mg/kg	0.01	0.032	0.05		0.018	
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	0.05	0.089	56%		**J/J**
Fluorene	mg/kg	0.01	0.019	0.032		0.013	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.012	0.016		0.004	
Naphthalene	mg/kg	0.01	0.012	0.024		0.012	
Phenanthrene	mg/kg	0.01	0.038	0.052		0.014	
Pyrene	mg/kg	0.01	0.07	0.12	53%		**J/J**

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
			UST29-S01-3-122313	**UST29-500-122313**			
Mercury	mg/kg	0.1	ND	ND		0	
Arsenic	mg/kg	1	4.84	3.74		1.1	
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	9.87	5.59	55%		**J/J**
Lead	mg/kg	1	7.79	2.08	116%		**J/J**
Nickel	mg/kg	1	14.1	12.6	11%		
Zinc	mg/kg	1	24.9	8.57	98%		**J/J**
Diesel Range TPH	mg/kg	50	ND	91		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Gasoline Range TPH	mg/kg	2	ND	ND		0	
Methylene chloride	mg/kg	0.5	1.2	0.97	21%		
Acenaphthene	mg/kg	0.01	0.018	ND		0.018	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	0.052	0		0.052	**J/UJ**
Benz(a)anthracene	mg/kg	0.01	0.14	0.018		0.122	**J/J**
Benzo(a)pyrene	mg/kg	0.01	0.1	0.011		0.089	**J/J**
Benzo(b)fluoranthene	mg/kg	0.01	0.14	0.014		0.126	**J/J**
Benzo(g,h,i)perylene	mg/kg	0.01	0.048	ND		0.048	**J/UJ**
Benzo(k)fluoranthene	mg/kg	0.01	0.044	ND		0.044	**J/UJ**
Chrysene	mg/kg	0.01	0.15	0.018		0.132	**J/J**
Dibenzo(a,h)anthracene	mg/kg	0.01	0.014	ND		0.014	**J/UJ**
Fluoranthene	mg/kg	0.01	0.24	0.031		0.209	**J/J**
Fluorene	mg/kg	0.01	0.021	ND		0.021	**J/UJ**
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.055	ND		0.055	**J/UJ**
Naphthalene	mg/kg	0.01	0.014	ND		0.014	**J/UJ**
Phenanthrene	mg/kg	0.01	0.22	0.025		0.195	**J/J**
Pyrene	mg/kg	0.01	0.28	0.036		0.244	**J/J**
			UST29-B15-17-010814	**UST29-B502**			
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Gasoline Range TPH	mg/kg	2	7.4	ND		7.4	**J/UJ**
Acenaphthene	mg/kg	0.01	0.04	ND		0.04	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Benz(a)anthracene	mg/kg	0.01	0.015	0.014		0.001	
Benzo(a)pyrene	mg/kg	0.01	0.01	ND		0.01	
Benzo(b)fluoranthene	mg/kg	0.01	0.014	0.014		0	
Benzo(g,h,i)perylene	mg/kg	0.01	0.011	0.01		0.001	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	0.016	0.014		0.002	
Dibenzo(a,h)anthracene	mg/kg	0.01	0	ND		0	
Fluoranthene	mg/kg	0.01	0.075	0.053	34%		
Fluorene	mg/kg	0.01	0.019	ND		0.019	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	ND		0	
Naphthalene	mg/kg	0.01	0.067	0.023		0.044	**J/J**
Phenanthrene	mg/kg	0.01	0.044	0.021		0.023	**J/J**
Pyrene	mg/kg	0.01	0.078	0.055	35%		
			UST70-S13-4-112113	**UST70-500**			
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Acenaphthene	mg/kg	0.01	ND	ND		0	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	ND	ND		0	
Benzo(a)pyrene	mg/kg	0.01	ND	0.013		0.013	
Benzo(b)fluoranthene	mg/kg	0.01	0.012	0.016		0.004	
Benzo(g,h,i)perylene	mg/kg	0.01	ND	0.011		0.011	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	ND	0.012		0.012	
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	0.01		0.01	
Fluoranthene	mg/kg	0.01	ND	0.016		0.016	
Fluorene	mg/kg	0.01	ND	ND		0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	ND		0	
Naphthalene	mg/kg	0.01	ND	ND		0	
Phenanthrene	mg/kg	0.01	ND	ND		0	
Pyrene	mg/kg	0.01	0.014	0.021		0.007	
			UST70-S16-8-112113	**UST70-501**			
Mercury	mg/kg	0.1	ND	ND		0	
Arsenic	mg/kg	1	5.36	5.97	11%		

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	11.6	11.9	3%		
Lead	mg/kg	1	10.2	9.83	4%		
Nickel	mg/kg	1	14.3	14.8	3%		
Zinc	mg/kg	1	21.6	24.4	12%		
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Acenaphthene	mg/kg	0.01	ND	ND		0	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	ND	0.037		0.037	**UJ/J**
Benzo(a)pyrene	mg/kg	0.01	ND	0.036		0.036	**UJ/J**
Benzo(b)fluoranthene	mg/kg	0.01	ND	0.049		0.049	**UJ/J**
Benzo(g,h,i)perylene	mg/kg	0.01	ND	0.023		0.023	**UJ/J**
Benzo(k)fluoranthene	mg/kg	0.01	ND	0.019		0.019	**UJ/J**
Chrysene	mg/kg	0.01	ND	0.039		0.039	**UJ/J**
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	0		0	
Fluoranthene	mg/kg	0.01	ND	0.04		0.04	**UJ/J**
Fluorene	mg/kg	0.01	ND	0		0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	0.024		0.024	**UJ/J**
Naphthalene	mg/kg	0.01	ND	0		0	
Phenanthrene	mg/kg	0.01	ND	0		0	
Pyrene	mg/kg	0.01	0.01	0.05		0.04	**UJ/J**
			UST70-S22-8-010614	**UST70-502**			
Diesel RangeTPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Acenaphthene	mg/kg	0.01	ND	ND		0	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	ND	ND		0	
Benzo(a)pyrene	mg/kg	0.01	ND	ND		0	
Benzo(b)fluoranthene	mg/kg	0.01	ND	ND		0	
Benzo(g,h,i)perylene	mg/kg	0.01	ND	ND		0	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	ND	ND		0	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	ND	ND		0	
Fluorene	mg/kg	0.01	ND	ND		0	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	ND	ND		0	
Naphthalene	mg/kg	0.01	0.14	0.14	0%		
Phenanthrene	mg/kg	0.01	ND	ND		0	
Pyrene	mg/kg	0.01	ND	ND		0	

Notes:
Delta – Concentration difference between the parent sample and its field duplicate
mg/kg – milligram per kilogram
ND – The analyte was not detected at or above the RL.
RL – Reporting limit
RPD – Relative percent difference

Data Validation Report

Kimberly-Clark Everett, Washington Site
Upland Area Interim Action Soil Sampling
Batch #5 Soil Samples

Prepared for:

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Prepared by:

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Olympia, WA 98502

ACRONYMS

%D	percent difference
%D_f	percent drift
%R	percent recovery
%RSD	percent relative standard deviation
AMU	atomic mass unit
BTEX	benzene, toluene, ethylbenzene, and *m-, p-, & o*-xylenes
CCB	continuing calibration blank
CCC	calibration check compound
CCV	continuing calibration verification
CF	calibration factor
CLP	U.S. EPA Contract Laboratory Program
COC	chain-of-custody
CVAFS	cold vapor atomic fluorescent spectrometry
DFTPP	decafluorotriphenylphosphine
ECD	electron capture detector
EPA	U.S. Environmental Protection Agency
EPH	extractable petroleum hydrocarbon
FID	Flame ionization detector
GC/MS	gas chromatograph/mass spectrometer
ICAL	initial calibration
ICB	initial calibration blank
ICP/MS	inductively coupled plasma/ mass spectrometer
ICV	initial calibration verification
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
MDL	method detection limit
µg/kg	microgram per kilogram
mg/kg	milligram per kilogram
MS	matrix spike
MSD	matrix spike duplicate
NFGs	CLP National Functional Guidelines for Data Review (EPA 2008 – Organics; EPA 2010 – Inorganics)
OPR	ongoing precision and recovery
PCBs	polychlorinated biphenyls

PID	photo-ionization detector
QA/QC	quality assurance/quality control
RF	response factor
RL	reporting limit
RPD	relative percent difference
RRT	relative retention time
SDG	sample delivery group
SIM	selective ion monitoring
SVOCs	semi-volatile organic compounds
VOCs	volatile organic compounds
VPH	volatile petroleum hydrocarbon

INTRODUCTION

This report presents and discusses findings of the data validation performed on analytical data for soil samples collected during October 2013 to March 2014 for the referenced project. The laboratory reports validated herein were submitted by Friedman & Bruya, Inc. and Fremont Aanlytical, Inc. in Seattle, Washington and ALS Environmental Services, Inc. in Kelso, Washington.

A level III data validation was performed on this laboratory report. The validation followed the procedures specified in USEPA CLP Functional Guidelines ([NFGs], EPA 2008 – Organics; EPA 2010 – Inorganics), with modifications to accommodate project and analytical method requirements. The numerical quality assurance/quality control (QA/QC) criteria applied to the validation were in accordance with those specified in the quality assurance project plans ([QAPPs], Aspect, 2009) and the current performance-based control limits established by the laboratory (laboratory control limits). Instrument calibration, frequency of QC analyses, and analytical sequence requirements were evaluated against the respective analytical methods.

Validation findings are discussed in each section pertinent to the QC parameter for each type of analysis. Qualified data with applied data qualifiers are summarized in the **Summary** section at the end of this report.

