APPENDIX A

Agreed Order Remedial Investigation/Feasibility Study Work Plan

LANDAU ASSOCIATES

AGREED ORDER REMEDIAL INVESTIGATION AND FEASIBILITY STUDY WORK PLAN

Paine Field TECT Aerospace Leasehold
Everett, Washington

May 7, 2024

Prepared for

Snohomish County
Everett, Washington

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Agreed Order Remedial Investigation and Feasibility Study Work Plan Paine Field TECT Aerospace Leasehold Everett, Washington

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LIST OF ABBREVIATIONS AND ACRONYMS

ADCS ..... Air Defense Command System
AFFF ..... aqueous film-forming foam
AGI ..... AGI Technologies
Airport ..... Snohomish County Airport
ARAR ..... applicable or relevant and appropriate requirement
AST ..... aboveground storage tank
ATS ..... Aviation Technical Services
bgs ..... below ground surface
BTEX ..... benzene, toluene, ethylbenzene, xylenes
CDM ..... Camp Dresser & McKee Inc.
CFR ..... Code of Federal Regulations
cis-1,2-DCE cis-1,2-dichloroethene
CLARC ..... Ecology's Cleanup Levels and Risk Calculations database
COC ..... contaminant of concern
County ..... Snohomish County
cPAH ..... carcinogenic polycyclic aromatic hydrocarbon
CUL ..... cleanup level
DAHP ..... Washington State Department of Archaeology and Historic Preservation
DCA ..... dichloroethane
DCE ..... dichloroethene
DRO ..... diesel-range organics
Ecology ..... Washington State Department of Ecology
EIM ..... Ecology's Environmental Information Management database
EPA ..... US Environmental Protection Agency
EPI ..... Environmental Partners Inc.
ESA ..... environmental site assessment
FS ..... feasibility study
ft ..... foot/feet
ft^2 ..... square foot/feet
Giddens Trust ..... Thomas V. Giddens Living Trust
GPR ..... ground-penetrating radar
HASP ..... health and safety plan
IDP ..... inadvertent discovery plan
Landau ..... Landau Associates, Inc.
µg/kg ..... micrograms per kilogram
µg/L ..... micrograms per liter
$µg/m^3$ ..... micrograms per cubic meter

LIST OF ABBREVIATIONS AND ACRONYMS (CONTINUED)

MCL ..... maximum contaminant level
mg/kg ..... milligrams per kilogram
MTCA ..... Model Toxics Control Act
Order ..... Agreed Order No. DE 21781
ORO ..... oil-range organics
PAH ..... polycyclic aromatic hydrocarbon
PFAS ..... per- and polyfluorinated substances
QAPP ..... quality assurance project plan
RAO ..... remedial action objective
RCW ..... Revised Code of Washington
RI ..... remedial investigation
SAP ..... sampling and analysis plan
TCA ..... trichloroethane
TCE ..... trichloroethene
TECT ..... TECT Aerospace
TEE ..... terrestrial ecological evaluation
TOC ..... total organic carbon
TPH ..... total petroleum hydrocarbons
TPH-G ..... gasoline-range total petroleum hydrocarbons
UNC ..... United Nuclear Corporation
USACE ..... US Army Corps of Engineers
UST ..... underground storage tank
VC ..... vinyl chloride
VOC ..... volatile organic compound
WAC ..... Washington Administrative Code

1.0 INTRODUCTION

This document presents a work plan to conduct a remedial investigation (RI) and feasibility study (FS) on Snohomish County Airport (Airport) property formerly leased to TECT Aerospace (TECT) and on the former East Fuel Farm property. These properties are located in the southeastern portion of Sector 5 of the Airport in Everett, Washington (Figure 1) and include existing Buildings C-19, C-20, C-21, C-22, C-23, C-23 Annex, as well as former Buildings C-27 and C-29 and the former East Fuel Farm (Figure 2). Collectively, these properties, as well as any area immediately outside of these properties with hazardous substances in soil or groundwater attributed to past operations on the properties, are referred to as the Site.

This work plan was prepared by Landau Associates, Inc. (Landau) on behalf of Snohomish County (County) in accordance with requirements in Agreed Order No. DE 21781 (Order) between the County and the Washington State Department of Ecology (Ecology). The Order became effective on August 30, 2023 and requires the County to conduct an RI/FS and to prepare a preliminary cleanup action plan to address known subsurface contamination at the Site. The Site is listed on Ecology's Confirmed and Suspected Contaminated Sites List as TECT Aerospace Everett with Facility Site ID No. 17392 and Cleanup Site ID No. 12071.

Prior to finalizing the Order, the County enrolled the Site into Ecology's Voluntary Cleanup Program (VCP). Ecology accepted the Site into the VCP on March 9, 2022 (VCP No. NW3328). The main purpose of enrolling the Site into the VCP was to obtain an opinion from Ecology on the adequacy of the November 9, 2021 Addendum No. 2 – Phase III Remedial Investigation/Feasibility Study Work Plan (Landau 2021), which described plans for an earlier investigation of the Site. Ecology's opinion letter (Ecology 2022) provided general concurrence with the investigation approach detailed in the plan and described additional data gaps that should be addressed during future Site investigation activities. Elements of the November 9, 2021 plan and/or Ecology-identified data gaps that were not previously addressed are incorporated into this work plan.

This work plan was developed to meet the requirements for an RI and FS as defined by the Model Toxics Control Act (MTCA) cleanup regulation (Washington Administrative Code [WAC] 173-340-350). This work plan describes the RI activities to be conducted and the planned schedule for data collection, evaluation, and reporting and the procedures to be used for completion of an FS. This work plan also includes a sampling and analysis plan (SAP; Appendix A), a quality assurance project plan (QAPP; Appendix B), a Health and Safety Plan (HASP; Appendix C), and an Inadvertent Discovery Plan (IDP; Appendix D) for the RI.

[Note: This work plan is titled Agreed Order (or AO) RI/FS Work Plan to differentiate the work plan from a previously prepared RI work plan (Landau 2018b) and associated work plan addenda (Landau 2019a, 2021, 2022) that were used to implement Site investigation activities from 2018 to 2022 as an independent action.]

1.1 Investigation Objectives Overview

A number of environmental investigations and environmental property assessments have taken place at the Site since the 1990s and are summarized in Section V, Findings of Fact, of the Order, and are presented in greater detail of Section 3 of this work plan. These investigations identified subsurface contamination at the Site including:

- Chlorinated solvents in shallow perched groundwater and in the deep aquifer
- Chlorinated solvents in shallow soil and soil gas
- Petroleum hydrocarbons and metals in shallow soil and groundwater.

The RI will investigate subsurface soil, groundwater, and soil gas at the Site and characterize the concentration, chemical nature, extent (horizontal and vertical), and the direction and rate of migration of contaminants of concern (COCs) released into the environment at or from each of the investigation areas identified during previous Site investigations as described in the Order. In addition, the RI will evaluate potential human and environmental receptors and potential pathways to each receptor from each investigation area, as appropriate. This information will be used to support and update the existing conceptual Site model, which will be used to support recommendations for potential interim measure(s), if warranted, and an FS of remedial action alternatives.

1.2 Investigation Overview

The following investigation areas have been identified for the Site based on past Site use and the results of previous Site investigations, as described in the Order:

- Building C-19
- Former Building C-20, C-21, C-22 Complex
- Former Building C-23 and C-23 Annex
- Former Building C-29 / Former East Fuel Farm (this area also includes former Building C-27)
- Deep Aquifer.

Each of these areas will receive an appropriate level of investigation during this RI depending on what is already known about the nature and extent of contamination in the area and remaining data gaps. It may be necessary to conduct the RI in more than one phase if contamination is found to extend beyond the limits of the currently planned RI locations. If additional RI phases are necessary, Ecology will be notified prior to field work and given the opportunity to approve the contingent exploration locations and other relevant details of the proposed investigation work.

2.0 SITE DESCRIPTION AND BACKGROUND

This section describes features of the Site, current and future land and water use, and historical Site uses.

2.1 Current Site Features

The Site is approximately 39 acres in size and is located in the southeastern portion of the Airport, as shown on Figure 1. The location of the Site and the approximate Site boundary is shown on Figure 2. The Site is generally bounded by Runway 34R-16L and taxiway golf on the east, a paved surface parking lot followed by 112th Street SW to the south, 109th Street and 30th Avenue South to the west, and the Aviation Technical Services (ATS) Hangar 1 lease area to the north. The former East Fuel Farm is located within the boundary of the ATS lease area.

The Site is at an average elevation of approximately 600 feet (ft) above mean sea level. Surface topography at and in the vicinity of the Airport is generally flat. To the west of the Airport, the land surface slopes downward to the west toward Puget Sound, located approximately 2.5 miles west of the Site.

Predominant Site features are described as follows:

- The former US Air Force East Fuel Farm is located at the north end of the Site. Underground storage tanks (USTs) remain in place. This area currently consists of undeveloped land covered with mown grass, small trees, and blackberry plants.
- Former Building C-29 was previously located south of the former East Fuel Farm. The former building area is currently occupied by overgrown vegetation and is partially enclosed by a chain-link fence. The footprint of former Building C-27 is located southwest of the former Building C-29 area and is currently used as a parking lot for ATS employees.
- Former Building C-23 occupies the central portion of the Site and consists of three sections: a 43,164-square-foot (ft^2) portion that includes the Machine Shop and Deburr Area; a 2,400-ft^2 structure on the east side, containing a metal chip processing area and the oil shed; and the 16,000-ft^2 Annex. Former Building C-23 and Annex were demolished in early 2024. The building foundations were left in place. Grassy fields are located to the north and east of Building C-23.
- Former Buildings C-20, C-21, and C-22 are connected to each other by enclosed breezeways to form a large complex of buildings located to the south of Building C-23. These buildings were demolished in early 2024 and the foundations remain in place.
- Building C-19 occupies the southern portion of the Site. Building C-19 is owned by the Thomas V. Giddens Living Trust (Giddens Trust), on land leased from the County. The building is currently occupied by FAM Waterjet, a metal fabrication company.

Much of the Site is paved with asphalt and cement concrete, with some unpaved areas to the north and east.

2.2 Current and Future Land Use

The Site is currently zoned for light industrial use (Snohomish County; accessed November 22, 2023). The Site land and buildings are owned by the County and leased to tenants for aerospace manufacturing and other light industrial operations, with the exception of Building C-19, which is owned by the Giddens Trust. The former locations of the East Fuel Farm and Building C-29 are currently unoccupied. Future land use is anticipated to be light industrial operations and aviation-related uses consistent with zoning and the current Site use.

2.3 Current and Future Groundwater Use

Based on investigation activities conducted to date, groundwater at or potentially affected by the Site is not currently used for drinking water and future use of groundwater at the Site as drinking water is not anticipated. The drinking water source for Paine Field is Spada Lake, located approximately 8 miles north of Sultan, Washington. Drinking water at the Site is distributed by Mukilteo Water and Wastewater District and is treated by the City of Everett.

2.4 Site History

This section presents a brief history of the Airport and Site.

2.4.1 Snohomish County Airport History

The Airport was first developed in the late 1930s on a 640-acre parcel that was previously owned by the Puget Mill Company. Construction on the Airport began in 1936 and the Airport was operating 2 years later. The US Army Air Corps leased the Airport from the County in 1940 and acquired the Airport in 1941 for use as an Army airfield, named Paine Field. Between 1941 and 1942, the current Airport configuration was established. Military use of the airfield continued until October 1945 and the County regained ownership in 1948. In 1950, the US Air Force rehabilitated the old Army Air Corps facilities and improved runways as part of the Air Defense Command System (ADCS). From 1951 through 1968, the Airport served both the US Air Force (southern portion) and the County (northern portion). Construction of a BOMARC (long-range anti-aircraft) missile site began in 1957, to the northeast of the Site, but was not completed. In 1968, the US Air Force deactivated the ADCS portion of the Airport (Landau 1993).