Samples and the associated analyses validated herein are summarized as follows:

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
BAST-EPH-01	310408-01	10/21/13	Soil		X					EPH
BAST-EPH-02	310408-02	10/21/13	Soil		X					EPH
BAST-EPH-03	310408-03	10/21/13	Soil		X					EPH
BAST-EPH-04	310408-04	10/21/13	Soil		X					EPH
CONC-SP-01-102313	310458-01	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-02-102313	310458-02	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-03-102313	310458-03	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-04-102313	310458-04	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-05-102313	310458-05	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-06-102313	310458-06	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-07-102313	310458-07	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-01-102313 Agg	310458-08	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-02-102313 Agg	310458-09	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-03-102313 Agg	310458-10	10/23/13	Soil	X	SVOC	X	pp	X	X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
CONC-SP-04-102313 Agg	310458-11	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-05-102313 Agg	310458-12	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-06-102313 Agg	310458-13	10/23/13	Soil	X	SVOC	X	pp	X	X	
CONC-SP-07-102313 Agg	310458-14	10/23/13	Soil	X	SVOC	X	pp	X	X	
BAST-B051-5.0	311028-01	11/01/13	Soil		X		X		X	
BAST-B504-5.0	311028-02	11/01/13	Soil		X		X		X	
BAST-S034B-3.0	311028-03	11/01/13	Soil		X				X	
BAST-S036-3.0	311028-04	11/01/13	Soil		X				X	
BAST-S035-3.0	311028-05	11/01/13	Soil		X				X	
STIL-G1-120513	312089-01	12/05/13	Soil	X	SVOC	X	pp	X	X	
STIL-G2-120513	312089-02	12/05/13	Soil	X	SVOC	X	pp	X	X	
STIL-G3-120513	312089-03	12/05/13	Soil	X	SVOC	X	pp	X	X	
STIL-G4-120513	312089-04	12/05/13	Soil	X	SVOC	X	pp	X	X	
STIL-G5-120513	312089-05	12/05/13	Soil	X	SVOC	X	pp	X	X	
STIL-G7-120513	312089-06	12/05/13	Soil	X	SVOC	X	pp	X	X	
STIL-G8-120513	312089-07	12/05/13	Soil	X	SVOC	X	pp	X	X	
STIL-G6-120513	312089-08	12/05/13	Soil	X	SVOC	X	pp	X	X	
NRA1-PC1-12-010614	401056-01	01/06/14	Soil		X	X	X	X	X	BTEX
NRA2-PC2-8-010614	401056-02	01/06/14	Soil		X	X	X	X	X	BTEX
NRA2-PC3-8-010614	401056-03	01/06/14	Soil		X	X	X	X	X	BTEX
Cemex-QS-011014	401111-01	01/10/14	Soil				pp			
STIL-G9-011414	401174-01	01/14/14	Soil	X	SVOC	X	pp	X	X	
STIL-G10-011414	401174-02	01/14/14	Soil	X	SVOC	X	pp	X	X	
STIL-G11-011414	401174-03	01/14/14	Soil	X	SVOC	X	pp	X	X	
STIL-G12-011414	401174-04	01/14/14	Soil	X	SVOC	X	pp	X	X	
BAST-S57-5-012114	401241-01	01/21/14	Soil	X	X		X	X	X	
BAST-S58-8-012114	401241-02	01/21/14	Soil	X	X			X	X	
BAST-S59-7-012114	401241-03	01/21/14	Soil	X	X			X	X	EPH/VPH
BAST-S60-8-012114	401241-04	01/21/14	Soil	X	X			X	X	
BAST-S61-5-012114	401241-05	01/21/14	Soil	X	X			X	X	
BAST-S62-8-012114	401241-06	01/21/14	Soil	X	X		X	X	X	
BAST-S63-9-012114	401241-07	01/21/14	Soil	X	X			X	X	
BAST-S64-6-012114	401241-08	01/21/14	Soil	X	X			X	X	
BAST-S65-8-012114	401241-09	01/21/14	Soil	X	X			X	X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
BAST-S66-3-012114	401241-10	01/21/14	Soil	X	X			X	X	
BAST-B56-4-012714	401317-01	01/27/14	Soil		X				X	
BAST-B57-7-012714	401317-02	01/27/14	Soil		X				X	
BAST-B58-4-012714	401317-03	01/27/14	Soil		X				X	
BAST-B59-4-012714	401317-04	01/27/14	Soil		X				X	
BAST-B60-4-012714	401317-05	01/27/14	Soil		X		X		X	
BAST-B61-4-012714	401317-06	01/27/14	Soil		X				X	
BAST-B62-4-012714	401317-07	01/27/14	Soil		X				X	
BAST-B63-4-012714	401317-08	01/27/14	Soil		X				X	
BAST-B64-4-012714	401317-09	01/27/14	Soil		X				X	
BAST-B65-3.5-012714	401317-10	01/27/14	Soil		X		X		X	
BAST-506-012714	401317-11	01/27/14	Soil		X		X		X	
NRS-SP01-1-021014	402099-01	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP01-2-021014	402099-02	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP01-3-021014	402099-03	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP02-1-021014	402099-04	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP02-2-021014	402099-05	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP02-3-021014	402099-06	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP03-1-021014	402099-07	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP03-2-021014	402099-08	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP03-3-021014	402099-09	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP04-1-021014	402099-10	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP04-2-021014	402099-11	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP04-3-021014	402099-12	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP05-1-021014	402099-13	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP05-2-021014	402099-14	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP05-3-021014	402099-15	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP06-1-021014	402099-16	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP06-2-021014	402099-17	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP06-3-021014	402099-18	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP07-1-021014	402099-19	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP07-2-021014	402099-20	02/10/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP07-3-021014	402099-21	02/10/14	Soil	X	SVOC	X	pp	X	X	
BAST-B067-5-021114	402128-01	02/11/14	Soil	X	X			X	X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
BAST-B068-5-021114	402128-02	02/11/14	Soil	X	X			X	X	
BAST-B069-5-021114	402128-03	02/11/14	Soil	X	X			X	X	
BAST-S069-3-021114	402128-04	02/11/14	Soil	X	X		X	X	X	
BAST-S070-3-021114	402128-05	02/11/14	Soil	X	X			X	X	
BAST-S071-3-021114	402128-06	02/11/14	Soil	X	X			X	X	
BAST-507	402128-07	02/11/14	Soil	X	X		X	X	X	
NRS-S01-8-021114	402129-01	02/11/14	Soil	X	X			X	X	
NRS-S02-11-021114	402129-02	02/11/14	Soil	X	X			X	X	
NRS-S03-8-021114	402129-03	02/11/14	Soil	X	X			X	X	
NRS-S04-11-021114	402129-04	02/11/14	Soil	X	X			X	X	
NRS-S05-8-021114	402129-05	02/11/14	Soil	X	X		X	X	X	
NRS-S06-11-021114	402129-06	02/11/14	Soil	X	X			X	X	
NRS-S07-8-021114	402129-07	02/11/14	Soil	X	X			X	X	
NRS-S08-11-021114	402129-08	02/11/14	Soil	X	X			X	X	
NRS-S09-8-021114	402129-09	02/11/14	Soil	X	X			X	X	
NRS-S10-11-021114	402129-10	02/11/14	Soil	X	X		X	X	X	
NRS-S11-8-021114	402129-11	02/11/14	Soil	X	X			X	X	
NRS-S12-11-021114	402129-12	02/11/14	Soil	X	X			X	X	
NRS-S13-8-021214	402161-01	02/12/14	Soil	X	X			X	X	
NRS-S14-11-021214	402161-02	02/12/14	Soil	X	X			X	X	
NRS-S15-8-021214	402161-03	02/12/14	Soil	X	X			X	X	
NRS-S16-11-021214	402161-04	02/12/14	Soil	X	X			X	X	
NRS-S17-8-021214	402161-05	02/12/14	Soil	X	X		X	X	X	
NRS-S18-11-021214	402161-06	02/12/14	Soil	X	X			X	X	
NRS-S19-8-021214	402161-07	02/12/14	Soil	X	X			X	X	
NRS-S20-11-021214	402161-08	02/12/14	Soil	X	X			X	X	
NRS-S21-8-021214	402161-09	02/12/14	Soil	X	X			X	X	
NRS-S22-11-021214	402161-10	02/12/14	Soil	X	X		X	X	X	
NRS-S23-8-021214	402161-11	02/12/14	Soil	X	X			X	X	
NRS-S24-11-021214	402161-12	02/12/14	Soil	X	X			X	X	
NRS-S25-8-021214	402161-13	02/12/14	Soil	X	X			X	X	
NRS-S26-11-021214	402161-14	02/12/14	Soil	X	X			X	X	
NRS-B01-13-021214	402161-15	02/12/14	Soil	X	X		X	X	X	
NRS-B02-13-021214	402161-16	02/12/14	Soil	X	X			X	X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
NRS-B03-13-021214	402161-17	02/12/14	Soil	X	X			X	X	
NRS-B04-13-021214	402161-18	02/12/14	Soil	X	X			X	X	
NRS-B05-13-021214	402161-19	02/12/14	Soil	X	X			X	X	
NRS-B06-13-021214	402161-20	02/12/14	Soil	X	X		X	X	X	
NRS-B07-13-021214	402161-21	02/12/14	Soil	X	X			X	X	
NRS-B08-13-021214	402161-22	02/12/14	Soil	X	X			X	X	
NRS-500-021214	402161-23	02/12/14	Soil	X	X			X	X	
NRS-501-021214	402161-24	02/12/14	Soil	X	X		X	X	X	
BAST-S72-3-021314	402183-01	02/13/14	Soil	X	X			X	X	
BAST-S73-3-021314	402183-02	02/13/14	Soil	X	X			X	X	
BAST-S74-3-021314	402183-03	02/13/14	Soil	X	X			X	X	
BAST-B70-4-021314	402183-04	02/13/14	Soil	X	X			X	X	
BAST-B71-4-021314	402183-05	02/13/14	Soil	X	X		X	X	X	
BAST-S075-4-021714	402219-01	02/17/14	Soil	X	X			X	X	EPH/VPH
BAST-SP01-1-021714	402220-01	02/17/14	Soil	X	SVOC	X	pp	X	X	
BAST-SP01-2-021714	402220-02	02/17/14	Soil	X	SVOC	X	pp	X	X	
BAST-SP01-3-021714	402220-03	02/17/14	Soil	X	SVOC	X	pp	X	X	
NRS-S27-8-021814	402263-01	02/18/14	Soil	X	X			X	X	
NRS-S28-8-021814	402263-02	02/18/14	Soil	X	X			X	X	
NRS-B09-10-021814	402263-03	02/18/14	Soil	X	X			X	X	
NRS-S29-8-021914	402263-04	02/19/14	Soil	X	X			X	X	
STIL-G-13-021914	402264-01	02/19/14	Soil	X	SVOC	X	pp	X	X	
STIL-G-14-021914	402264-02	02/19/14	Soil	X	SVOC	X	pp	X	X	
STIL-G-15-021914	402264-03	02/19/14	Soil	X	SVOC	X	pp	X	X	
STIL-G-16-021914	402264-04	02/19/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP08-1-021914	402265-01	02/19/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP08-2-021914	402265-02	02/19/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP08-3-021914	402265-03	02/19/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP09-1-021914	402265-04	02/19/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP09-2-021914	402265-05	02/19/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP09-3-021914	402265-06	02/19/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP10-1-021914	402265-07	02/19/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP10-2-021914	402265-08	02/19/14	Soil	X	SVOC	X	pp	X	X	
NRS-SP10-3-021914	402265-09	02/19/14	Soil	X	SVOC	X	pp	X	X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
BAST-B72-6-022014	402314-01	02/20/14	Soil	X	SVOC		pp	X	X	
BAST-S76-4-022014	402314-02	02/20/14	Soil	X	SVOC		pp	X	X	
BAST-S77-4-022014	402314-03	02/20/14	Soil	X	SVOC		pp	X	X	
BAST-S78-4-022014	402314-04	02/20/14	Soil	X	SVOC		pp	X	X	
BAST-B73-7-022014	402314-05	02/20/14	Soil	X	SVOC		pp	X	X	
BAST-S79-4-022114	402314-06	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-S80-4-022114	402314-07	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-S81-4-022114	402314-08	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-B77-8-022114	402314-09	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-S82-4-022114	402314-10	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-S83-4-022114	402314-11	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-S84-4-022114	402314-12	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-S85-4-022114	402314-13	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-S86-4-022114	402314-14	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-B74-7-022114	402314-15	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-B75-7-022114	402314-16	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-B76-7-022114	402314-17	02/21/14	Soil	X	SVOC		pp	X	X	
BAST-508-022014	402314-18	02/20/14	Soil	X	SVOC		pp	X	X	
BAST-B78-4-022414	402347-01	02/24/14	Soil	X	X		X	X	X	
BAST-S87-2-022414	402347-02	02/24/14	Soil	X	X		X	X	X	
BAST-S88-4-022514	402347-03	02/25/14	Soil	X	X		X	X	X	
BAST-S89-4-022514	402347-04	02/25/14	Soil	X	X		X	X	X	
BAST-S90-4-022514	402347-05	02/25/14	Soil	X	X		X	X	X	
BAST-S91-4-022514	402347-06	02/25/14	Soil	X	X		X	X	X	
BAST-S92-4-022514	402347-07	02/25/14	Soil	X	X		X	X	X	
BAST-S93-4-022514	402347-08	02/25/14	Soil	X	X		X	X	X	
BAST-509	402347-09	02/25/14	Soil	X	X		X	X	X	
CN-S01-3-030314	403027-01	03/03/14	Soil		X				X	
CN-S02-3-030314	403027-02	03/03/14	Soil		X				X	
CN-S03-4-030314	403027-03	03/03/14	Soil		X				X	
CN-S04-3-030314	403027-04	03/03/14	Soil		X				X	
CN-S05-6-030314	403027-05	03/03/14	Soil		X		X		X	
CN-S06-3-030314	403027-06	03/03/14	Soil		X				X	
CN-S07-6-030314	403027-07	03/03/14	Soil		X				X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
CN-S08-3-030314	403027-08	03/03/14	Soil		X				X	
CN-S09-6-030314	403027-09	03/03/14	Soil		X				X	
CN-S10-6-030314	403027-10	03/03/14	Soil		X	X	X		X	
CN-S11-3-030314	403027-11	03/03/14	Soil		X				X	
CN-S12-3-030314	403027-12	03/03/14	Soil		X				X	
CN-B01-4-030314	403027-13	03/03/14	Soil		X				X	
CN-B02-4-030314	403027-14	03/03/14	Soil		X				X	
CN-B03-8-030314	403027-15	03/03/14	Soil		X		X		X	
CN-B04-8-030314	403027-16	03/03/14	Soil		X				X	
CN-B05-7-030314	403027-17	03/03/14	Soil		X				X	
CN-B06-7-030314	403027-18	03/03/14	Soil		X				X	
CN-B07-4-030314	403027-19	03/03/14	Soil		X				X	
CN-500-030314	403027-20	03/03/14	Soil		X		X		X	
BAST-S94-4-030414	403052-01	03/04/14	Soil		X				X	
BAST-S95-4-030414	403052-02	03/04/14	Soil				Pb		X	
BA-S01-4-030514	403053-01	03/05/14	Soil						X	
BA-S02-4-030514	403053-02	03/05/14	Soil						X	
BA-S03-4-030514	403053-03	03/05/14	Soil						X	
BA-B01-5-030514	403053-04	03/05/14	Soil						X	
BA-B02-6-030514	403053-05	03/05/14	Soil						X	
BA-500-030514	403053-06	03/05/14	Soil						X	
CN-S14-6-030714	403089-01	03/07/14	Soil		X		X		X	
CN-S15-10-030714	403089-02	03/07/14	Soil		X		X		X	
CN-S16-6-030714	403089-03	03/07/14	Soil		X		X		X	
CN-S17-10-030714	403089-04	03/07/14	Soil		X		X		X	
CN-S18-6-030714	403089-05	03/07/14	Soil		X		X		X	
CN-S19-10-030714	403089-06	03/07/14	Soil		X		X		X	
CN-S20-6-030714	403089-07	03/07/14	Soil		X		X		X	
CN-S21-10-030714	403089-08	03/07/14	Soil		X		X		X	
CN-S22-6-030714	403089-09	03/07/14	Soil		X		X		X	
CN-S23-10-030714	403089-10	03/07/14	Soil		X		X		X	
CN-S24-6-030714	403089-11	03/07/14	Soil		X		X		X	
CN-S25-10-030714	403089-12	03/07/14	Soil		X		X		X	
SHB-S01-3-030614	403091-01	03/06/14	Soil	X	X		X	X	X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
SHB-S02-3-030614	403091-02	03/06/14	Soil	X	X		X	X	X	
SHB-S03-3-030614	403091-03	03/06/14	Soil	X	X		X	X	X	
SHB-S04-3-030614	403091-04	03/06/14	Soil	X	X		X	X	X	
SHB-S05-3-030614	403091-05	03/06/14	Soil	X	X		X	X	X	
SHB-S06-3-030614	403091-06	03/06/14	Soil	X	X		X	X	X	
SHB-B01-5-030614	403091-07	03/06/14	Soil	X	X		X	X	X	
SHB-B02-5-030614	403091-08	03/06/14	Soil	X	X		X	X	X	
SHB-B03-5-030614	403091-09	03/06/14	Soil	X	X		X	X	X	
SHB-500	403091-10	03/06/14	Soil	X	X		X	X	X	
CN-B08-12-030714	403101-01	03/07/14	Soil		X		X		X	
CN-B09-11-030714	403101-02	03/07/14	Soil		X		X		X	
CN-B10-11-030714	403101-03	03/07/14	Soil		X		X		X	
CN-B11-11-030714	403101-04	03/07/14	Soil		X		X		X	
CN-B12-11-030714	403101-05	03/07/14	Soil		X		X		X	
CN-B13-11-030714	403101-06	03/07/14	Soil		X		X		X	
CN-501	403101-07	03/07/14	Soil		X		X		X	
SHB-S07-3-031114	403133-01	03/11/14	Soil				Cu		X	
CN-B14-15-031414	403201-01	03/14/14	Soil		X		X		X	
CN-S13-4-031514	403201-02	03/15/14	Soil		X		X		X	
CN-S26-8-031514	403201-03	03/15/14	Soil		X		X		X	
CN-S27-12-031514	403201-04	03/15/14	Soil		X		X		X	
CN-S28-4-031514	403201-05	03/15/14	Soil		X		X		X	
CN-S29-8-031514	403201-06	03/15/14	Soil		X		X		X	
CN-S30-12-031514	403201-07	03/15/14	Soil		X		X		X	
CN-S31-4-031514	403201-08	03/15/14	Soil		X		X		X	
CN-S32-8-031514	403201-09	03/15/14	Soil		X		X		X	
CN-S33-12-031514	403201-10	03/15/14	Soil		X		X		X	
CN-S34-4-031514	403201-11	03/15/14	Soil		X		X		X	
CN-B15-18-031514	403201-12	03/15/14	Soil		X		X		X	
CN-B16-18-031514	403201-13	03/15/14	Soil		X		X		X	
CN-B17-18-031514	403201-14	03/15/14	Soil		X		X		X	
CN-B18-18-031514	403201-15	03/15/14	Soil		X		X		X	
CN-B19-18-031514	403201-16	03/15/14	Soil		X		X		X	
CN-B20-16-031514	403201-17	03/15/14	Soil		X		X		X	

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
CN-B21-16-031514	403201-18	03/15/14	Soil		X		X		X	
CN-B22-14-031514	403201-19	03/15/14	Soil		X		X		X	
CN-502-031514	403201-20	03/15/14	Soil		X		X		X	
CN-S35-8-031514	403201-21	03/15/14	Soil		X		X		X	
CN-S36-12-031514	403201-22	03/15/14	Soil		X		X		X	
CN-S37-4-031514	403201-23	03/15/14	Soil		X		X		X	
CN-S38-8-031514	403201-24	03/15/14	Soil		X		X		X	
CN-S39-12-031514	403201-25	03/15/14	Soil		X		X		X	
CN-S40-4-031514	403201-26	03/15/14	Soil		X		X		X	
CN-S41-8-031514	403201-27	03/15/14	Soil		X		X		X	
CN-S42-12-031514	403201-28	03/15/14	Soil		X		X		X	
CN-S43-4-031514	403201-29	03/15/14	Soil		X		X		X	
CN-S44-8-031514	403201-30	03/15/14	Soil		X		X		X	
CN-B23-14-031514	403201-31	03/15/14	Soil		X		X		X	
CN-S45-12-031514	403201-32	03/15/14	Soil		X		X		X	
CN-S46-4-031514	403201-33	03/15/14	Soil		X		X		X	
CN-S47-8-031514	403201-34	03/15/14	Soil		X		X		X	
CN-S48-12-031514	403201-35	03/15/14	Soil		X		X		X	
CN-B25-18-031914	403267-01	03/19/14	Soil		X		X		X	
CN-B24-16-031914	403267-02	03/19/14	Soil		X		X		X	
CN-S49-12-031914	403267-03	03/19/14	Soil		X		X		X	
CN-503	403267-04	03/19/14	Soil		X		X		X	
CN-S50-3-032014	403267-05	03/20/14	Soil		X		X		X	
CN-S51-3-032014	403267-06	03/20/14	Soil		X		X		X	
CN-S52-3-032014	403267-07	03/20/14	Soil		X		X		X	
CN-S53-3-032014	403267-08	03/20/14	Soil		X		X		X	
CN-B26-4-032014	403267-09	03/20/14	Soil		X		X		X	
CN-B27-4-032014	403267-10	03/20/14	Soil		X		X		X	
CN-B28-4-032014	403267-11	03/20/14	Soil		X		X		X	
UST29-B01-5-122313	K1313944-009	12/23/13	Soil							FRM
UST29-B02-5-122313	K1313944-010	12/23/13	Soil							FRM
UST29-B03-5-122313	K1313944-011	12/23/13	Soil							FRM
UST29-B04-5-122313	K1313944-012	12/23/13	Soil							FRM
UST29-B05-5-122313	K1313944-013	12/23/13	Soil							FRM