2.4.2 Building C-19

The area of Building C-19 was historically developed with barracks associated with the former military operations at the Site. Building C-19 was constructed in 1979, and is owned by the Giddens Trust. The land is owned by the County and is under a long-term lease to the Giddens Trust through October 2028. Since its construction, Building C-19 was operated along with Buildings C-20, C-21, C-22, and C-23 for aerospace parts manufacturing (see Section 2.4.3). In approximately 2013 or 2014, TECT Aerospace vacated Building C-19 and the building is currently occupied by FAM Waterjet a metal fabrication company.

2.4.3 Buildings C-20, C-21, C-22, and C-23

The Building C-20, C-21, C-22 complex was constructed in stages beginning in the 1950s. The southern portion of Building C-23 was originally constructed between 1941 and 1952 as two buildings, later connected by a breezeway. The east side of the building (oil shed) was added in 1978. The Annex was built on the north side of the building in 1987. This portion of the Site has been used for aerospace manufacturing since the 1950s. General operations have reportedly remained relatively unchanged, although the business names and ownership have changed over time. Previous operators of the facility have included Castle Industries (1950s), All Fab (1960s-1980s), Certified Holdings Corporation, United Nuclear Corporation (UNC), Grenwich, General Electric, Neuvant Aerospace, Prudential, and TECT (2004 to July 2019). TECT consolidated its operations in Building C-23 in late 2017 and the Building C-20, C-21, C-22 complex is currently unoccupied.

Manufacturing processes/structures in this area of the Site included: maintenance shop, freezer, brake press, tumbler (Building C-20); sheet metal fabrication, forming, welding, heat treating (Building C-21); machining, stretch form, and hammer shop (Building C-22); and machining, hand forming, trimming, assembly, painting, and deburring (Building C-23). Buildings C-20 through C-23 were demolished in early 2024. The concrete slabs were left in place.

2.4.4 Former Building C-29

Former Building C-29 (also referred to as the Meiers Building) was a chemical storage shed that was located west of the northwest corner of Building C-23 (Figure 2). The building is first visible in aerial photographs from 1947. The building was reportedly partially occupied by Meiers Wrought Iron from 1965 to 1981 and also by All Fab, Inc. The building was removed in January 1996 while being leased by UNC Aerostructures (Envirotech 1997). Contamination was discovered beneath the building at the time of demolition, as discussed in Section 3.3.

2.4.5 Former East Fuel Farm

The former East Fuel Farm is located northwest of Building C-23, and north of former Building C-29, as shown on Figure 2. The fuel farm was developed in the 1940s and was used by the US Army Air Corps during World War II and was later used by Alaska Airlines and Revolution Airlines for aviation fuel. At the time of an assessment completed in 1993, the fuel farm was operated by Flightline Services and used to supply aviation fuel for general aviation, military, and commercial aircraft (AGI 1993).

Records regarding the number, size, contents, and locations of USTs associated with the fuel farm are inconsistent. Based on a review of available records, the following USTs are or were present at the East Fuel Farm:

ID	Size (Gallons)	Contents	Status	Notes
93	25,000	Jet-A fuel	In place – temporarily abandoned in place in 1996	Upgraded in 1967 to store Jet-A fuel
95B	12,000	Aviation fuel	Removed in 1992	100 cubic yards of impacted soil removed at time of UST removal
Not Registered	Est. 12,000	Unknown	In place – identified during geophysical survey in 1994	
Not Registered	Est. 5,000-10,000	Unknown	Possible UST identified during geophysical survey in 1994	

As indicated above, up to three USTs remain in place at the former East Fuel Farm. The tanks are not currently in use, have reportedly had their contents removed, and been rinsed clean. Based on previous subsurface investigations completed at the former East Fuel Farm, as discussed in Section 3.4, subsurface contamination by petroleum hydrocarbons has been identified in this area.

2.4.6 Former Building C-27

Former Building C-27 was located southwest of the former East Fuel Farm area. The building was constructed in the 1950s and was used by All Fab for aerospace parts manufacturing. A 1952 aerial photograph shows a small area directly north of the building in the immediate vicinity of boring RISB-45 that appears to be used as an outdoor staging or storage area. All Fab went out of business in the late 1950s and Building C-27 was occupied by Castle Industries through 1965 and then by Evergreen until 1990. The building was categorized as surplus by Snohomish County and subsequently demolished.

3.0 PREVIOUS INVESTIGATIONS AND CLEANUP ACTIONS

Various environmental investigations and cleanup actions have been conducted at the Site to characterize and evaluate the chemical quality and physical condition of soil, groundwater, and soil gas, or to address specific releases. This section describes the environmental investigations and remedial actions that have been conducted at the Site prior to the preparation of this work plan. The reader is referred to previous investigation reports for more detailed descriptions of these investigations and remedial actions.

Historical analytical data generated during these investigations and remedial actions are provided in Tables 1 through 14. For brevity, these tables show data results only for constituents that were found to be present within a given investigation area and medium at concentrations above analytical detection limits. A complete listing of all constituents that were tested for at the Site, including constituents that were not found at concentrations above laboratory detection limits, is available in Ecology's Environmental Information Management (EIM) database.[1]

Historical exploration locations for each investigation area are shown on Figures 3a, 4a, 5a, 6a, and 8. Historical analytical data of the main Site COCs are presented by investigation area on Figures 3b, 4b, 5b, and 6b (total petroleum hydrocarbons [TPH] in soil); 3c, 4c, 5c, and 6c (volatile organic compounds [VOCs] in soil); 3d, 4d, 5d, and 6d (metals in soil); 3e, 4e, 5e, and 6e (TPH and benzene in groundwater); 3f, 4f, 5f, and 6f (VOCs in groundwater); 3g, 4g, 5g, and 6g (dissolved metals in groundwater); and 3h, 4h, 5h, and 6h (VOCs in soil gas). Figure 7 shows the Site-wide extent of trichloroethene (TCE) concentrations in shallow groundwater. The most recent round of deep aquifer groundwater elevation contours from February 2023 are shown on Figure 9. Figures 10 and 11 show VOC concentrations in deep aquifer groundwater.

The investigations described in the following Section 3 subsections were completed between 1992 and 2023. Data from investigations completed prior to 2018 (i.e., pre-RI) are discussed in terms of MTCA cleanup levels (CULs) in effect at the time of the investigation as documented in the report prepared at the conclusion of the investigation. Data from previous investigations completed in 2018 (i.e., pre-AO RI) and beyond are compared to screening levels in the 2018 work plan (Landau 2018b). In all cases, Section 3 summarizes the information and conclusions included in the reports prepared for each investigation and generally does not evaluate the historical data relative to the screening levels developed in this work plan.

However, all Site data have been evaluated relative to screening levels developed in this work plan (see Section 5.0 for discussion on development of RI screening levels) in the figures and tables included in this work plan. In addition, the data gaps presented in Section 6 of this work plan were identified based on this evaluation of all Site data. Moving forward in the RI/FS process, all Site data will be compared to the screening levels and to CULs developed during the FS. .

[1] https://apps.ecology.wa.gov/eim/search/Eim/EIMSearchResults.aspx?ResultType=EIMTabs&StudyNames=TECT%20Aerospace&StudyNameSearchType=Contains

3.1 Building C-19

This section includes relevant findings from Phase I environmental site assessments (ESAs) and other investigations at Building C-19. Previous investigations at Building C-19 have focused primarily on a former degreaser located at the south end of the building. The degreaser, a 1,1,1-trichloroethane (1,1,1-TCA) storage tank, and a chiller were removed from the building in 1993 (Landau 1993). In addition, the building owner conducted an investigation and cleanup of petroleum-contaminated soil resulting from releases of cutting oil from machinery located in the manufacturing area of the building. The Airport has also conducted a series of remedial investigations in and around Building C-19. Additional details are provided in the following subsections and previous sampling locations are shown on Figure 3a.

3.1.1 1993 Phase I Environmental Site Assessment

A Phase I ESA was completed at Buildings C-19, C-20, C-21, C-22, C-23, and C-29 by Landau on behalf of Snohomish County in 1993. Building C-19 was occupied by All Fab, Inc. at the time of the assessment. Relevant findings from the Phase I ESA for Building C-19 are as follows (Landau 1993):

- Manufacturing operation areas at Building C-19 included a metal fabricating area, a sandblasting room, a former 1,1,1-TCA storage tank, dip tank (degreaser) and chiller area, oil drum storage areas and a sump, an acid dip tank room, and waste metal storage bins.
- Water-soluble cutting fluids were used throughout the manufacturing areas of the building. The site representative reported that chlorinated cutting fluids had been used in the past.
- A former degreaser pit was identified at the southern corner of the building. The pit was described as a 15-ft-wide by 40-ft-long by 8-ft-deep concrete-lined vault. A sump was located in the southeast corner of the vault and was used to collect spilled 1,1,1-TCA and groundwater that reportedly seeped into the sump. The sump was pumped as needed and the liquid was stored in drums prior to transport off site for disposal. The 1,1,1-TCA tank was reportedly situated on a concrete pad outside the building. A representative of All Fab reported that TCE and possibly other chlorinated solvents were used in the past.
- Severe oil staining was observed in the area of a waste oil drum on the southeast side of the building. The drum was used to collect oil drippings from scrap metal prior to placing the metal in an adjacent roll off bin.

The Phase I ESA concluded that there were potential discharges of 1,1,1-TCA and other solvents from the vapor degreaser to the local stormwater sewer system, and soil and groundwater. In addition, the Phase I ESA concluded that there was potential for cutting fluids, including chlorinated cutting fluids, to penetrate the concrete floor of the building resulting in impacts to soil and groundwater.

3.1.2 Degreaser Sump Area

In 1994, on behalf of the Snohomish County Airport, Landau conducted a preliminary investigation of the vapor degreaser pit and sump in the southern corner of Building C-19 by excavating two test pits below the base of the concrete floor of the vapor degreaser pit (identified as C19-TP1 and C19-TP2 on Figure 3a). TCE was detected at concentrations above MTCA Method A CULs in effect at that time in soil

and TCE, 1,1,1-TCA, 1,1-dichloroethane (1,1-DCA) and vinyl chloride were detected at concentrations above MTCA Method A or B CULs in shallow groundwater. Additional VOCs were detected at concentrations below applicable CULs. Soil samples were collected at a maximum depth of 1.8 ft below the top of the concrete floor of the sump, and water samples were collected from perched water that accumulated in the test pits over several hours by seeping through the sides of the test pits and into the degreaser sump through weep holes in the concrete walls (Landau 1994).

In 1995, Landau conducted additional sampling and analysis in and around the degreaser sump, on behalf of the building owner, Jack Giddens. Prior to sampling, the concrete floor of the sump and approximately 1 ft of underlying soil had been removed. Thirteen soil samples were collected from approximately 0.5, 1, and 2.5 ft below the base of the former sump floor and from approximately 0.5, 1, and 2 ft laterally beyond the former sump walls. Three water samples were collected from water seeping into the holes dug for collection of soil samples. The samples are identified by the prefix SU or SU2 on Figure 3a. TCE and vinyl chloride were detected at concentrations above MTCA Method A or B CULs in soil. TCE, 1,1-dichloroethene (1,1-DCE), and cis-1,2-dichloroethene (cis-1,2-DCE) were detected at concentrations above MTCA Method A or B CULs in water (Landau 1995).