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOC	PAHs	PCBs	Metals	TPH -Gx	TPH-Dx	Misc.
UST29-B06-5-122313	K1313944-014	12/23/13	Soil							FRM
UST29-S01-3-122313	K1313944-001	12/23/13	Soil							FRM
UST29-S02-3-122313	K1313944-002	12/23/13	Soil							FRM
UST29-S03-3-122313	K1313944-003	12/23/13	Soil							FRM
UST29-S04-3-122313	K1313944-004	12/23/13	Soil							FRM
UST29-S05-3-122313	K1313944-005	12/23/13	Soil							FRM
UST29-S06-3-122313	K1313944-006	12/23/13	Soil							FRM
UST29-S07-3-122313	K1313944-007	12/23/13	Soil							FRM

Notes:

[A] - Arsenic, cadmium, chromium, copper, mercury, nickel, and zinc
Cu - Sample was analyzed for copper only
EPH - Extractable petroleum hydrocarbon
FMR - Formaldehyde
Metals - Antimony, arsenic, cadmium, chromium, copper, mercury, nickel, and zinc, unless otherwise noted.
Misc. - Miscellaneous
PAHs - Polycyclic aromatic hydrocarbons
Pb - Sample was analyzed for lead only
PCBs - Polychlorinated biphenyl
pp - Priority pollutant metals, *i.e.,* antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc
SPLP - Synthetic precipitation leaching procedure; the leachates were analyzed for copper (SPLP/Cu) and/or arsenic (SPLP/As).
TPH-Dx - Diesel and motor oil range total petroleum hydrocarbon
TPH-Gx - Gasoline range total petroleum hydrocarbon
VOC - Volatile organic compound
VPH - Volatile petroleum hydrocarbon
X - The analysis was requested and performed on the sample.

The analytical parameters requested for the samples, the respective analytical methods, and the analytical laboratories are summarized below:

Parameter	Analytical Method	Analytical Laboratory
Volatile Organic Compounds (VOCs)	SW846 Method 8260C	Friedman & Bruya, Inc. (F&BI) Seattle, WA
Polycyclic Aromatic Hydrocarbons (PAHs)	SW846 Method 8270D-SIM	
PCB Aroclors	SW846 Method 8082A	
BTEX	SW846 Method 8021B	
TPH - Gasoline Range	NWTPH-Gx	
TPH - Diesel & Motor Oil Range	NWTPH-Dx	
Total Metals	EPA Method 200.8	
Mercury	EPA Method 1631E	
Extractable Petroleum Hydrocarbon	NWTPH-EPH	Fremont Analytical, Inc. Seattle, WA
Volatile Petroleum Hydrocarbon	NWTPH-VPH	
Formaldehyde	SW846 Method 8315A	ALS Environmental Services, Inc. Kelso, Washington

Notes:

1. SW846 - *USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,* SW-846, Third Edition, December 1996.
2. EPA Methods - *USEPA Methods for Chemical Analysis of Water and Wastes,* EPA–600/4-79-020, March 1983 Revision.
3. EPA Method 1631E - *Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry,* Office of Water, U.S. Environmental Protection Agency, August 2002, EPA-821-R-02-019.
4. NWTPH Methods – *Washington State Department of Ecology, Analytical Methods for Petroleum Hydrocarbons*, Publication No. ECY 97-602, June 1997.

DATA VALIDATION FINDINGS

1. VOCs by GC/MS (EPA Method SW8260C)

1.1 Sample Management and Holding Time

Samples were received in the laboratory intact and in consistence with the accompanying chain-of-custody (COC) documentation. In some cases where cooler temperature was outside the 4±2°C criteria; samples were hand-delivered to the laboratory the same day of collection. The cooler temperature exceedance had no significant effects on data quality. No other anomalies were identified in relation to sample preservation, handling, and transport.

All samples in SDGs: 402099, 402220, and 402265 were not preserved in methanol upon collection. The analyses were performed within a relatively short period of time (less than seven days) of collection. VOCs results for these samples, rather than being rejected, were qualified (UJ) for non-detects and (J) for detects as estimated.

Soil samples should be preserved at the time of collection. Soil samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

1.2 GC/MS Instrument Performance Check

The method require that (1) gas chromatograph/mass spectrometer (GC/MS) tuning analysis be performed, using bromofluorobenzene (BFB), at the beginning of each 12-hour period prior to any analysis, and (2) specific mass ions meet the criteria provided in the method. All instrument performance checks met the requirements.

1.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the percent relative standard deviation (%RSD) of response factors (RFs) be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. ICALs either met the requirements or the outliers had no adverse effects on data usability (*e.g.,* %RSD >20% for a compound not detected in samples).

An initial calibration verification (ICV) standard (second source standard) was analyzed to verify the calibration curve. Percent difference (%D) values were either within ±30%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

1.4 Calibration Verification (CCV)

The CCV criteria requires that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D value be within ±20%.

Calibration verifications either met the requirements, or the exceedance had no adverse effects on data usability (*e.g.,* biased high CCV recovery for a compound not detected in samples), except for the following:

SDG	CCV ID	Compound	%D	Bias	Affected Sample	Data Qualifier
403091	GCMS4 3/7/14, 14:00	Bromomethane	25.6%	Low	SHB-S03-3-030614 SHB-S04-3-030614 SHB-S05-3-030614 SHB-S06-3-030614 SHB-B01-5-030614 SHB-B02-5-030614 SHB-B03-5-030614 SHB-500	**UJ**

1.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the reporting limits (RLs).

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

LCS and LCSD were prepared and analyzed as required by the method. Percent recovery (%R) and relative percent difference (RPD) values either met the project control limits, or the outliers had no adverse effects on data usability (*e.g.,* biased high recovery for a compound not detected in samples).

1.7 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits.

1.8 Matrix Spike (MS)

MS analyses were performed on project and batch QC samples at the proper frequency (≥5% of the samples analyzed for VOCs). All %R values were within the project control limits, except for the following:

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Data Qualifier
310458	CONC-SP-01-102313	1,1,2,2-tetrachloroethane	21%	13%	28-140%	47%	**UJ**

Note that the %R values for the lower-boiling-point VOCs in the MSD analyses performed on samples NRS-500-021214 (SDG: 402161) and NRS-SP08-1-021914 (SDG: 402265) appeared to be a result of mishandling of the MSD samples, rather than matrix effects. Data were not qualified on this basis.

1.9 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

1.10 Reporting Limit and Target Compound Quantitation

RLs were supported with adequate initial calibration concentrations.

1,4-dioxane and vinyl acetate were reported from the mass spectrum library search, the reported RLs were considered estimated. These compounds were not detected in any of the field samples; the results were qualified (UJ) to indicate that the RLs were estimated values.

In cases where a sample was analyzed for both VOCs (Method 8260C) and SVOCs (Method 8270D), the results for 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, hexachlorobutadiene, and naphthalene were to be reported from the SVOCs analysis, in favor of the lower detection limits.

In cases where a sample was analyzed for both VOCs (Method 8260C) and PAHs (Method 8270-SIM), the result for naphthalene was to be reported from the PAHs analysis, in favor of the lower detection limit.

1.11 Field Duplicates

Five sets of field duplicates were submitted for VOCss analyses. VOCs were not detected at or above RLs in these sample; the field precision met the project advisory criteria.

1.12 Overall Assessment of VOCs Data Usability

VOCs data are of known quality and acceptable for use, as qualified.

2. SVOCs and PAHs by GC/MS and GC/MS - SIM (EPA Method SW8270D and SIM)

2.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days and water within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

2.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

2.3 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. All ICALs met the requirements.

An ICV standard (second source standard) was analyzed to verify the calibration curve. %D values were either within ±30%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

2.4 Calibration Verification (CCV)

The analytical method requires that (1) continuing calibration verifications be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D be within ±20%. The CCVs met the requirements, except for the following:

SDG	CCV ID	Compound	%D	Bias	Affected Sample	Data Qualifier
401174	GCMS8 1/21/14, 12:29	Benzoic Acid	27.8%	Low	STIL-G9-011414 STIL-G10-011414 STIL-G11-011414 STIL-G12-011414	**UJ**

SDG	CCV ID	Compound	%D	Bias	Affected Sample	Data Qualifier
401299	GCMS8 2/13/14, 7:04	Benzoic Acid	42.0%	Low	NRS-SP01-2-021014 NRS-SP01-3-021014 NRS-SP02-3-021014 NRS-SP04-1-021014	**UJ**
401299	GCMS8 2/13/14, 17:43	2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol	36.7% 34.4%	Low	NRS-SP01-1-021014 NRS-SP02-1-021014 NRS-SP02-2-021014 NRS-SP03-2-021014 NRS-SP05-2-021014 NRS-SP05-3-021014 NRS-SP06-1-021014 NRS-SP06-2-021014 NRS-SP06-3-021014 NRS-SP07-1-021014	**UJ**
402220	GCMS8 2/20/14, 17:38	Benzoic Acid	38.2%	Low	BAST-SP01-2-021714	**UJ**
402263	GCMS6 2/20/14, 8:21	Indeno(1,2,3-cd)pyrene	34.2%	Low	NRS-B09-10-021814	**UJ**
402264	GCMS8 2/24/14, 7:44	1,3-Dichlorobenzene Benzoic Acid 2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol	42.4% 28.9% 27.9% 23.0%	Low	NRS-SP08-2-021914 NRS-SP10-2-021914 NRS-SP10-3-021914	**UJ**
402264	GCMS8 2/22/14, 17:12	Benzoic Acid	46.3%	Low	NRS-SP08-3-021914 NRS-SP09-1-021914 NRS-SP09-2-021914 NRS-SP09-3-021914 NRS-SP10-1-021914	**UJ**
402347	GCMS6 2/27/14, 7:07 2/27/14, 17:03	Indeno(1,2,3-cd)pyrene	-27.0% -24.6%	High	BAST-B78-4-022414 BAST-S87-2-022414 BAST-S90-4-022514	**UJ**

2.5 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks. 1,4-Dichlorobenzene was detected at a level greater than the method detection limit but less than the RL in the method blank associated with samples in SDGs 402099 and 402220. 1,4-Dichlorobenzene detections in these samples were less than 10x the level found in the method blank and were qualified (U) as non-detects at the reported values, as summarized in **SUMMARY, Table I**.

2.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits or at levels that had no adverse effects on data quality (*e.g.,* biased-high recovery for compounds that were not detected in samples). In some cases surrogate spike %R values were not applicable for data evaluation because the samples contained high levels of target PAHs and required dilution analysis; no data were qualified in these cases.