In 1999, on behalf of Snohomish County Public Works Department, environmental consulting firm AGI Technologies (AGI) conducted a preliminary contamination assessment at Buildings C-19 and C-29 (see Section 3.3 for discussion of previous investigations at Building C-29). AGI identified and collected groundwater samples from three monitoring wells near Building C-19 that were installed by the Snohomish County Public Works Department in 1996 (SCPWD-2 through -4). Well depths ranged from 18 to 29.3 ft below ground surface (bgs) and depths to groundwater during sampling ranged from 2.47 ft bgs to 6.8 ft bgs. TCE was detected in groundwater at a maximum concentration of 140,000 micrograms per liter (µg/L) and detected concentrations exceeded the MTCA Method A CUL (5 µg/L) in water samples from all three wells. The concentration of tetrachloroethene exceeded the MTCA Method A CUL (5 µg/L) in water from SCPWD-3, and vinyl chloride concentrations exceeded the MTCA Method A CUL (0.2 µg/L) in water from SCPWD-2 and 3 (AGI 1999).

Camp Dresser & McKee Inc. (CDM) conducted a deep aquifer investigation in 2000 (discussed in more detail in Section 3.46), during which monitoring well DW1 was installed south of Building C-19. Aquifer groundwater was encountered at approximately 133 ft bgs and sampling and analysis from DW-1 indicated that chlorinated VOCs had reached the deep aquifer (CDM 2000a).

In 2005, CDM reported the results of an investigation conducted for the Snohomish County Airport to delineate the lateral extent of chlorinated VOC contamination in shallow soil and perched groundwater near Building C-19. The investigation included the installation of 20 direct-push probes identified as GP1 through GP20 on Figure 3a. CDM reported that TCE was not detected in soils at depths shallower than 5 ft bgs. The core of the plume appeared to be located below 29th Avenue West (southwest of Building C-19) and appeared to extend in a west to east direction, migrating along sewer and storm drain lines. No offsite TCE source (other than Building C-19) was identified (CDM 2005).

Remedial investigation activities at Building C-19 were conducted by Landau on behalf of the Airport over multiple mobilizations between 2018 and 2022. These soil, groundwater, and soil gas investigations

further delineated the extent of VOC contamination within and around Building C-19. Results of the investigations were presented in two, separate data reports (Landau 2019b, 2023). The cumulative results of the investigations are summarized below.

- VOC-contaminated soil was present at concentrations above MTCA Method B CULs at the maximum depth sampled of 25 ft bgs (RISB-56) near the degreaser sump area and east of the northern section of Building C-19 (RISB-06 and RISB-58) (Figure 3c).
- VOC concentrations were above the MTCA Method B CULs in shallow, perched groundwater samples collected from below the concrete floor near the degreaser sump area (RIGW-55), and in the middle of Building C-19 (RISB-69). Shallow groundwater contamination was also present at concentrations above CULs up to 140 ft south (RISB-01) and approximately 90 ft east (RISB-58) of the building footprint (Figure 3f). Deep aquifer groundwater results are discussed in Section 3.4.
- Soil gas samples collected from below the concrete floor inside Building C-19 in 2019 indicated that VOC concentrations (primarily TCE) below the building were above the MTCA Method B screening levels for soil gas in the degreaser sump area (RISG-54 and RISG-55) (Figure 3h).
- In September 2021, Landau conducted an indoor air evaluation at Building C-19, the only occupied building within the Site at the time. Indoor air, sub slab soil gas, and ambient air samples were collected as part of the evaluation to determine if VOC vapors were intruding into the building to the extent that they would pose a health risk to workers in the building. The results of the investigation indicated that VOC concentrations in indoor air were below the screening levels for indoor air and the short-term action level for TCE (Figure 3h).

3.1.3 Petroleum-Contaminated Soil beneath the Floor of Building C-19

Environmental Partners Inc. (EPI) completed site characterization at Building C-19 in 2005, 2006 and 2007 for the Giddens Trust. In 2005 and 2006, soil and shallow groundwater samples collected from beneath the floor of the interior of Building C-19 were analyzed for diesel- and heavy oil-range petroleum hydrocarbons (also referred to as diesel-range organics [DRO] and oil-range organics [ORO]) to evaluate potential subsurface impacts resulting from releases of cutting oil. Selected soil samples were also analyzed for polycyclic aromatic hydrocarbons (PAHs). DRO and ORO were detected at concentrations above the MTCA Method A CUL in shallow soil beneath the southern and central section of Building C-19. Neither DRO nor ORO was detected at a concentration above reporting limits in groundwater samples (EPI 2006, 2007). The EPI report stated that PAHs were detected in two soil samples at concentrations greater than the MTCA Method B CUL; the exceedances were co-located with exceedances for TPH.

In 2010, EPI conducted additional soil sampling and analysis in an area not accessible during previous investigations, and detected additional areas with DRO and ORO at concentrations above MTCA Method A CULs in soil beneath the northern section of Building C-19 (EPI 2010). During the site characterization sampling completed between 2005 and 2010, a total of 121 soil samples were collected from 65 locations throughout the manufacturing areas of the building. In addition, three shallow groundwater samples were collected from beneath the south end of the building and one shallow groundwater sample was collected from outside the east corner of the central portion of the building. The screened

intervals for the temporary wells ranged from 5 to 13 ft bgs. The characterization sampling locations are not shown on the figures included with this document but are included in the EPI report (EPI 2010).

In 2011 and 2012, EPI reported the results of remedial actions completed in Bays 1, 2 and 3 (northern, central, and southern areas of Building C-19) conducted on behalf of the Giddens Trust. Shallow soil was excavated from six areas beneath the floor of Building C-19 and transported to a treatment facility. The locations of the excavation areas are shown on Figure 3a. Confirmation soil samples (a total of 88) were collected from the bottom and sidewalls of the excavations and analyzed for DRO and ORO. Detected concentrations were less than MTCA Method A soil CULs in all samples. EPI requested a No Further Action (NFA) determination from Ecology based on the remedial actions conducted in Bays 1, 2, and 3 (EPI 2011, 2012). Ecology issued an NFA determination for soil contaminated with DRO and ORO in Bays 1, 2, and 3, as described above, but noted that the NFA determination did not apply to the TCE contamination near the degreaser sump, described above (Ecology 2013).

Petroleum-related RI activities conducted by Landau at Building C-19 between 2018 and 2022 included sampling and analysis of TPH and metals in soil and groundwater. Results of the investigations were presented in two, separate data reports (Landau 2019b, 2023). Cumulative TPH, arsenic, and chromium results indicate that concentrations in shallow soil outside of the building were below screening levels (Figures 3b and 3d, respectively). With one exception, shallow groundwater sampling results indicated that TPH and metals concentrations were below the MTCA Method B screening levels and mostly not detected above laboratory reporting limits (Figures 3e and 3g). At RISB-07, the combined DRO and ORO results exceeded the 500 µg/L screening level. Benzene exceeded the screening level (0.8 µg/L) in a shallow groundwater sample collected from RISB-58. However, the concentration is below the standard MTCA Method B CUL of 5 µg/L.

3.2 Buildings C-20, C-21, C-22, C-23/C-23 Annex

This section includes relevant findings from previous Phase I ESAs and subsequent investigations at Buildings C-20, C-21, C-22, C-23, and the C-23 Annex. Historical exploration locations for this area are shown on Figures 4a and 5a. (Note: Although Building C23/C-23 Annex is considered a separate investigation area in this document, the discussion of previous investigations within this investigation area is combined with the Buildings C-20, C-21, C-22 discussion because historical investigations of Buildings C-20, C-21, and C-22, and documentation of those investigations, were typically combined with investigations of Building C-23/C-23 Annex.)

3.2.1 Phase I Environmental Site Assessment Findings

A Phase I ESA was completed at Buildings C-19, C-20, C-21, C-22, C-23, and C-29 by Landau on behalf of Snohomish County in 1993. The Building C-20, C-21, C-22 complex was referred to collectively as Building C-22 in the 1993 report and the buildings were occupied by All Fab, Inc. at the time of the 1993 assessment. A Phase I ESA was conducted by Landau on behalf of the County at Buildings C-20, C-21, C-22, C-23, and the C-23 Annex in 2017. The buildings were occupied by TECT at the time of the 2017 assessment. Relevant finding from the Phase I ESAs for Buildings C-20, C-21, and C-22 are as follows (Landau 1993, 2017):

- Manufacturing operations areas and other features observed in the Building C-20, C-21, C-22 complex in 1993 included metal fabricating areas (C-21), molten lead and alloy tanks (C-22), metal stretching machine and associated sump (C-22), a heat treating and glycol quench tank area (C-21), and a drop hammer machine area (C-22).
- The metal stretching machine was located in a rectangular vault in the southwest corner of Building C-22. The vault was observed to be approximately 6 ft deep and included a sump near the center of the vault. The sump reportedly collected cutting oil from the machine as well as groundwater that would seep into the vault. The sump was reportedly pumped as needed and the liquid was taken to an oil recycling area at Building C-23. The machine had been removed and the vault cleaned and filled by the time of the 2017 Phase I ESA.
- Two USTs were reportedly removed from the north side of Building C-22 in 1989. Minor soil contamination was reportedly encountered and excavated at the time of the UST removal; however, documentation was not available for review.
- A trench drain was observed in Building C-22 and continuing west along the north side of the exterior of Building C-20. The 1993 report indicates that the trench drain is connected to the storm drainage system and to a detention pond located east of the Site. At the time of the 2017 Phase I ESA, the discharge point of the trench drain could not be determined.

At the time of the 2017 Phase I ESA, most manufacturing operations had ceased in the Building C-20, C-21, C-22 complex. Degraded and stained asphalt and concrete were observed in the manufacturing areas and storage drums and other containers of hazardous materials and petroleum products were observed without adequate secondary containment. The 2017 Phase I ESA concluded that there is a high potential for subsurface soil contamination to be present in areas where cutting oils and other hazardous materials and petroleum products were used and stored.

Relevant finding from the Phase I ESAs for Building C-23 and the C-23 Annex are as follows (Landau 1993, 2017):

- Manufacturing operation areas at Building C-23 included metal fabricating areas, a waste storage area, chemical storage areas, and an empty drum storage and metal chip processing area.
- At the time of the 1993 assessment, a liquid waste storage area was identified on the west side of the building. The storage area included an approximately 2,000-gallon waste antifreeze tank, a 300-gallon evaporator, and a 500-gallon sludge tank. The tanks were located on a paved area within a berm. At the time of the 2017 assessment, a 3,000-gallon aboveground storage tank (AST) containing used coolant was located in this bermed area as well as a smaller AST (former evaporator) that is used for backup used coolant storage, if necessary. Staining and degraded concrete were observed in the vicinity of the ASTs.
- An oil shed was observed to the east of the center of Building C-23. This area was identified as a wood shop during the 1993 assessment. A sump is located in a covered area between Building C-23 and the oil shed. Metal chips resulting from the fabrication process were placed in chip bins and allowed to drain in this area. The sump is reportedly lined with concrete and has a solid bottom; however, the lining was not inspected during the 1993 or 2017 Phase I ESAs and staining and degraded concrete were observed.

- At least one out-of-use heating oil UST is located at the southwest corner of Building C-23. Previous reports include conflicting information regarding the number of USTs and a second UST is potentially present. The heating oil UST was reportedly emptied, but has not been filled, decommissioned, or removed.