2.7 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency (≥5% of samples analyzed). All %R and RPD values met the project control criteria, except for the following:

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Data Qualifier
402099	NRS-SP01-1-021014	Hexachlorocyclopentadiene 2,4-Dinitrophenol Pyrene	29% 81% 114%	15% 47% 143%	50-150%	64% 53% 23%	**UJ** **UJ** **J**
402099	NRS-SP07-3-021014	Hexachlorocyclopentadiene 2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol	16% 30% 37%	8% 24% 32%	50-150%	67% 22% 14%	**UJ**
403027	CN-S01-3-030314	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Chrysene	84% 87% 94% 87%	150% 138% 164% 186%	23-144% 39-128% 31-144% 45-122%	56% 45% 54% 73%	**J**

Note: RPD control criteria = ±20%

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits, except for the following:

SDG#	LCS ID	Analyte	LCS %R	LCSD %R	Control Limit	RPD	Affected Sample	Data Qualifier
401212	LCS/LCSD	Indeno(1,2,3-cd)pyrene	77%	60%	62-119%	25%	BV-S01-6-011714 BV-S04-6-011714	**UJ**
402263	LCS/LCSD	*cis*-1,3-Dichloropropene Dibromochloromethane *trans*-1,3-Dichloropropene	71% 64% 72%	-	75-136% 72-132% 74-125%	-	NRS-S27-8-021814 NRS-S28-8-021814 NRS-B09-10-021814 NRS-S29-8-021914	**UJ**

Note: RPD control criteria = ±20%

2.9 Internal Standards

The method requires that (1) internal standard retention time be within ±30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within –50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria, except for the following:

SDG#	Sample ID	Internal Standard	Sample Response Area	CCV Response Area	Affected Compound	Data Qualifier
310458	CONC-SP-01-102313	Chrysene-d_{12} Perylene-d_{12}	505384 371993	1522710 881878	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Dibenzo(a,h)anthracene Di-n-octyl phthalate Indeno(1,2,3-cd)pyrene Pyrene	**J** **J** **J** **J** **J** **UJ** **UJ** **J** **J** **UJ** **J** **J**
310458	CONC-SP-02-102313	Chrysene-d_{12} Perylene-d_{12}	535966 339158	1522710 881878	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Dibenzo(a,h)anthracene Di-n-octyl phthalate Indeno(1,2,3-cd)pyrene Pyrene	**J** **J** **J** **J** **J** **UJ** **UJ** **J** **J** **UJ** **J** **J**
310458	CONC-SP-05-102313	Chrysene-d_{12}	600742	1522710	Benz(a)anthracene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Pyrene	**J**
310458	CONC-SP-06-102313	Chrysene-d_{12} Perylene-d_{12}	587148 403106	1522710 881878	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Dibenzo(a,h)anthracene Di-n-octyl phthalate Indeno(1,2,3-cd)pyrene Pyrene	**J** **J** **J** **J** **J** **UJ** **UJ** **J** **UJ** **UJ** **J** **J**
402099	NRS-SP02-3-021014	Chrysene-d_{12}	1064719	2390680	Benz(a)anthracene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Pyrene	**J**
403089	CN-S24-6-030714	Perylene-d_{12}	272282	130766	Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Dibenzo(a,h)anthracene Indeno(1,2,3-cd)pyrene	**J**

Note that samples listed above were also analyzed at dilutions to confirm the presence and effects of sample matrices on internal standard quantitation. The initial analyses provided optimal data usability. Therefore, the PAHs/SVOCs results were to be reported from the initial analyses as qualified above, and the dilution analyses discarded.

2.10 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations. In some cases samples required dilution for definitive quantitation of target compounds; the RLs were raised accordingly, and the compounds reported from the dilution analysis. The remaining (un-diluted) target compounds were to be reported from the initial analysis for the lower detection limits.

2.11 Field Duplicates

Eleven sets of field duplicates were submitted for PAHs analyses. Field duplicate results for detected target compounds, RPD (or concentration difference) values, and data qualification were presented in **Appendix A**.

2.12 Overall Assessment of PAHs Data Usability

PAHs data are of known quality and acceptable for use, as qualified.

3. PCB Aroclors (EPA Method SW8082A)

3.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days of collection and extracts analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

3.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using the mixture of Aroclor 1016 and 1260, (2) a single-point calibration be performed for the other five Aroclors to establish calibration factors (CFs) and for Aroclor pattern recognition, (3) at least 3 peaks (preferably 5 peaks) must be chosen for each Aroclor for characterization, (4) the %RSD values of Aroclor 1016 and 1260 CFs must be ≤20%, and

(5) if dual column analysis is chosen, both columns should meet the requirements. All ICALs met the requirements.

3.3 Calibration Verification

CCV analyses should be performed for each 12-hour analysis sequence prior to sample analyses, and the %D be within ±20%. Calibration verifications were performed at the required frequency. All %D values either met the control criteria or biased high for target compounds that were not detected in the associated samples.

3.4 Method Blanks

Method blanks were prepared and analyzed as required. PCB Aroclors were not detected at or above the MDLs in the method blanks.

3.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

3.6 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on project samples or batch QC samples at the required frequency. All %R and RPD values were within the laboratory control limits.

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

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the project control limits.

3.8 Method Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations and achieved the project target quantitation limits.

3.9 Field Duplicates

Field duplicates were not submitted for PCB Aroclors analysis in these SDGs.

3.10 Overall Assessment of PCB Aroclors Data Usability

PCB Aroclor data are of known quality and acceptable for use.

4. TPH-Gasoline by GC/FID (Method NWTPH-Gx)

4.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

All samples in SDGs: 402099, 402220, and 402265 were not preserved in methanol upon collection. The analyses were performed within a relatively short period of time (less than seven days) of collection. TPH-Gasoline results for these samples, rather than being rejected, were qualified (UJ) for non-detects and (J) for detects as estimated.

Soil samples should be preserved in methanol at the time of collection. Soil samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

4.2 Initial Calibration (ICAL)

The method criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be ≥0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be ≥0.990, and (4) the back-calculated %D value for each calibration standard be within ±15%. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

4.3 Calibration Verification

Continuing calibration verification (CCV) analyses were performed at the required frequency for all analytical sequences as required by the method. The %D values for all CCVs met the method criterion (±20%).

4.4 Method Blanks

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

4.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits, or outside the control limits due to matrix interference, or diluted below quantitation limits due to high levels of target or non-target compounds in the samples. No data qualifying actions were taken in these cases.

4.6 Matrix Spike and Matrix Spike Duplicate

MS/MSD analyses were not performed for TPH-Gasoline analyses; instead, duplicate and LCS analyses in combination were performed.

4.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the laboratory control limits.

4.8 Laboratory Duplicate Analysis

Duplicate analyses were performed on project and batch QC samples at the proper frequency. All RPD and concentration difference values met the laboratory control criteria.

4.9 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

4.10 Field Duplicates

Five sets of field duplicates were submitted for PAHs analyses. Field duplicate results for detected target compounds, RPD (or concentration difference) values, and data qualification were presented in **Appendix A**.

4.11 Overall Assessment of TPH-Gasoline Data Usability

TPH-Gasoline data are of known quality and acceptable for use, as qualified.

5. TPH-Diesel & Motor Oil by GC/FID (Method NWTPH-Dx)

5.1 Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the recommended holding times.

5.2 Initial Calibration

The method criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be ≥0.995, (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be ≥0.990, and (4) the back-calculated %D value for each calibration standard be within ±15%. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

5.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift (%D) value be within ±20% of the true value.

Calibration verification was performed at required frequency. The %D values were either within the ±20% criterion or at levels that had no adverse effects on data quality (e.g., high-bias %D value where the target compound was not detected in associated sample).

5.4 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks.

5.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits, or outside the control limits due to matrix interference, or diluted below quantitation limits due to high levels of target or non-target compounds in the samples. No data qualifying actions were taken in these cases.

5.6 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency. The %R and RPD values met the laboratory control criteria.

5.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required. All %R values met the project control limits.

5.8 Target Compound Identification

Selected sample extracts were cleaned up with acid and silica gel treatment to minimize the biogenic interference with target compound identification, as required by the project. The laboratory reported results as diesel #2 (C10 - C25) and motor oil (C25 - C36), as required by the method. In some cases where sample chromatographic patterns resembled Bunker C fuel, the results were quantitated and reported as Bunker C fuel accordingly. No anomalies were identified relative to target compound identification.

5.9 Reporting Limits and Target Compound Quantitation

The reported RLs were supported with adequate ICAL concentrations.

The Bunker C fuel concentration in sample BUST-S67-3 exceeded instrument calibration range; the result was qualified (J) as estimated.

5.10 Field Duplicates

Fourteen sets of field duplicates were submitted for TPH-Diesel and TPH-Motor Oil analyses. Field duplicate results, RPD (or concentration difference) values, and data qualification for detected TPH-Diesel or Motor Oil were presented in **Appendix A**.

5.11 Overall Assessment of TPH-Diesel and Motor Oil Data Usability

TPH-Diesel and TPH-Motor Oil data are of known quality and acceptable for use, as qualified.

6. Total Metals by ICP/MS and CVAFS (EPA Methods 200.8 and 1631E)

6.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Soil and water samples should be analyzed within 180 days for metals and 28 days for mercury. Samples were analyzed within the required holding times.

6.2 ICP/MS Tuning

Instrument tuning was performed at the required frequency. The stability check (%RSD <5%), mass calibration (mass difference <0.1 AMU), and resolution check (peak width <1.0 AMU at 5% peak height) met the NFG and method criteria.

6.3 Initial Calibration (ICAL)

The ICP/MS method requires that (1) a blank and one calibration standard be used in establishing the analytical curve, and (2) the average of replicate exposures be reported for all standards, QC, and sample analyses.

The CVAFS method require that (1) a blank and five calibration standards be employed to establish the analytical curve, (2) the linearity of the calibration curve should meet the criteria of correlation coefficient ≥ 0.995 for linear regression, and (3) the %RSD <15% if average response factor approach is employed.

All ICALs met the method requirements.

6.4 Calibration Verification (ICV and CCV)

Initial calibration verifications (ICVs) and continuing calibration verifications (CCVs) for ICP/MS and GFAA and ongoing precision recovery (OPR) were analyzed at the required frequency. The %R values either met the control criteria (90 – 110% for metals, 76 – 123% for mercury) or the exceedance had no adverse effects on data usability (e.g., high-bias %D value where the target compound was not detected in associated sample).

6.5 Blanks

Calibration Blanks: Initial calibration blanks (ICBs) and continuing calibration blanks (CCBs) were not analyzed after calibration verification standards. Target analytes were either not detected at or above the RLs in the ICBs and CCBs, or sample results affected by the ICB/CCB detections were qualified as results of detections in preparation blanks.

Preparation Blanks: Preparation blanks were prepared and analyzed as required. Target analytes were either not detected at or above the RLs in the preparation blanks, or sample results were greater than 10X the detection in the associated blank, except for the following:

SDG	Method Blank ID	Compound	MB (µg/L)	Affected Sample	Original Result	Qualified Result	Unit
311028	I3-748	Arsenic	0.358 J	BAST-B051-5.0 BAST-B504-5.0	1.92 1.37	1.92 J 1.37 J	**mg/kg**
401056	I4-010	Zinc	-1.502	NRA2-PC2-8-010614	15.4	15.4 J	**mg/kg**
402220	I4-096	Antimony	0.105	BAST-SP01-1-021714	3.09	3.09 J	**mg/kg**
402347	I4-0121	Zinc	-1.179	BAST-S88-4-022514	8.709	8.709 J	**mg/kg**
403027	I4-139	Zinc	-1.764	CN-S05-6-030314 CN-S10-6-030314 CN-500-030314	8.137 10.89 12.29	8.137 J 10.89 J 12.29 J	**mg/kg**
403201	I4-164	Nickel	0.405	CN-502-031514 CN-S36-12-031514 CN-S42-12-031514	7.52 9.45 11.2	7.52 J 9.45 J 11.2 J	**mg/kg**
403201	I4-164	Zinc	-0.749	CN-502-031514 CN-S42-12-031514	8.48 17.0	8.48 J 17.0 J	**mg/kg**
403201	I4-164	Arsenic	-0.1556	CN-502-031514 CN-S36-12-031514	6.95 5.21	6.95 J 5.21 J	**mg/kg**
403267	I4-174	Zinc	-1.23	CN-B24-16-031914 CN-S49-12-031914 CN-S51-3-032014 CN-S53-3-032014 CN-B26-4-032014 CN-B28-4-032014	10.02 3.696 11.92 3.904 10.41 10.96	10.02 J 3.696 J 11.92 J 3.904 J 10.41 J 10.96 J	**mg/kg**

6.6 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the project control limits, or the exceedance had no adverse effects on data usability (e.g., high-bias %R value where the target compound was not detected in associated sample).

6.7 Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the adequate frequency (>5% of field sample). The %R and RPD values either met the laboratory control limits or the outliers were not applicable for matrix effect evaluation (e.g. sample concentration >4x spiking level), except for the following:

SDG#	Parent Sample ID	Analyte	MS %R	MSD %R	Control Limit	RPD	Affected Sample	Data Qualifier
401111	Cemex-QS-011014	Zinc	39%	45%	50-150%	14%	BUST-S68-3	J
402099	NRS-SP01-1-021014	Mercury	54%	64%	62-140%	17%	NRS-SP01-1-021014	J
402128	BAST-S069-3-021114	Mercury	56%	32%	62-140%	55%	BAST-S069-3-021114 BAST-507	J

Note: RPD control criteria = ±20%

6.8 Internal Standards

At least three internal standards were added to all field and QC samples for ICP/MS analyses. All percent relative intensity values were within the method criteria (60 - 125%).

6.9 Method Reporting Limits and Analyte Quantitation

Sample-specific RLs were supported with adequate initial calibration concentrations.

6.10 Field Duplicates

Seven sets of field duplicates were submitted for metals analyses. Field duplicate results, RPD (or concentration difference) values, and data qualification for detected TPH-Diesel or Motor Oil were presented in **Appendix A**.

6.11 Overall Assessment of Metals Data Usability

Metal data are of known quality and acceptable for use, as qualified.

7. Formaldehyde by HPLC/UV (EPA Method 8315A)

7.1 Sample Management and Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Soil samples should be derivatized and extracted within seven days of sample collection. All derivatized sample extracts should be analyzed within three days after preparation. The sample was prepared and analyzed within the required holding times.

7.2 Instrument Calibration

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.990. Initial calibration met the criteria for all target compounds.

An ICV (second source) standard was analyzed to verify the calibration curve. %D values were within ±20%.

7.3 Calibration Verification

CCV analyses were performed at the required frequency for all analytical sequences as required by the method. The %D values for all CCVs met the method criterion (±20%).

7.4 Method Blanks

A method blank was prepared and analyzed in each preparation batch as required. Formaldehyde was not detected at or above the RL in method blanks.

7.5 Matrix Spike (MS) and MS Duplicate (MSD)

MS and MSD analyses were performed on project and batch QC samples at the proper frequency. The %R and RPD values met the laboratory control criteria.

7.6 Laboratory Control Samples (LCS)

LCS analyses were performed as required by the methods. The %R values were within the laboratory control limits.

7.7 Field Duplicates

Two sets of field duplicates were submitted for metals analyses. Field duplicate results, RPD (or concentration difference) values, and data qualification for detected TPH-Diesel or Motor Oil were presented in **Appendix A**.

7.8 Overall Assessment of Formaldehyde Data Usability

Formaldehyde data are of known quality and acceptable for use, as qualified.

8. Extractable Petroleum Hydrocarbon (EPH) by GC/FID (Method NWTPH-EPH)

8.1 Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be extracted within 14 days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the recommended holding times.

8.2 Initial Calibration

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.990, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.990. Initial calibration met the criteria for all target compounds.

Initial calibration information was not submitted for review in these SDGs.

8.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift (%D) value be within ±20% of the true value.

Calibration verification was performed at required frequency. The %D values were either within the ±30% criterion or at levels that had no adverse effects on data quality (e.g., high-bias %D value where the target compound was not detected in associated sample).

8.4 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs in the method blanks, except for the following:

SDG	Method Blank ID	Compound	MB Conc.	Affected Sample	Original Result	Qualified Result	Unit
401241	**6467**	Aromatic C8-C10	0.992 J	BAST-S59-7-012114	1.06	**5.19 U**	**mg/kg**
402219	**6751**	Aromatic C8-C10	1.96 J	BAST-S075-4-021714	14.0 J	**52.5 U**	**mg/kg**

8.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits, or outside the control limits due to matrix interference, or diluted below quantitation limits due to high levels of target or non-target compounds in the samples. No data qualifying actions were taken in these cases.

8.6 Matrix Spike (MS)

MS analyses were performed on project and batch QC samples at the proper frequency. The %R values met the laboratory control criteria.

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

LCS and LCSD analyses were performed as required. All %R and RPD values met the project control limits, except for the following:

SDG#	LCS ID	Analyte	LCS %R	LCSD %R	Control Limit	RPD	Affected Sample	Data Qualifier
402219	6751	Aromatic C8-C10 Aromatic C10-C12	47.0% 28.2%	55.0% 34.8%	70-130%	-	BAST-S59-7-012114	**J**

Note: RPD criteria = ±20%.

8.8 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were consistent with method-recommended pratical quantitation limits and were adjusted with sample volumes and moisture contents.

8.9 Field Duplicates

Field duplicates were not submitted for EPH analysis in these SDGs.

8.10 Overall Assessment of EPH Data Usability

EPH data are acceptable for use as qualified, based on the information submitted by the laboratory.

9. Volatile Petroleum Hydrocarbon by GC/FID (Method NWTPH-VPH)

9.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be preserved with methanol at the time of collection, and analyzed within 14 days of collection. All samples were analyzed within the required holding times.

9.2 Initial Calibration (ICAL)

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be ≤20%, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.990, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.990. Initial calibration met the criteria for all target compounds.

Initial calibration information was not submitted for review in these SDGs.

9.3 Calibration Verification

Continuing calibration verification (CCV) analyses were performed at the required frequency for all analytical sequences as required by the method. The %D values for all CCVs met the method criterion (% value within ±20% for the carbon range components and ±15% for individual target compounds), except for the following:

SDG	CCV ID	Compound	%D	Bias	Affected Sample	Data Qualifier
401241	6483A	Methyl-*tert*-butyl ether	23.9%	Low	BAST-S59-7-012114	**UJ**

9.4 Method Blanks

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

9.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were either within the project control limits, or outside the control limits due to matrix interference, or diluted below quantitation limits due to high levels of target or non-target compounds in the samples. No data qualifying actions were taken in these cases.

9.6 Matrix Spike (MS)

MS analyses were performed on project or batch QC samples at the required frequency. The %R values were within the laboratory control limits, except for the following:

SDG#	Parent Sample ID	Compound	MS %R	Control Limit	Affected Sample	Data Qualifier
401318	NRU-B5-16-012714	Aliphatics C10-C12 Aromatics C10-C12	-18.5% 43.8%	57-120%	NRU-B5-16-012714	J

9.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values were within the laboratory control limits.

9.8 Laboratory Duplicate Analysis

Duplicate analyses were performed on project and batch QC samples at the proper frequency. All RPD and concentration difference values met the laboratory control criteria.

9.9 Reporting Limits and Target Compound Quantitation

Sample-specific RLs were consistent with method-recommended practical quantitation limits, and were adjusted with sample volumes and moisture contents.

9.10 Field Duplicates

Field duplicates were not submitted for VPH analysis in these SDGs.

9.11 Overall Assessment of VPH Data Usability

VPH data are acceptable for use as qualified, based on the information submitted by the laboratory.

10. BTEX by GC/PID (EPA Method SW8021B)

10.1 Sample Management and Holding Time

No anomalies were identified in relation to sample preservation, handling, and transport as discussed in Section 1.1.

Soil samples should be preserved in methanol at the time of collection. Soil and water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding times.

10.2 Initial Calibration (ICAL)

The ICAL criteria require that (1) if linear average RFs is chosen as the quantitation option, at least five standards at different concentrations should be analyzed and the percent relative standard deviation (%RSD) of response factors (RFs) be ≤20% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. The ICAL met the requirements.

An initial calibration verification (ICV) standard (second source standard) was analyzed to verify the calibration curve. Percent difference (%D) values were either within ±20%, or the exceedance had no adverse effects on data usability (*e.g.,* biased high ICV recovery for a compound not detected in samples).

10.3 Calibration Verification (CCV)

The CCV criteria requires that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, and (2) the %D be within ±20. Calibration verifications met the requirements.

10.4 Method Blanks

Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the RLs.

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

LCS and LCSD were prepared and analyzed as required by the method. The %R and RPD values met the project control limits.

10.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the project control limits.

10.7 Matrix Spike (MS)

MS analyses were performed on project and batch QC samples at the proper frequency. All %R values were within the project control limits.

10.8 Reporting Limit and Target Compound Quantitation

RLs were supported with adequate initial calibration concentrations.