Both the 1993 and 2017 Phase I ESA concluded that there was potential for subsurface contamination at Building C-23 and the C-23 Annex resulting from current and historical industrial operations.

3.2.2 Phase II Investigation Results (2017)

In 2017, Landau conducted a focused Phase II investigation at the current TECT lease area (Buildings C-20, C-21, C-22, C-23, the C-23 Annex, and associated land) on behalf of the County. Additional details are provided in this and the following sections, and historical sampling locations (LAI-01 through LAI-28) are shown on Figures 4a and 5a.

3.2.2.1 Soil Investigation Results

A total of 22 soil samples were collected from the TECT lease area and analyzed for DRO and ORO, VOCs, and glycols. The analytical results and exceedances of MTCA Method A CULs for industrial land uses are summarized below.

- Glycols were not detected at concentrations greater than the laboratory reporting limits in the one sample submitted for analysis.
- DRO or ORO was detected in 9 of 21 samples at concentrations greater than the laboratory reporting limits. The detected concentrations of DRO were less than the MTCA Method A CUL of 2,000 milligrams per kilogram (mg/kg). ORO was detected at concentrations greater than the MTCA Method A CUL at two locations (LAI-10 and LAI-16).
- Cis-1,2-DCE and TCE were each detected in 4 of 17 samples at concentrations greater than the laboratory reporting limits. No other VOCs were detected in the samples.
  - TCE was detected at concentrations greater than the MTCA Method A CUL of 0.03 mg/kg in four samples collected from three locations (LAI-25, LAI-26, and LAI-27) (Figure 4c).
  - There is no MTCA Method A CUL for cis-1,2-DCE. The detected concentration of cis-1,2-DCE (0.32 mg/kg) in the sample from LAI-25 at a depth of 15 ft bgs exceeded the MTCA Method B screening level (0.078 mg/kg – based on the protection of groundwater as drinking water); however, it did not exceed the Method B screening level (160 mg/kg) based on direct contact.

The 2017 Phase II soil investigation identified petroleum hydrocarbons and TCE at concentrations greater than the MTCA Method A and B screening levels.

3.2.2.2 Soil Gas Investigation Results

Soil gas samples were collected from 25 locations within the TECT lease area and submitted for analysis for VOCs. These sampling locations are identified as LAI-01, LAI-03, LAI-05, and LAI-07 through LAI-28 on Figures 4a and 5a. VOCs that were detected in soil gas are shown in Table 9.

VOCs were detected at 21 of 25 sampling locations at concentrations greater than the MTCA Method B shallow soil gas screening level and at 15 of 25 sampling locations at concentrations greater than the Method C shallow soil gas screening level. Exceedances of MTCA Method B and C shallow soil gas screening levels that were published at the time of the 2017 investigation are summarized below.

- At locations where 1,1-DCA and benzene were detected above the MTCA Method B shallow soil gas screening levels, concentrations were below the Method C shallow soil gas screening levels.
- At locations where 1-3-butadiene, chloroform, TCE, and vinyl chloride (VC) were detected above the MTCA Method B shallow soil gas screening level, the concentrations also exceeded the Method C shallow soil gas screening levels.

VOCs, primarily TCE and VC, were detected at concentrations greater than the MTCA Method B and Method C shallow soil gas screening levels at locations throughout the TECT lease area where tested. The highest concentrations of VOCs were detected in samples collected from beneath and outside the southwest corner of Building C-22 and from beneath the north end of Building C-23 (the C-23 Annex).

3.2.2.3 Indoor Air Investigation Results (Building C-23)

In response to the soil gas sampling results, the County requested that Landau conduct indoor air sampling at the occupied buildings within the TECT lease area to determine if chemicals detected in soil gas were also present in indoor air at concentrations indicating a potential health concern for buildings occupants. At the time of the indoor air sampling and in preparation for termination of its lease, TECT had moved all business operations to Building C-23 and the C-23 Annex, and Buildings C-20, C-21, and C-22 were not occupied (used by TECT for storage). Therefore, indoor air sampling was conducted only at Building C-23 but was focused on the C-23 Annex, where VOC concentrations in soil gas samples collected from beneath and adjacent to the building were detected above the MTCA Method B and Method C screening levels, as described in Section 3.2.2.2.

In preparation for indoor air sampling, a survey of Building C-23 was conducted on November 13, 2017. The building survey consisted of observing relevant features of the building construction (e.g., foundation type and condition); documenting the building heating, cooling, and ventilation system; documenting building operations; and conducting a chemical inventory.

Indoor air samples were collected from six locations (identified on Figure 4a as IA01-C23 through IA06-C23) and both short-term (8-hour) and long-term (21-day) samples were collected from each of the six locations. An ambient air sample was also collected from an upwind location outside the building during the 8-hour sampling period. The results of the indoor air investigation are summarized below.

- During the 8-hour sampling event, TCE was detected in two indoor air samples at estimated time-weighted average concentrations of 0.2 and 0.21 micrograms per cubic meter ($\mu g/m^3$). TCE was also detected in the 8-hour ambient air sample at an estimated concentration of 0.31 $\mu g/m^3$, which is higher than the concentrations detected in indoor air. Vinyl chloride was not detected in any of the 8-hour samples at concentrations greater than the laboratory reporting limit.
- During the 21-day sampling event, TCE was detected in each of the six indoor air samples at time-weighted average concentrations ranging from 0.40 to 1.7 $\mu g/m^3$. None of the detected

concentrations exceeded either the chronic (2.0 µg/m^3) or acute (8.4 µg/m^3) screening criteria for industrial properties (MTCA Method C). The data indicated that vapor intrusion is likely occurring, but that contaminant concentrations in indoor air are, on average, less than the screening criteria. The data also indicated that contaminant concentrations in indoor air were likely impacted by contaminants present in ambient air.

3.2.3 Pre-Agreed Order Remedial Investigation Activities (2018-2022)

RI activities were conducted between 2018 and 2022 at the Building C-20, C-21, C-22 complex, Building C-23, and the Building C-23 Annex. These soil, groundwater, and soil gas investigations were conducted prior to execution of the Order in August 2023. Results of the investigations were presented in two, separate data reports (Landau 2019b, 2023). The cumulative results of the investigations are summarized in the following subsections.

3.2.3.1 Soil Results

Three soil investigations were conducted in the Building C-20, C-21, and C-22 complex as part of the pre-Order RI activities. Gasoline-range TPH (TPH-G) and ORO were detected at one location (RISB-28) at concentrations above MTCA Method B CULs up to 2 ft deep below the former Hammer Shop, where petroleum contamination appeared to be isolated (Figure 4b). VOCs were detected in shallow soil throughout the Building C-20, C-21, and C-22 complex. The highest VOC concentrations were detected in soil beneath and immediately south of Building C-22 and VOC concentrations in soils were above CULs to a depth of 20 ft bgs (RISB-21). TCE was detected at a concentration above the CUL (0.206 mg/kg) at a depth of 35 ft bgs north of Building C-21 (RISB-15) (Figure 4c). Total chromium was detected at a concentration above (43 mg/kg) the MTCA Method B CUL (42 mg/kg) at one location below the floor of the C-22 complex (Figure 4d).

3.2.3.2 Groundwater Results

Three rounds of pre-Order RI activities were conducted in the Building C-20, C-21, and C-22 complex. Perched groundwater grab samples were collected from borings using temporary well screens with intervals ranging from 1 to 4 ft bgs to 20 to 25 ft bgs. ORO was detected at concentrations above the MTCA Method B CUL within the central portion of the complex with the highest concentrations detected in samples collected from below the Hammer Shop (RISB-28) and the C-22 complex (RISB-49) (Figure 4e). VOCs were detected in groundwater at concentrations above the MTCA Method B CUL throughout the Building C-20, C-21, and C-22 complex. The highest concentrations were detected in samples collected from below the C-22 complex (RISB-13) and north of Building C-21 (RISB-15) (Figure 4f). One sample exceeded the MTCA Method B CUL (5 µg/L) for arsenic at the time. However, the concentration (14 µg/L) is comparable to the natural background concentration (13.6 µg/L) for Snohomish County (San Juan 2022).

3.2.3.3 Soil Gas Results

Soil gas samples were collected from below the concrete floor within and south of Building C-22 in 2019. The samples were collected using sub-slab vapor pins and temporary vapor screens that ranged in depth from 0.7 ft (indoor) to 4.5 ft bgs (outdoor). The 2019 laboratory analysis confirmed the 2017 Phase II

findings that VOC concentrations below and south of Building C-22 were above the MTCA Method B screening levels for soil gas that were presented in the 2018 pre-Order RI work plan (Figure 4h).

3.3 Former Building C-29/East Fuel Farm and Former Building C-27

This section includes relevant findings from previous Phase I ESAs and subsequent investigations at the former Building C-29/East Fuel Farm investigation area. The investigation area was expanded to include former Building C-27 after investigations conducted in 2019 found contamination to the south and west of the former Building C-29/East Fuel Farm investigation area.

3.3.1 Former Building C-29

Building C-29 was included in the Phase I ESA completed by Landau on behalf of the County in 1993, although the assessment report does not identify the building by number. The building was occupied by All Fab, Inc. at the time of the assessment. Relevant findings from the Phase I ESA for Building C-29 are as follows (Landau 1993):

Building C-29 is described as two interconnected buildings that were used for large-scale chemical storage. One of the buildings contained approximately 100 storage drums, most of which contained petroleum lubricants. Petroleum spillage was observed in this room; however, the underlying concrete did not appear to be degraded. The other building stored several hundred smaller containers (2 gallons or less) of paints and similar compounds. A sump and floor drains were observed in the building; however, there was no information provided regarding the specific location or outlet of the sump or floor drains (Landau 1993). The floor was observed to be very clean, as though recently steam-cleaned. The 1993 report indicated that an inventory of materials contained in the buildings had recently been completed, though the inventory was not provided, and that disposal of the materials was pending.

Former Building C-29 was demolished by the County in 1996. During demolition, the County discovered a greenish-yellow tinted water at the foundation of the building. The County stopped the demolition work and retained Landau to collect a sample of the water for laboratory analysis (sampling location identified as AF-1 on Figure 6a). Landau reported that analysis of the water sample detected chromium, TCE, and VC at levels exceeding MTCA drinking water standards (Snohomish County Airport 1996). In July 1996, Landau reported the results of further investigation completed in the vicinity of Building C-29. The study was conducted on behalf of Snohomish County Public Works, based on the January 1996 foundation water sample analysis. Eight test pits were excavated (C29-TP1 through C29-TP8), two soil borings drilled (C29-B3 and C29-B4), and two additional soil borings were drilled and completed as monitoring wells (C29-MW1 and C29-MW2). Two existing monitoring wells were also sampled (SCPWD-1 and SCPWD-2). Analysis of soil and groundwater samples indicated that TCE was present at concentrations exceeding MTCA Method A CULs in soil and groundwater; cis-1,2-DCE was detected at concentrations above MTCA Method B CULs; and VC was detected above MTCA Method A CULs in groundwater. Total chromium was detected at a concentration above the MTCA Method A CUL in one soil sample collected from within the building footprint (Landau 1996).

In 1999, AGI conducted a preliminary contamination assessment of Buildings C-19 (described in Section 3.1) and C-29, on behalf of the Snohomish County Public Works Department. AGI identified and collected groundwater samples from eight monitoring wells near Building C-29 that were previously installed by Landau (C29-MW1 and C29-MW2), Snohomish County Public Works Department (SCPWD-1), BF Goodrich or Tramco (HMB1), and AGI (MW1 through MW4). Well depths ranged from 17 to 23 ft bgs and depths to groundwater during sampling ranged from 1.26 ft bgs to 8.26 ft bgs. TCE was detected at a maximum concentration of 18,000 µg/L and the detected concentrations exceeded the MTCA Method A CUL in water samples from seven of the eight wells near Building C-29. Detected concentrations of VC exceeded CULs in water from six of the eight wells, and concentrations of 1,2-dichloroethane (1,2-DCA) exceeded CULs in three of the eight wells (AGI 1999).