10.9 Field Duplicates

Field duplicates were not submitted for BTEX analysis in these SDGs.

10.10 Overall Assessment of BTEX Data Usability

BTEX data are of known quality and acceptable for use.

SUMMARY

Table I. Data Affected by QC Anomalies:

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
402099-01 402128-04 402128-07	NRS-SP01-1-021014 BAST-S069-3-021114 BAST-507	Mercury	**J** **J** **UJ**	MS/MSD %R values were <LCL
402220-01	BAST-SP01-1-021714	Antimony	**J**	Analyte was detected in MB
403201-22	CN-S36-12-031514	Arsenic	**J**	Analyte was detected in MB
403201-20 403201-22 403201-28	CN-502-031514 CN-S36-12-031514 CN-S42-12-031514	Nickel	**J**	Analyte was detected in MB
403201-28	CN-S42-12-031514	Zinc	**J**	Analyte was detected in MB
403201-20	CN-502-031514	Arsenic Zinc	**J**	FD RPD value was >35%; analyte was detected in MB
401056-02 402347-03 403027-05 403027-10 403027-20 403267-02 403267-03 403267-06 403267-08 403267-09 403267-11	NRA2-PC2-8-010614 BAST-S88-4-022514 CN-S05-6-030314 CN-S10-6-030314 CN-500-030314 CN-B24-16-031914 CN-S49-12-031914 CN-S51-3-032014 CN-S53-3-032014 CN-B26-4-032014 CN-B28-4-032014	Zinc	**J**	Result was affected by negative detection in MB
401111-01	Cemex-QS-011014	Zinc	**J**	MS/MSD %R values were <LCL
401241-03	BAST-S59-7-012114	Aliphatic C8-C10 (EPH)	**J**	LCS/LCSD %R values were <LCL
402219-01	BAST-S075-4-021714	Aromatics C10-C12 (EPH)	**J**	LCS/LCSD %R values were <LCL
401241-03	BAST-S59-7-012114	Methyl-tert-butyl ether	**UJ**	CCV %D value was <LCL

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
402099-01 402099-02 402099-03 402099-04 402099-05 402099-06 402099-07 402099-08 402099-09 402099-10 402099-11 402099-12 402099-13 402099-14 402099-15 402099-16 402099-17 402099-18 402099-19 402099-20 402099-21 402220-01 402220-02 402220-03 402265-01 402265-02 402265-03 402265-04 402265-05 402265-06 402265-07 402265-08 402265-09	NRS-SP01-1-021014 NRS-SP01-2-021014 NRS-SP01-3-021014 NRS-SP02-1-021014 NRS-SP02-2-021014 NRS-SP02-3-021014 NRS-SP03-1-021014 NRS-SP03-2-021014 NRS-SP03-3-021014 NRS-SP04-1-021014 NRS-SP04-2-021014 NRS-SP04-3-021014 NRS-SP05-1-021014 NRS-SP05-2-021014 NRS-SP05-3-021014 NRS-SP06-1-021014 NRS-SP06-2-021014 NRS-SP06-3-021014 NRS-SP07-1-021014 NRS-SP07-2-021014 NRS-SP07-3-021014 BAST-SP01-1-021714 BAST-SP01-2-021714 BAST-SP01-3-021714 NRS-SP08-1-021914 NRS-SP08-2-021914 NRS-SP08-3-021914 NRS-SP09-1-021914 NRS-SP09-2-021914 NRS-SP09-3-021914 NRS-SP10-1-021914 NRS-SP10-2-021914 NRS-SP10-3-021914	Gasoline Range TPH VOCs	**J/UJ**	Sample was not preserved per method requirements
403091-03 403091-04 403091-05 403091-06 403091-07 403091-08 403091-09 403091-10	SHB-S03-3-030614 SHB-S04-3-030614 SHB-S05-3-030614 SHB-S06-3-030614 SHB-B01-5-030614 SHB-B02-5-030614 SHB-B03-5-030614 SHB-500	Bromomethane	**UJ**	CCV %D value was <LCL
402263-01 402263-02 402263-03 402263-04	NRS-S27-8-021814 NRS-S28-8-021814 NRS-B09-10-021814 NRS-S29-8-021914	*cis*-1,3-Dichloropropene Dibromochloromethane *trans*-1,3-Dichloropropene	**UJ**	LCS %R value was <LCL
310458-01	CONC-SP-01-102313	1,1,2,2-Tetrachloroethane	**UJ**	MS/MSD %R values were <LCL

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
402099-01 402099-02 402099-03 402099-13 402099-18 402220-03	NRS-SP01-1-021014 NRS-SP01-2-021014 NRS-SP01-3-021014 NRS-SP05-1-021014 NRS-SP06-3-021014 BAST-SP01-3-021714	1,4-Dichlorobenzene	**U**	Analyte was detected in MB
402265-02	NRS-SP08-2-021914	1,3-Dichlorobenzene	**UJ**	CCV %D value was <LCL
401174-01 401174-02 401174-03 401174-04	STIL-G9-011414 STIL-G10-011414 STIL-G11-011414 STIL-G12-011414	Benzoic acid	**UJ**	CCV %D value was <LCL
402099-01	NRS-SP01-1-021014	4,6-Dinitro-2-methylphenol	**UJ**	CCV %D value was <LCL
402099-02 402099-03 402099-06 402099-10	NRS-SP01-2-021014 NRS-SP01-3-021014 NRS-SP02-3-021014 NRS-SP04-1-021014	Benzoic acid	**UJ**	CCV %D value was <LCL
402220-02	BAST-SP01-2-021714	Benzoic acid	**UJ**	CCV %D value was <LCL
402099-04 402099-05 402099-08 402099-14 402099-15 402099-16 402099-17 402099-18 402099-19	NRS-SP02-1-021014 NRS-SP02-2-021014 NRS-SP03-2-021014 NRS-SP05-2-021014 NRS-SP05-3-021014 NRS-SP06-1-021014 NRS-SP06-2-021014 NRS-SP06-3-021014 NRS-SP07-1-021014	2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol	**UJ**	CCV %D value was <LCL
402265-02	NRS-SP08-2-021914	2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol Benzoic acid	**UJ**	CCV %D value was <LCL
402265-03 402265-04 402265-05 402265-06 402265-07	NRS-SP08-3-021914 NRS-SP09-1-021914 NRS-SP09-2-021914 NRS-SP09-3-021914 NRS-SP10-1-021914	Benzoic acid	**UJ**	CCV %D value was <LCL
402265-08 402265-09	NRS-SP10-2-021914 NRS-SP10-3-021914	1,3-Dichlorobenzene 2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol Benzoic acid	**UJ**	CCV %D value was <LCL
402099-01	NRS-SP01-1-021014	2,4-Dinitrophenol	**UJ**	CCV %D value was <LCL; MSD %R value was <LCL

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
310458-01	CONC-SP-01-102313	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Dibenzo(a,h)anthracene Di-n-octyl phthalate Indeno(1,2,3-cd)pyrene Pyrene	**J** **J** **J** **J** **J** **UJ** **UJ** **J** **J** **UJ** **J** **J**	Internal standard recovery was <LCL
310458-02	CONC-SP-02-102313	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Dibenzo(a,h)anthracene Di-n-octyl phthalate Indeno(1,2,3-cd)pyrene Pyrene	**J** **J** **J** **J** **J** **UJ** **UJ** **J** **J** **UJ** **J** **J**	Internal standard recovery was <LCL
310458-05	CONC-SP-05-102313	Benz(a)anthracene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Pyrene	**J**	Internal standard recovery was <LCL
310458-06	CONC-SP-06-102313	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Dibenzo(a,h)anthracene Di-n-octyl phthalate Indeno(1,2,3-cd)pyrene Pyrene	**J** **J** **J** **J** **J** **UJ** **UJ** **J** **UJ** **UJ** **J** **J**	Internal standard recovery was <LCL
402099-06	NRS-SP02-3-021014	Benz(a)anthracene Benzyl butyl phthalate *bis*(2-ethylhexyl) phthalate Chrysene Pyrene	**J** **UJ** **UJ** **J** **J**	Internal standard recovery was <LCL
402099-21	NRS-SP07-3-021014	2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol Hexachlorocyclopentadiene	**UJ**	MS/MSD %R values were <LCL

Laboratory ID	Sample ID	Analyte	Qualifier	Qualified Reason
402099-01	NRS-SP01-1-021014	Hexachlorocyclopentadiene Pyrene	**UJ** **J**	MS/MSD %R values were <LCL
310458-01DL 310458-02DL 310458-05DL 310458-06DL 310458-09DL	CONC-SP-01-102313 CONC-SP-02-102313 CONC-SP-05-102313 CONC-SP-06-102313 CONC-SP-02-102313 Agg	SVOCs	**DNR**	Report from initial analysis
402263-03 402347-01 402347-02 402347-05	NRS-B09-10-021814 BAST-B78-4-022414 BAST-S87-2-022414 BAST-S90-4-022514	Indeno(1,2,3-cd)pyrene	**J**	CCV %D value was >UCL
403089-11	CN-S24-6-030714	Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Dibenzo(a,h)anthracene Indeno(1,2,3-cd)pyrene	**J**	Internal standard recovery was >UCL
403027-01	CN-S01-3-030314	Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Chrysene	**J**	MS/MSD RPD & MSD %R values were >UCL
311028-01 311028-02	BAST-B051-5.0 BAST-B504-5.0	Bunker C	**J** **UJ**	FD difference >2XRL
401317-10	BAST-B65-3.5-012714	Anthracene Benz(a)anthracene Chrysene Phenanthrene Pyrene	**UJ** **UJ** **UJ** **J** **UJ**	FD difference >2xRL
401317-11	BAST-506-012714	Anthracene Benz(a)anthracene Chrysene Phenanthrene Pyrene	**J**	FD difference >2xRL
403091-07 403091-10	SHB-B01-5-030614 SHB-500	Lead Fluoranthene Pyrene	**J**	FD difference >2xRL
403101-03 403101-07	CN-B10-11-030714 CN-501	Benzo(a)pyrene Benzo(b)fluoranthene Chrysene Fluoranthene Naphthalene Phenanthrene Pyrene	**J**	FD difference >2xRL
403201-17	CN-B20-16-031514	Arsenic Zinc	**J**	FD RPD value >35%

Notes:
%R - Percent recovery
CCV - Continuing calibration verification
DL - Dilution analysis
FD - Field duplicate

LCL - Lower control limit
LCS - Laboratory control sample
LCSD - Laboratory control sample duplicate
MB - Method blank
MS - Matrix spike
MSD - Matrix spike duplicate
RPD - Relative percent difference
UCL - Upper control limit