Pre-Order RI activities at Building C-29 were conducted by Landau on behalf of the Airport over multiple mobilizations between 2018 and 2022. These soil, groundwater, and soil gas investigations further delineated the extent of TPH, VOCs, and metals within and around Building C-29. Results of the investigations were presented in two, separate data reports (Landau 2019b, 2023). The cumulative results of the investigations are summarized below.

- TPH-G, DRO, and ORO were analyzed for in soil and groundwater samples collected from within and outside of the Building C-29 footprint. Groundwater samples were collected from temporary wells and permanent monitoring wells. Soil results from three borings (RISB-31, RISB-47, and RISB-48) indicated that TPH was not detected at concentrations above the laboratory reporting limit within or around the former Building C-29 footprint. Groundwater sampling results showed that TPH-G, DRO, and ORO are present in groundwater west and northwest of Building C-29 at concentrations that exceed the MTCA Method B CUL (Figures 6b and 6e).
- VOC-contaminated soil and groundwater were detected at concentrations above MTCA Method B CULs in and around the Building C-29 footprint. Concentrations of VC (0.061 micrograms per kilogram [µg/kg]) were above the CUL (0.0089 µg/kg) at a maximum depth of 20 ft bgs (RISB-30) immediately east of the building footprint. Concentrations of VOCs in the groundwater within and surrounding Building C-29 are significantly above MTCA CULs. The highest VOC concentrations were to the west and northwest (toward the former East Fuel Farm), and concentrations decreased significantly to the east and southeast (Figure 6f).
- Metals were analyzed for in soil and groundwater samples collected from within and around the Building C-29 footprint. None of the MTCA Method B CULs for metals were exceeded, except at RISB-48, which was located inside the building footprint. The total chromium concentration (450 mg/kg) exceeded the CUL (42 mg/kg) in the one soil sample collected from 9 to 10 ft bgs. There were no total chromium exceedances in groundwater, but two samples (SCPWD-1 and RISB-30) had concentrations above the arsenic CUL (5 µg/L) at the time. However, results were below the Snohomish County background concentration of 13.6 µg/L (San Juan 2022) (Figures 6d and 6g).

3.3.2 Former East Fuel Farm

Environmental investigations at the former East Fuel Farm have been completed on behalf of the US Army Corps of Engineers (USACE) and Snohomish County. In 1992, a 12,000-gallon aviation fuel UST (Tank 95B) was removed by a contractor on behalf of the USACE. At the time of the UST removal,

approximately 100 cubic yards of petroleum-contaminated soil was removed from the UST excavation and stockpiled on Airport property prior to disposal. Based on the analytical results from confirmation soil samples collected from the remaining soil, contamination exceeding MTCA Method A CULs was not present and no further action was recommended by the USACE. Records indicate that the USACE planned to remove a second UST (Tank 95; size and contents unknown) at the time of the removal of the 12,000-gallon UST; however, the second UST could not be located (AGI 1993). The historical investigation data described above were considered in developing the planned RI investigation locations discussed in Section 6.0 and shown on Figure 6i. In 1994, AGI completed a subsurface investigation at the East Fuel Farm on behalf of Snohomish County. The investigation included a geophysical survey and sampling and analysis of soil and perched groundwater. The results of the 1994 investigation are summarized as follows (AGI 1994):

- The geophysical survey identified two USTs and a potential third UST in the fuel farm. Details regarding the USTs are provided in Section 2.4.5 and the locations of the current and former USTs are shown on the Figure 6 series.
- Ten soil borings (B14 to B23) were advanced in the fuel farm using a hollow-stem auger. The soil borings encountered approximately 2 to 17 ft of fill underlain by till. Perched groundwater was encountered at four locations (B16, B20, B21, and B23) at depths ranging from 15 to 22 ft bgs; these borings were completed as monitoring wells MW1 through MW4. The sampling locations are shown on Figure 6a.
- Analytical results for soil samples identified gasoline-range and JP8 jet fuel-range petroleum hydrocarbons in soil at concentrations exceeding the applicable MTCA Method A CULs. AGI concluded that the soil contamination was limited to the UST backfill.
- Analytical results for groundwater identified petroleum hydrocarbons; Jet-A fuel; benzene, toluene, ethylbenzene, and xylenes (BTEX); and chromium in groundwater at concentrations greater than the applicable MTCA Method A CULs.

In 2000, CDM completed an assessment of contamination at the East Fuel Farm on behalf of the County. No additional sampling was completed as part of the assessment. The assessment report indicates that the 25,000-gallon UST was drained and rinsed in 1996 and had not been used since that time (CDM 2000b).

An additional assessment was completed by CDM in 2002 on behalf of the County. The assessment included sampling and analysis of groundwater samples from existing shallow monitoring wells MW-1 through MW-4, and from aquifer well DW-2. Analytical results are summarized as follows (CDM 2002):

- Detected concentrations of petroleum hydrocarbons in samples from MW-1 through MW-3 were below MTCA Method A CULs.
- Gasoline- and diesel-range petroleum hydrocarbons were detected at concentrations greater than the Method A CULs in the sample from MW-4.
- Benzene was detected in each of the wells at concentrations greater than the MTCA Method A CUL.
- Petroleum hydrocarbons and BTEX were not detected in the deep aquifer sample collected from DW-2.

The 2002 CDM report also indicates that samples were collected from the monitoring wells at the East Fuel Farm in 1996 and 1999 as part of separate investigations conducted at the All Fab facility Building C-29. Chlorinated VOCs were detected in each of the wells indicating potential commingled groundwater plumes in this area. Additional details regarding the C-29 investigations are provided in Section 3.3.

Pre-Order RI activities at the former East Fuel Farm were conducted by Landau on behalf of the Airport over multiple mobilizations between 2018 and 2022. These soil, groundwater, and soil gas investigations further delineated the extent of TPH, VOCs, and metals in the area. Results of the investigations were presented in two, separate data reports (Landau 2019b, 2023). The cumulative results of the investigations are summarized below.

- TPH-G, DRO, and ORO were analyzed for in soil and groundwater samples collected from north and northeast of the former East Fuel Farm boundary. Groundwater samples were collected using temporary well screens and permanent monitoring wells. Soil results from five borings (RISB-41, RISB-42, RISB-43, RISB-64, and RISB-74) indicated that TPH-G and DRO were not detected at concentrations above the laboratory reporting limit. ORO was detected (180 mg/kg) at one location (RISB-64) above the laboratory reporting limit but below the MTCA Method B CUL (2,000 mg/kg). Benzene was detected above the CUL (0.277 µg/kg) at one location (RISB-42) just north of the USTs. The sample was collected from 11.5 to 12.5 ft bgs and the concentration was 2 µg/kg (Figure 6b). Groundwater samples were collected from nine locations (monitoring wells and temporary wells screens) and results showed that DRO and ORO are present in groundwater north of the former East Fuel Farm at concentrations that exceed the MTCA Method B CUL. Benzene concentrations exceeded the CUL (0.795 µg/L) at five of the nine locations (Figure 6e).
- VOC-contaminated soil and groundwater were detected at concentrations above MTCA Method B CULs in and around the former fuel farm footprint. Concentrations of TCE in soil (1.8 to 9.8 µg/kg) were above the CUL (0.0089 µg/L) at a maximum depth of 20 ft bgs (RISB-41) immediately east of the tank area. Cis-1,2-DCE and VC were also detected at concentrations above the CULs in soil around the former fuel farm area. Groundwater samples collected from both temporary and permanent wells showed that TCE, cis-1,2-DCE, and VC were detected at concentrations above the MTCA Method B CULs at the time. The highest VOC concentrations in groundwater were found at the south end of the former East Fuel Farm, at permanent monitoring well MW1 (Figure 6f).
- 1,4-dioxane was detected at concentrations above the MTCA Method B CUL in each of four shallow groundwater samples analyzed for 1,4-dioxane. The highest concentration, 190 µg/L, was detected at MW-1 within the former fuel farm.
- Metals were analyzed for in groundwater samples collected from within and around the former East Fuel Farm footprint. Only arsenic was detected above the CUL (5 µg/L) at the time and of the six wells that had CUL exceedances, only two (HMB1 and MW1) exceeded the current background concentration of 13.6 µg/L.
- One soil gas sample was collected from near the northeast corner of the former East Fuel Farm footprint in April 2019. The sample was collected from a temporary vapor probe that was screened from 4 to 4.5 ft bgs. The only VOC compound detected above the laboratory reporting

limit was VC and the concentration (2,000 µg/m^3) exceeded the MTCA Method B screening level of 9.33 µg/m^3) (Figure 6h).

3.3.3 Former Building C-27

Investigation activities near former Building C-27 began in April 2019 as part of Landau's initial mobilization to implement the 2018 pre-Order RI work plan. There had been no known investigations conducted in the vicinity of Building C-27 prior to implementation of the pre-Order RI in 2019. During drilling activities at location RISB-45 (north of former Building C-27) in 2019, Landau field personnel noted very strong odors and staining in the cores as they were removed from the boring. Soil analytical results indicated a TCE concentration of 230,000 µg/kg at 15 ft bgs. A groundwater grab sample was collected from boring RISB-45 from 15 to 20 ft bgs and the TCE concentration was 340,000 µg/L. TPH concentrations were also found to be above MTCA CULs in effect at the time of the investigation in both soil and groundwater north of the former Building C-27 footprint.

Subsequent Pre-Order RI activities were conducted in and around the former C-27 Building footprint to determine the nature and extent of VOC and TPH contamination. The reported results of those subsequent investigations conducted in the area are summarized below and reference the screening levels presented in the 2018 pre-Order work plan (Landau 2018b).

- TPH-G, DRO, and ORO were analyzed for in soil and groundwater samples collected from within and outside the Building C-27 footprint. Groundwater samples were collected from temporary wells and permanent monitoring wells.
  - Soil results indicated that TPH was either not detected above the laboratory reporting limit or was below the screening levels within and around the former Building C-27 footprint (Figure 6b).
  - Groundwater sampling results showed that TPH-G, DRO, and ORO are present in groundwater within (RISB-46) and to the north (RISB-45, RISB-66, and RISB-76) of the former building footprint. DRO and ORO concentrations were above the screening levels at these locations. TPH-G exceeded the screening level (800 µg/L) at RISB-45 but was below the CUL at RISB-48 and RISB-66. Benzene exceeded the screening level (0.800 µg/L) at two locations (RISB-45 and RISB-76; Figure 6e).
- VOC-contaminated soil and groundwater were detected at concentrations above screening levels within and around the Building C-27 footprint. The highest concentrations in both soil and groundwater were north of the building footprint at RISB-45, as discussed above.
  - VOC concentrations in soil and groundwater exceeded the screening level up to approximately 100 ft northwest (RISB-76) and south (RISB-79), and 235 ft west (RISB-77) of former Building C-27 (Figure 6c).
  - Three new groundwater wells (RIGW-1 through RIGW-3) were installed near the former Building C-27 area during the Pre-Order RI activities. Two of the wells (RIGW-2 and RIGW-3) were sampled (RIGW-1 was dry) in September 2023, along with two new deep aquifer wells. The deep aquifer results are discussed in Section 3.4. Groundwater results from sampling temporary well screens and all permanent monitoring wells near the former Building C-27 indicated that VOC concentrations were above the screening levels in all of the samples (Figure 6f).

- Metals were analyzed for in soil and groundwater samples within and around the Building C-27 footprint. Soil results from one location (RISB-80) indicated that metals were not present in shallow soil (to a maximum depth of 40 ft bgs) at concentrations above the screening levels. Metals were not detected above the laboratory reporting limits from the groundwater sample (RISB-46) collected from beneath the former building footprint.
- In December 2019, the Airport asked Landau to conduct a focused soil gas investigation beneath the southeast corner of Hangar 1 to determine VOC concentrations below the concrete slab. Three soil gas samples (RISG-100, RISG-101, and RISG-102) were collected from stainless-steel vapor pins that were installed just below the concrete slab between 0.7 and 0.9 ft bgs. One of the samples (RISG-102) had a VC concentration (210 µg/m^3) that exceeded the screening level (95 µg/m^3) for shallow soil gas. The remaining samples were below applicable screening levels.

3.4 Deep Aquifer

Investigation of the deep aquifer began in 1999 and continued into 2023 with the installation and sampling of deep aquifer monitoring wells RIDW-5 and RIDW-6.

In 2000, CDM (formerly AGI) completed an investigation of potential contamination of the deep aquifer underlying the Site on behalf of Snohomish County. CDM installed wells into the deep aquifer to the southwest of Building C-19 (DW1), north of the former Building C-29 (DW2), and northeast of Building C-19 (DW3). The locations of the wells are shown on Figure 8. The wells ranged in depth from 117 ft bgs to 151 ft bgs. Soil samples were collected at 10-ft intervals during drilling, field-screened for VOCs, and analyzed in the laboratory for halogenated VOCs. Groundwater samples were collected from DW1 and DW2 in December 1999 and March 2000 and from DW3 in May 2000. Additional groundwater samples were collected from monitoring well DW1 in 2003 and analyzed for halogenated VOCs.

- At monitoring well DW1, aquifer groundwater was encountered at approximately 133 ft bgs. TCE was detected at a concentration above the MTCA Method A CUL in one soil sample from 58 ft bgs (10 µg/kg). Analysis of groundwater samples from DW1 indicated that TCE had migrated vertically to the aquifer. TCE and cis-1,2-DCE were detected in aquifer groundwater samples from DW1, but only TCE (maximum detected concentration of 62 µg/L in 2000) exceeded the MTCA Method A CUL of 5 µg/L. TCE was detected at a concentration above the laboratory reporting limit in one soil sample (57.8 ft bgs), but below the MTCA Method A and B CULs (CDM 2000a). CDM's analysis of a groundwater sample from DW1 in 2003 showed that the concentration of TCE increased to 81 µg/L.
- At monitoring well DW2, aquifer groundwater was encountered at approximately 134 ft bgs. TCE was not detected in groundwater samples collected from DW2; however, concentrations of 1,1,2-TCA, 1,2 DCA, and 1,2-dichloropropane were detected above MTCA Method A and B CULs in the groundwater samples. TCE was detected at a concentration above the MTCA Method B CUL for protection of groundwater in one soil sample. Trans-1,2-DCE and cis-1,2-DCE were detected at concentrations below applicable CULs in soil samples collected from DW2 (CDM 2000a).
- At monitoring well DW3, aquifer groundwater was encountered at approximately 132 ft bgs. VOCs were not detected in soil or groundwater samples from DW3.

CDM concluded that the data did not suggest the presence of area-wide contamination of the aquifer and, as noted in Section 3.1.2, further investigation completed in 2005 did not identify a TCE source other than Building C-19 (CDM 2005).

From 2018 to 2023, the County re-sampled DW1, DW2, and DW3 and installed and sampled six additional deep aquifer monitoring wells (RIDW-1 through RIDW-6). Resampling of DW1 in 2019 showed a marked increase in TCE concentration (300 µg/L) compared to the earlier 81 µg/L measured in 2003. DW2 also yielded a higher TCE concentration in 2019 (120 µg/L) relative to the earlier non-detect result from 2000. Analytical results from DW3 were generally consistent with previous data.

The sampling of RIDW-1 through RIDW-6 has generally yielded concentrations of TCE and other VOCs that are much lower than those found in DW1 and DW2. For example, RIDW-4, which is located immediately downgradient of the highest concentrations of TCE measured in the shallow groundwater at the Site, has yielded a maximum TCE concentration of 1.2 µg/L. This concentration is above Site screening levels (see Section 5) but below the potential TCE groundwater CUL for the Site once CULs are developed in the FS report. Previously unreported data from the September 26, 2023 sampling of downgradient wells RIDW-5 and RIDW-6 (see Table 14) show that only one VOC (1,2-DCA) was detected and exceeded screening levels in the samples at a maximum concentration of 0.68 µg/L. However, 1,4-dioxane was detected above the MTCA Method B CUL (0.44 µg/L) in four of the seven deep aquifer monitoring wells sampled between 2018 and 2023.

A comparison of VOC data from DW1 and DW2 to the VOC data from more recently installed deep wells RIDW-1 through RIDW-6 raised suspicion surrounding the construction methods used to install DW1 and DW2 in 1999. It was noted that both wells were installed in areas with high VOC concentrations in shallow groundwater and therefore a potential exists for shallow perched contaminated groundwater to act as a source of contamination to the deep aquifer if the well is not properly sealed. The evaluation noted that both wells were constructed with a single casing that extended from the surface to the bottom of the boring in the deep aquifer and that bentonite chips (i.e., not a fluidized grout) were used as the primary seal to the surface. The well logs and report (CDM 2000a) have no mention of the bentonite chips being hydrated during installation. In contrast, the RIDW series of wells that were installed in areas where VOC concentrations in shallow groundwater were elevated or potentially elevated (RIDW-4, 5, and 6) were double-cased during drilling to better isolate the shallow perched groundwater from the deep aquifer. RIDW-1 through RIDW-6 were also constructed using fluidized grout as the primary seal to provide a more competent seal compared to dry bentonite chips.

The historical investigation data described above and the well construction evaluation results were considered in developing the planned RI investigation locations for the deep aquifer discussed in Section 6.0 and shown on Figure 13.

4.0 PRELIMINARY CONCEPTUAL SITE MODEL

This section presents a preliminary conceptual Site model based on information developed during previous Site investigations. The conceptual Site model describes the geology and hydrogeology of the Site and identifies contaminants of concern (COCs) and potential COCs at the Site, the media (e.g., soil, groundwater) impacted by these COCs, the known nature and extent of COCs at the Site, and the potential contaminant migration pathways and receptors. The conceptual Site model will help in developing the scope of the RI and will be refined with information obtained during the RI. A schematic of the conceptual Site model will be developed and included in the RI report.

4.1 Geology

The Puget Sound region is underlain by Quaternary sediments deposited by numerous glacial episodes, the most recent of which is termed the Vashon Stade of the Fraser Glaciation. Deposition occurred during a number of glacial advances and retreats. The last cycle of glacial advance and retreat resulted in the present-day topographic expression of the area, many of the near-surface deposits, and existing subsurface conditions. The glacial sediments, in general order from most shallow to deepest, are made up of interlayered and sequential deposits of glaciomarine drift, glacial recessional outwash, glacial till, and glacial advance outwash. The glacial till and underlying units have been over consolidated due to the weight of the overriding ice sheets. In some areas of the Puget Sound region (though not at the Site), these glacial sediments are overlain with more recent, non-glacial deposits locally consisting of beach sands and gravels; alluvial silt, sands, and gravels; and/or lake clays, silts, and peat that were deposited following the glacial retreats (Booth et al. 2004).

Previous investigations conducted at the Site and adjacent properties encountered fill material to depths between 0 and 20 ft bgs, underlain by Vashon till, which is composed of a very dense, heterogeneous mixture of gravel, sand, silt, and clay, with localized sand lenses. The till at the Site is up to 80 ft thick and is underlain by Vashon advance outwash, which is a gray, fine to medium sand with gravel that begins at approximately 100 ft bgs and then transitions to a fine to medium sand to approximately 145 ft bgs, where the sand becomes gravelly (CDM 2000a).

4.2 Hydrogeology

Based on the results of previous investigations at the Site, perched groundwater occurs sporadically within fill material and within shallow Vashon till across the Site at depths as shallow as 1.5 to 15.5 ft bgs. Recent investigations (Landau 2018a) have shown that the perched groundwater encountered historically may not be present during the dry months of the year in certain areas of the Site, thus the perched water should be considered seasonal. In addition, the perched groundwater is not continuous across the Site and its occurrence is likely affected by the presence of localized depressions and sand lenses within the till. Because of the discontinuous nature of the perched groundwater in both time and space, the direction of groundwater flow in the perched groundwater zone is not well defined.

A groundwater aquifer, referred to herein as the deep aquifer, was encountered in the Vashon advance outwash at approximately 130 to 135 ft bgs. Groundwater flow in the aquifer was observed to be to the

north to northeast by CDM (CDM 2000a, 2005) and by Landau (2019b) during more recent investigations.

4.3 Contaminants of Concern and Sources

Site COCs are identified based on contaminants that have been detected during previous investigations or remedial actions at the Site (Section 3), or that are suspected to be present based on available information. The COCs consist primarily of VOCs, metals (arsenic, chromium, and lead) and TPH. Former operations in each of the investigation areas are discussed in Section 2.4 for this work plan. The specific COCs for each area being investigated under the Order are as follows:

- Building C-19 COCs:
  - VOCs
  - 1,4-Dioxane
- Building C-29 COCs:
  - VOCs
  - 1,4-Dioxane
  - Metals (MTCA metals, in particular chromium [III and VI] and lead)
  - TPH (TPH-G, DRO, ORO)
- Former East Fuel Farm COCs:
  - VOCs
  - 1,4-Dioxane
  - Metals (MTCA metals, in particular chromium [III and VI] and lead)
  - TPH (TPH-G, DRO, ORO)
- Building C-23 COCs:
  - VOCs
  - TPH (DRO, ORO)
- Building C-20, C-21, C-22 complex COCs:
  - VOCs
  - 1,4-Dioxane
  - Metals (MTCA metals, in particular lead and chromium [III and VI])
  - TPH (DRO, ORO)
- Deep aquifer COCs:
  - VOCs
  - 1,4-Dioxane.

A description of the activities that took place at these investigation areas, many of which are the likely sources of the contamination found within these areas, is presented in Section 2.4.

Ecology requested (Ecology 2022) that carcinogenic polycyclic aromatic hydrocarbons (cPAHs) be analyzed whenever groundwater samples are analyzed for DRO or ORO, consistent with Table 830-1 of MTCA. Although cPAHs have yet to be detected at the Site at concentrations above screening levels, cPAH analysis has been limited and therefore cPAHs are considered a potential COC at the Site.

Ecology, in the October 5, 2023 Pre-Work Plan Meeting, requested that perfluorinated and polyfluorinated substances (PFAS) be considered a potential COC at the Site because PFAS have been detected at other airports, including Paine Field, due to historical releases of aqueous film-forming foam (AFFF).[2] (Note: Since 2018, Paine Field has been evaluating historical AFFF releases separate from this AO.) The Airport's review of fire department incident reports dating back to the early 1990s as well as interviews with current and past Airport firefighter employees indicate that significant use of AFFF at the Site and therefore releases of AFFF to soil and/or groundwater have not occurred at the Site; however, two emergency fire suppression releases of AFFF are known to have occurred at nearby Hangar 1 and migrated onto the Site. Evaluation of PFAS in this area of the Site is discussed in Section 6.4.