Table II. Data Affected by Detections in Method Blank

SDG#	Sample ID	Compound	Original Result	Adjusted Result	Unit	Report Section
401241	BAST-S59-7-012114	Aromatics C8-C10 (EPH)	1.06 J	**5.19 U**	mg/kg	**8.4**
402219	BAST-S075-4-021714	Aromatics C8-C10 (EPH)	14.0 J	**52.5 U**	mg/kg	**8.4**

Table III. Data Qualifiers are defined as follows:

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

Approved By: ______________________ Date: ***6/23/2014***
Mingta Lin, Senior Project Chemist

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Appendix A

Field duplicate RPD is indicative of field and laboratory precision and sample homogeneity in combination. The CLP National Functional Guidelines or *Work Plan* do not specify criteria for field duplicate evaluation. An advisory criterion of 35% was applied to evaluating the RPD values of field duplicate results that are ≥5xRL. For results that are <5xRL, an advisory criterion of ±2RL was applied to evaluating the concentration differences. The RPD (or concentration difference as applicable) values and data qualification for detected compounds in field duplicates are presented as follows:

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
			BAST-S010-3.5	**BAST-502-3.2**			
Bunker C	mg/kg	0.1	ND	ND			
			BAST-B051-5.0	**BAST-B504-5.0**			
Bunker C	mg/kg	250	1000	ND		1000	**J**
			BAST-B65-3.5-012714	**BAST-506-012714**			
Arsenic	mg/kg	1	ND	ND		0	
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	15.6	14.9	5%		
Lead	mg/kg	1	3.22	2.47	26%		
Mercury	mg/kg	0.1	ND	ND		0	
Nickel	mg/kg	1	11.5	11.3	2%		
Zinc	mg/kg	1	71.6	66.7	7%		
Bunker C	mg/kg	250	ND	ND		0	
Acenaphthene	mg/kg	0.01	ND	0.011		0.011	
Anthracene	mg/kg	0.01	ND	0.025		0.025	**UJ/J**
Benz(a)anthracene	mg/kg	0.01	ND	0.029		0.029	**UJ/J**
Benzo(a)pyrene	mg/kg	0.01	ND	0.017		0.017	
Chrysene	mg/kg	0.01	ND	0.034		0.034	**UJ/J**
Fluorene	mg/kg	0.01	ND	0.016		0.016	
Phenanthrene	mg/kg	0.01	0.018	0.084		0.066	**UJ/J**
Pyrene	mg/kg	0.01	ND	0.06		0.06	**UJ/J**
			BAST-S069-3-021114	**BAST-507**			
Mercury	mg/kg	0.1	0.11	ND		0.11	
Arsenic	mg/kg	1	2.06	10	132%	7.94	**J/J**
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	22.3	40.1	57%		**J/J**
Lead	mg/kg	1	4.62	7.56		2.94	**J/J**

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Nickel	mg/kg	1	19.4	28.7	39%		**J/J**
Zinc	mg/kg	1	86.2	45.9	61%		**J/J**
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Gasoline Range TPH	mg/kg	2	ND	ND		0	
			NRS-B01-13-021214	**NRS-500-021214**			
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Gasoline Range TPH	mg/kg	2	ND	ND		0	
Fluoranthene	mg/kg	0.01	0.024	0.035		0.011	
Naphthalene	mg/kg	0.01	0.02	0.029		0.009	
Phenanthrene	mg/kg	0.01	0.016	0.024		0.008	
Pyrene	mg/kg	0.01	0.024	0.035		0.011	
			NRS-S17-8-021214	**NRS-501-021214**			
Mercury	mg/kg	0.1	ND	ND			
Arsenic	mg/kg	1	3.92	2.79		1.13	
Cadmium	mg/kg	1	ND	ND			
Copper	mg/kg	1	7	6.32	10%		
Lead	mg/kg	1	2.45	1.86		0.59	
Nickel	mg/kg	1	11.2	10.7	5%		
Zinc	mg/kg	1	13.6	11.9	13%		
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	**J/J**
Gasoline Range TPH	mg/kg	2	ND	ND		0	**J/J**
			BAST-B72-6-022014	**BAST-508-022014**			
Mercury	mg/kg	0.1	ND	ND			
Arsenic	mg/kg	1	4.93	4.62		0.31	
Cadmium	mg/kg	1	ND	ND		0	**UJ/J**
Copper	mg/kg	1	6.4	5.94	7%		
Lead	mg/kg	1	1.79	1.75		0.04	**J/J**
Nickel	mg/kg	1	9.75	9.27	5%		**J/UJ**
Zinc	mg/kg	5	10.9	10.1	8%		**J/J**
Diesel Range TPH	mg/kg	50	ND	ND		0	**J/J**
Oil Range TPH	mg/kg	250	ND	ND		0	
Gasoline Range TPH	mg/kg	2	ND	ND		0	
			CN-B03-8-030314	**CN-500-030314**			

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
Mercury	mg/kg	0.1	ND	ND		0	
Arsenic	mg/kg	1	3.61	3.36		0.25	
Cadmium	mg/kg	1	ND	ND		0	**UJ/J**
Copper	mg/kg	1	7.57	6.83	10%		
Lead	mg/kg	1	3.57	2.12		1.45	**J/J**
Nickel	mg/kg	1	11.1	11.3	2%		**J/J**
Zinc	mg/kg	5	14.3	15.8	10%		**J/J**
Diesel Range TPH	mg/kg	50	ND	ND		0	**J/J**
Oil Range TPH	mg/kg	250	ND	ND		0	
			SHB-B01-5-030614	**SHB-500**			
Mercury	mg/kg	0.1	ND	ND		0	
Arsenic	mg/kg	1	4.37	5.6		1.23	
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	12.7	20	45%		
Lead	mg/kg	1	3.37	5.54		2.17	**J/J**
Nickel	mg/kg	1	11.6	13.9	18%		
Zinc	mg/kg	1	77.8	85.6	10%		
Diesel Range TPH	mg/kg	50	ND	ND		0	
Oil Range TPH	mg/kg	250	ND	ND		0	
Gasoline Range TPH	mg/kg	2	ND	ND		0	
Acenaphthene	mg/kg	0.01	ND	ND		0	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	ND	ND		0	
Benz(a)anthracene	mg/kg	0.01	0.011	ND		0	
Benzo(a)pyrene	mg/kg	0.01	0.016	ND		0	
Benzo(b)fluoranthene	mg/kg	0.01	0.018	0.011		0.007	
Benzo(g,h,i)perylene	mg/kg	0.01	0.014	ND		0	
Benzo(k)fluoranthene	mg/kg	0.01	ND	ND		0	
Chrysene	mg/kg	0.01	0.014	ND		0	
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	0.034	0.011		0.023	J/J
Fluorene	mg/kg	0.01	ND	ND			
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.013	ND			
Naphthalene	mg/kg	0.01	ND	ND			
Phenanthrene	mg/kg	0.01	0.019	ND			
Pyrene	mg/kg	0.01	0.04	0.011		0.029	J/J

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
			CN-B10-11-030714	**CN-501**			
Mercury	mg/kg	0.1	ND	ND			
Arsenic	mg/kg	1	3.94	5.04		1.1	
Cadmium	mg/kg	1	ND	ND			
Copper	mg/kg	1	16	17.2	7%		
Lead	mg/kg	1	5.19	5.68	9%		
Nickel	mg/kg	1	16.1	17.6	9%		
Zinc	mg/kg	1	27.4	28.7	5%		
Diesel Range TPH	mg/kg	50	ND	ND			
Oil Range TPH	mg/kg	250	ND	ND			
Acenaphthene	mg/kg	0.01	0.011	0.021		0.01	
Acenaphthylene	mg/kg	0.01	ND	ND		0	
Anthracene	mg/kg	0.01	0.01	0.019		0.009	
Benz(a)anthracene	mg/kg	0.01	0.026	0.045		0.019	
Benzo(a)pyrene	mg/kg	0.01	0.021	0.044		0.023	**J/J**
Benzo(b)fluoranthene	mg/kg	0.01	0.027	0.055		0.028	**J/J**
Benzo(g,h,i)perylene	mg/kg	0.01	0.012	0.03		0.018	
Benzo(k)fluoranthene	mg/kg	0.01	ND	0.02		0.02	
Chrysene	mg/kg	0.01	0.029	0.055		0.026	**J/J**
Dibenzo(a,h)anthracene	mg/kg	0.01	ND	ND		0	
Fluoranthene	mg/kg	0.01	0.052	0.086	49%		**J/J**
Fluorene	mg/kg	0.01	ND	0.017		0.017	
Indeno(1,2,3-cd)pyrene	mg/kg	0.01	0.012	0.032		0.02	
Naphthalene	mg/kg	0.01	0.019	0.049		0.03	**J/J**
Phenanthrene	mg/kg	0.01	0.038	0.085		0.047	**J/J**
Pyrene	mg/kg	0.01	0.057	0.11	63%		**J/J**
			CN-B20-16-031514	**CN-502-031514**			
Mercury	mg/kg	0.1	0.13	0.14		0.01	
Arsenic	mg/kg	1	10.5	6.95	41%		J/J
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	123	136	10%		
Lead	mg/kg	1	156	152	3%		
Nickel	mg/kg	1	7.85	7.52	4%		
Zinc	mg/kg	1	5.4	8.48	44%		J/J
Diesel Range TPH	mg/kg	200	ND	ND		0	
Oil Range TPH	mg/kg	1000	ND	ND		0	

Analyte	Units	RL	Parent & Field Duplicate Sample Result		RPD	Delta	Data Qualifier
			CN-B24-16-031914	**CN-503**			
Mercury	mg/kg	0.1	ND	ND		0	
Arsenic	mg/kg	1	ND	ND		0	
Cadmium	mg/kg	1	ND	ND		0	
Copper	mg/kg	1	ND	ND		0	
Lead	mg/kg	1	27.6	20.6	29%		
Nickel	mg/kg	1	9.12	7.83	15%		
Zinc	mg/kg	5	40	55.8	33%		
Diesel Range TPH	mg/kg	250	ND	ND		0	
Oil Range TPH	mg/kg	1250	ND	ND		0	
			UST29-S01-3-122313	**UST29-500-122313**			
Formaldehyde	mg/kg	50	ND	ND		0	
			UST29-B06-5-122313	**UST29-501-122313**			
Formaldehyde	mg/kg	2.3	2.6	2.3		0.3	

Notes:
Delta – Concentration difference between the parent sample and its field duplicate
mg/kg – milligram per kilogram
ND – The analyte was not detected at or above the RL.
RL – Reporting limit
RPD – Relative percent difference