4.4 Media of Concern, Contaminant Migration, Receptors, and Exposure Pathways

As described in Section 4.1 and 4.2, the Site geology consists of a relatively thin layer of fill material underlain by glacial till with advance outwash underlying the glacial till. Seasonal perched groundwater is present above the glacial till in some areas of the Site. The deep aquifer is located at approximately 130 to 135 ft bgs in the advance outwash.

Much of the Site surface is paved, with some unpaved areas to the north and east. No surface water features are located near the Site and stormwater runoff is collected in the onsite stormwater conveyance system or runs off and infiltrates in unpaved areas. Surface water is not considered a medium of concern at the Site because there are no known discharges of Site groundwater to a surface water body.

The Site and the surrounding area are highly urbanized and are part of an airport facility where use by wildlife is actively discouraged due to aviation safety concerns. Therefore, wildlife are not identified as potential receptors. A Terrestrial Ecological Evaluation (TEE) will be conducted as part of the RI report to fully evaluate this exposure pathway. The Site is zoned for industrial land use and the primary use of the Site is industrial; the primary receptors are adult workers. Adult workers include both people working at the Site long-term and temporary construction workers.

[2] AFFF is a synthetic firefighting foam used to suppress flammable liquid fires and PFAS are key components in most AFFFs.

4.4.1 Exposure Pathways

Previous investigations indicate that soil, groundwater, and soil gas contamination is present in the upper glacial till and fill layers and groundwater contamination is present in the deep aquifer. Potential exposure and migration pathways are summarized in the following subsections by medium.

4.4.1.1 Soil

Potential exposure and migration pathways in shallow soil include:

- Direct contact including incidental ingestion or dermal contact by Site workers with hazardous substances that are present in subsurface soil or inhalation of hazardous substances that are present in soil that have migrated as windblown or fugitive dust during construction activities
- Leaching of contaminants from soil to groundwater
- Partitioning of contaminants from soil to shallow soil gas.

4.4.1.2 Groundwater

Potential exposure and migration pathways for shallow groundwater include:

- Incidental ingestion and dermal contact by construction workers with hazardous substances that are present in shallow groundwater
- Migration of contaminated shallow groundwater to the deep aquifer
- Partitioning of contaminants from groundwater to shallow soil gas.

Potential exposure and migration pathways for deep aquifer groundwater include:

- Ingestion as drinking water of hazardous substances that are present in deep aquifer groundwater.

Note that ingestion as drinking water of hazardous substances that are present in shallow groundwater is not considered a potential exposure pathway due to the shallow groundwater not meeting the definition of potable groundwater as defined in WAC 173-340-720(2). However, potential migration of contamination from the shallow groundwater to the deep aquifer is a potential exposure pathway and is being evaluated as part of the RI.

4.4.1.3 Soil Gas/Indoor Air

Potential exposure pathways for soil gas include:

- Migration of hazardous substances from soil gas to indoor air
- Inhalation of hazardous substances in indoor air by workers.

5.0 SCREENING LEVELS

Screening levels are tools used to help remediation professionals and regulators evaluate RI data and are typically established as concentrations for each compound and medium of potential concern at a site. Screening levels are typically established at the most conservative regulatory concentrations in order to ensure that appropriate analytical methods are employed. Screening levels are not cleanup levels; CULs will be developed during the FS phase of the project and are often different than the screening levels for a particular compound or medium. Cleanup standards, also typically developed during the FS phase, include CULs; the point of compliance, the location where CULs must be met; and other regulatory requirements that apply to a site.

Soil, groundwater, and air screening levels were developed based on the media and exposure pathways identified in Sections 4.3 and 4.4 and MTCA requirements, as described below.

5.1 Soil Screening Levels

Soil screening levels were developed for unrestricted land use in accordance with WAC 173-340-740 using MTCA Method B. Although Ecology has stated (Ecology 2022) that the Site meets the definition of an industrial property as promulgated in WAC 173-340-200 and WAC 173-340-745(1)(a)(i), basing screening levels on unrestricted land use provides a conservative evaluation of constituents for initial screening of data and addresses potential exposure pathways including potential exposure of future receptors if the Site use changes. Under MTCA Method B, soil CULs must be at least as stringent as all of the following[3]:

- Concentrations established under applicable state and federal laws
- Concentrations protective of human health:
  - Concentrations that, due to direct contact with contaminated soil, are estimated to result in no acute or chronic non-carcinogenic or carcinogenic toxic effects on human health
  - Concentrations that will not cause contamination of groundwater at levels which exceed groundwater CULs.

These criteria were considered during development of soil screening levels. Soil screening levels were developed for all constituents detected in previous soil or groundwater investigations and in some cases for additional compounds that are part of the same chemical class. Soil screening levels are provided in Table 15.

Except for TPH, mercury, and lead, standard MTCA Method B soil screening levels protective of groundwater or direct human contact (whichever value is lower) were determined in accordance with WAC 173-340-740(3) using Ecology's Cleanup Levels and Risk Calculations (CLARC) database (Ecology; accessed March 2024). MTCA Method A soil CULs for unrestricted land uses were used for TPH, mercury, and lead because there are no Method B values for these constituents published in CLARC.

[3] Protection of ecological receptors was not considered because the Site is believed to meet the exemption criteria for a terrestrial ecological evaluation.

The CLARC database does not provide a screening level for total chromium. Therefore, the screening level for total chromium was set at natural background levels published by Ecology (1994). Hexavalent (Cr VI) and trivalent chromium (Cr III) soil screening levels are based on CULs in CLARC that are protective of the groundwater pathway.

5.2 Groundwater Screening Levels

Groundwater screening levels were developed for detected constituents in previous soil or groundwater investigations using the standard MTCA Method B [WAC 173-340-720(4)]. Groundwater at the Site is not used as drinking water and shallow perched groundwater does not meet the MTCA definition of potable groundwater (WAC 173-340-720(2)) due to low well yields. However, to provide a conservative evaluation of constituents and to address potential future use of groundwater as drinking water, screening levels were based on drinking water as the highest potential beneficial use for groundwater. Under MTCA Method B, groundwater CULs must be at least as stringent as all of the following[4]:

- Concentrations established under applicable state and federal laws
- Concentrations protective of human health determined using MTCA Equations 720-1 or 720-2, if sufficiently protective health-based criteria have not been established under applicable state and federal laws.

Screening levels were established based on these CUL requirements. Although MTCA allows for a maximum carcinogenic risk of $1x10^{-5}$ for constituents for which maximum contaminant levels (MCLs) have been established under applicable state or federal laws, screening levels were based on a maximum carcinogenic risk of $1x10^{-6}$. Screening levels were set at the lowest of the federal and state MCLs or State Action Levels (SALs), where applicable, and the MTCA Method B value, except arsenic, which is set at the Snohomish County background concentration of 13.6 µg/L (San Juan 2022). Groundwater concentrations protective of the vapor intrusion pathway were also considered for compounds that are proposed for analysis in soil gas (see Section 5.3). If no federal or state criteria were available, the lowest of the MTCA Method B formula values were used as the screening criterion.

Groundwater screening levels were developed for all constituents detected in previous soil or groundwater investigations and in some cases for additional compounds that are part of the same chemical class or that have not been analyzed at the Site but are planned for analysis during the RI. Screening levels for the eight PFAS compounds listed in CLARC are based on protection of groundwater and categorized as MTCA Method B cancer CULs, or Washington SALs, which are protective of groundwater for use as drinking water. Groundwater CULs and their respective adjusted screening levels are provided in Table 16.

5.3 Air/Vapor Intrusion Screening Levels

Screening levels protective of the vapor intrusion pathway were established for indoor air, soil gas, and groundwater based on the standard MTCA Method B [173-340-750(3)]. Because air samples are

[4] Contaminant concentrations must be protective of surface water beneficial uses if impacted groundwater will reach surface water; however, no surface water features are located near the Site.

susceptible to interference from background sources, the list of analytes was narrowed based on the results from previous soil gas investigations. Previous data were screened against soil gas screening levels provided in the CLARC database. Of the six detected compounds that exceeded the screening levels in the CLARC database, two compounds (chloroform and 1,3-butadiene) were excluded because they are considered common background contaminants due to laboratory contamination issues, and historical information does not indicate that the compounds were used or released at the Site. In addition, two compounds (tetrachloroethene and 1,1,1-TCA) were added to the air analyte list because historical information indicates that they may have been used at the Site and analysis of these compounds in soil gas will help determine if a release occurred. Soil gas and indoor air screening levels are provided in Table 17.

6.0 REMEDIAL INVESTIGATION

This section presents the planned scope of the remedial investigation. Further investigation of soil, groundwater, and/or soil gas is needed to evaluate the nature and extent of contamination in each of the investigation areas and in the deep aquifer based on previous investigations at the Site. Data from the RI will be used to determine if cleanup is warranted, and, if warranted, to develop and evaluate cleanup action alternatives in the FS and to select a final cleanup action in the draft cleanup action plan.

The nature and extent of contamination at the Site has been, and will continue to be, delineated based primarily on data obtained from laboratory analysis of soil, groundwater, and soil gas samples for COCs. Evaluation of data from the analysis of all three of these media is beneficial in delineating the nature and extent of contamination at the Site. Soils at the Site are heterogeneous laterally and vertically (especially the till). Shallow groundwater at the Site is seasonal and appears to be discontinuous. These factors contribute to the heterogeneous distribution of contamination at the Site. Additionally, VOCs, which readily partition off of soil and groundwater to soil gas are present at the Site. Soil gas contaminated with VOCs may migrate a significant distance from the release source due to variable geology and preferential flow paths created by utilities and other infrastructure. By evaluating all three media wholistically, a higher level of confidence is achieved in delineating the nature and extent of contamination based on multiple lines of evidence.

The planned scope of the RI is summarized in Table 18. More detailed information on the planned sampling depth and analyses to be conducted for each exploration location is presented by media in Tables 19, 20, and 21 for temporary borings, groundwater monitoring wells, and soil gas, respectively. Planned RI investigation locations are shown on Figures 3i, 4i, 5i, and 6i for each of the four investigation areas and on Figure 13 for the deep aquifer. A Site-wide map of planned shallow investigation locations is shown on Figure 12 along with Site-wide TCE concentration contours in shallow groundwater because most of the additional RI activities described in this plan are driven by the presence of elevated VOC (namely TCE) concentrations in shallow groundwater.

The field and analytical methods to be used during the RI are described in the SAP (Appendix A) and QAPP (Appendix B). The SAP includes detailed methods to be employed during drilling and sampling, including field screening, to collect samples with the highest potential to contain contamination. The SAP also describes procedures for sampling groundwater in soil borings, along with soil, if groundwater is found to be present in the boring.

An underground utility survey will be conducted at each drilling location prior to drilling as described in the SAP. Additional, more expansive, utility survey work may be necessary if RI analytical results and field observations indicate that a utility might be acting as a preferential pathway. This more detailed utility survey could include a private utility locating company employing magnetometers, radio frequency, ground-penetrating radar (GPR), and utility cameras, as necessary.

The scope and rationale of the planned RI is described below for each of the four investigation areas and the deep aquifer in terms of the data gaps that remain for characterizing the nature and extent of contamination within each area. The scope and rationale for planned Site-wide groundwater monitoring

are also provided below as well as procedures to be followed in the event of an inadvertent discovery of an archaeological resource and/or human remains during the proposed RI activities.

6.1 Building C-19

This section identifies the data gaps, RI objectives and planned RI activities for the Building C-19 investigation area.

6.1.1 Data Gaps

The following data gaps have been identified for Building C-19:

- The vertical extent of chlorinated solvents in soil at and near the former vapor degreaser has not been adequately delineated.
- The easterly extent of the chlorinated solvent groundwater plume to the east of the former vapor degreaser has not been adequately delineated.
- The extent of chlorinated solvents in groundwater around existing boring RISB-58 located east of the northern half of Building C-19 has not been adequately delineated.

6.1.2 Remedial Investigation Objectives and Planned Activities

The objectives of the RI in the Building C-19 area and the planned RI activities to address the objectives are as follows:

- Further delineate the vertical extent of chlorinated solvents in soil near the former vapor degreaser
  - Soil samples will be collected at 10-ft intervals from continuous cores collected using rotosonic drilling methods at new deep well RIDW-7 (Figure 3i and Figure 13) to be installed adjacent to existing deep well DW1 located just south of the former vapor degreaser (see discussion in Section 3.4 regarding the installation of DW1 and DW2 replacement wells). Soil will be sampled from 5 ft to 55 ft bgs at which point the collection of additional soil samples will be based on the results of field screening for VOCs using a photoionization detector. Soil will continue to be sampled at 10-ft intervals until field screening indicates that VOC contamination is no longer present.
  - Soil samples will be analyzed for VOCs.
- Further delineate the extent of the chlorinated solvent plume to the east of the former vapor degreaser
  - Groundwater and/or soil will be sampled from boring RISB-100 to be advanced at the location shown on Figure 3i. Soil and groundwater samples will be analyzed for VOCs with the groundwater sample also being analyzed for 1,4-dioxane.
- Further delineate the extent of chlorinated solvents in groundwater around existing boring RISB-58 located east of the northern half of Building C-19
  - Groundwater and/or soil will be sampled from three borings (RISB-101 through RISB-103) to be advanced at the locations shown on Figure 3i. Soil and groundwater samples will be analyzed for VOCs with the groundwater samples also being analyzed for 1,4-dioxane.

  - Additional borings (i.e., contingent borings) will be advanced at locations extending radially outward from RISB-101 through RISB-103 during a second phase of the RI, if needed, to delineate the extent of VOC contamination within this area. The locations of the contingent borings will be determined based on the data obtained from sampling RISB-101 through RISB-103 and on consultation with Ecology prior to selecting the final locations.

Previous investigations indicate that TCE has migrated vertically to the deep aquifer over the Building C-19 area. Planned RI activities associated with the deep aquifer in the Building C-19 area are discussed in Section 6.5.

6.2 Building C-20, C-21, C-22 Complex

This section identifies the data gaps, RI objectives and planned RI activities for the Building C-20, C-21, C-22 complex investigation area.

6.2.1 Data Gaps

The following data gaps have been identified for the Building C-20, C-21, C-22 complex:

- Chlorinated solvents have been detected in soil, groundwater and soil gas in and around Building C-22 at concentrations greater than Site screening levels. The highest concentration of TCE in soil gas was measured at LAI-26. The extent of TCE and other chlorinated solvents in soil gas around LAI-26 has not been delineated.
- DRO and ORO have been detected in shallow soil south of Buildings C-20 and C-22 at RISB-22 at concentrations greater than Site screening levels. The extent of DRO and ORO in this area has not been adequately delineated.
- DRO and ORO have been detected in groundwater in the area of Building C-20 and C-22 at concentrations greater than Site screening levels. The extent of DRO and ORO to the west of Building C-22, south of Building C-20 and C-22 and east of RISB-14 and RISB-60 (located northeast of Building C-21) has not been adequately delineated.
- Contamination has been identified along a trench drain located within the interior of Building C-22 and running east to west along the north side of Building C-20 (Figure 4i). The discharge point of the trench drain is not known.
- Permanent groundwater monitoring wells have not been installed in the Building C-20, C-21, C-22 complex to allow for seasonal evaluation of groundwater contamination and groundwater levels, and for establishing baseline groundwater conditions prior to potential remediation in the area. The absence of wells in this area is considered a data gap.
- Total chromium was detected in a soil sample collected from RISB-13 at 12.5 ft bgs at a concentration slightly above screening levels. Ecology (2022) identified the extent of total chromium in soil to the west and south of Building C-22 as a data gap.
- Total chromium was detected in a groundwater sample collected from RISB-13 at 9 to 12 ft bgs at a concentration below the screening level for total chromium but above the screening level for hexavalent chromium. Ecology (2023) identified chromium speciation in groundwater at the C-20 complex as a data gap in assessing compliance with the hexavalent chromium groundwater CUL. In addition, a soil sample from RISB-13 (10 to 13 ft bgs) contained total chromium at a

concentration above the screening level for hexavalent chromium. Ecology (2024a) identified speciation in soil at this location as a data gap in assessing compliance with the hexavalent chromium soil CUL.

6.2.2 Remedial Investigation Objectives and Planned Activities

The objectives of the RI in the Building C-20, C-21, C-22 complex and the planned RI activities to address the objectives are as follows:

- Further delineate the extent of VOCs in soil gas exceeding screening levels to the south of Building C-20 in the vicinity of LAI-26
  - Three soil gas probes, RISG-203 through RISG-205 will be installed at the locations shown on Figure 4i and sampled for VOCs
- Further delineate the extent of DRO and ORO in shallow soil exceeding screening levels to the south of Buildings C-20 and C-22 in the vicinity of RISB-22
  - One shallow soil sample (1 to 5 ft bgs) will be collected during drilling from soil probes RISG-204 and RISG-205. Soil samples will be analyzed for TPH-G/DRO/ORO.
- Further delineate the extent of total chromium in soil and DRO and ORO in groundwater to the west of Building C-22 and to the south of Buildings C-20 and C-22
  - Two soil borings, RISB-105 and RISB-106, will be advanced at the locations shown on Figure 4i. Soil samples will be analyzed for trivalent chromium, hexavalent chromium, and total chromium. Soil samples will also be analyzed for cPAHs and naphthalene due to the lack of cPAH and naphthalene data from the Building C-20 complex area. Groundwater samples will be analyzed for DRO and ORO, cPAHs, and naphthalene.[5]
  - A soil boring, RISB-113, will be advanced at the location shown on Figure 4i. Groundwater will be sampled from the boring and analyzed for TPH-G/DRO/ORO, cPAHs, and naphthalene. A monitoring well, RIGW-103, will be installed at the location shown on Figure 4i. Groundwater will be sampled from the well as part of Site-wide groundwater monitoring (as described in the penultimate bullet below) and analyzed for TPH-G/DRO/ORO, cPAHs, and naphthalene. Soil samples will be collected from temporary boring RISB-113 and during installation of well RIGW-103 and analyzed for TPH-G/DRO/ORO. Additionally, the soil sample collected from RIGW-103 will be analyzed for VOCs.
- Further delineate the extent of DRO and ORO in groundwater to the east of RISB-14 and RISB-60
  - One soil boring (RISB-114) will be advanced at the location shown on Figure 4i and soil samples will be analyzed for VOCs. Groundwater will be sampled from the boring and analyzed for DRO, ORO, VOCs, cPAHs, and naphthalene. A monitoring well, RIGW-104, will be installed at the location shown on Figure 4i. Groundwater will be sampled from the well as part of Site-wide groundwater monitoring (as described in the penultimate bullet below) and analyzed for DRO, ORO, VOCs, and cPAHs. Soil samples will be collected during the drilling of RIGW-104 and analyzed for TPH-G/DRO/ORO and VOCs.
- Determine the discharge point of the trench drain

[5] Ecology requested that cPAHs and naphthalene be analyzed for any time DRO or ORO is analyzed for in groundwater (Ecology 2022).

  - A sonde survey or other pipe-tracing method, depending on conditions encountered in the field, will be employed in an attempt to determine the discharge point of the trench drain. The survey will begin at the known easterly extent of the trench drain and proceed eastward.
  - Additional investigation will be conducted at the surveyed terminus of the trench drain if there are no existing Site data within the immediate area.
- Establish a groundwater monitoring network in the Building C-20, C-21, C-22 complex
  - Install four groundwater monitoring wells, RIGW-100,RIGW-101, RIGW-103, and RIGW-104 in the immediate vicinity of the Building C-20 to C-22 complex at the locations shown on Figure 4i. Sample the wells as part of Site-wide groundwater monitoring discussed in Section 6.6.
  - Based on previous investigations within this area and depending on the season, sufficient groundwater may not be available to complete a fully functional groundwater monitoring well. In this case, the wells will be completed as designed (see SAP; Appendix A) and periodically monitored to demonstrate the absence of groundwater in this area and/or to potentially be used for collection of soil gas samples. The wells will be constructed of fiberglass to withstand temperatures exceeding the boiling point of water in the event that soil heating is implemented in the area as a cleanup remedy.
- Sample soil and groundwater for hexavalent chromium to assess compliance with hexavalent chromium CULs
  - Two soil samples will be collected during installation of monitoring well RIGW-100 (located near RISB-13) and analyzed for total chromium, trivalent chromium, and hexavalent chromium. A groundwater sample from new monitoring well RIGW-100 will be collected and analyzed for total chromium, trivalent chromium, and hexavalent chromium during two rounds of Site-wide groundwater monitoring (see Section 6.6).

6.3 Building C-23/C-23 Annex

This section identifies the data gaps, RI objectives, and planned RI activities for the Building C-23/C-23 Annex investigation area.

6.3.1 Data Gaps

The following data gaps have been identified for Building C-23/C-23 Annex:

- Chlorinated solvents have been detected in soil, groundwater, and soil gas beneath the north end of the Building C-23 Annex in RISB-29, RISB-51, LAI-13, and RISB-61 at concentrations greater than applicable screening levels. The extent of contamination has not been adequately delineated.
- ORO has been detected in groundwater beneath the north end of the Building C-23 Annex at concentrations greater than applicable screening levels. The extent of ORO in this area has not been adequately delineated.
- Previous groundwater sampling near the former oil shed and de-burr area, east of Building C-23 was limited to depths of less than 3 ft from shallow vapor implants. Characterization of

groundwater from deeper portions of the shallow perched groundwater in this area has not been conducted.

- Permanent groundwater monitoring wells have not been installed in the Building C-23/C-23 Annex to allow for seasonal evaluation of groundwater contamination and groundwater levels, and for establishing baseline groundwater conditions prior to potential remediation in the area. The absence of wells in this area is considered a data gap.
- At least one heating oil UST is located at the southwest corner of Building C-23. Previous reports include conflicting information regarding the number of USTs and a second UST is potentially present. Limited sampling has been conducted in the vicinity of the UST(s) and groundwater conditions have not been evaluated.

6.3.2 Remedial Investigation Objectives and Planned Activities

The objectives of the RI in the Building C-23/C-23 Annex area and the planned RI activities to address the objectives are as follows:

- Further delineate the extent of chlorinated solvents and ORO beneath the northern portion of the Building C-23 Annex
  - Groundwater and/or soil will be sampled from two borings, RISB-107 and RISB-108, to be advanced at the locations shown on Figure 5i. Soil samples will be analyzed for VOCs. Groundwater samples will be analyzed for VOCs, 1,4-dioxane, DRO, ORO, cPAHs, and naphthalene.
  - Groundwater and soil will be sampled from one boring, RISB-115, located east of RISB-61 as shown on Figure 5i to delineate the easterly extent of VOC contamination found at RISB-61. Soil and groundwater samples will be analyzed for VOCs.
  - Three soil gas probes, RISG-206, RISG-207, and RISG-208, will be installed at the locations shown on Figure 5i and sampled for VOCs.
- Establish a groundwater monitoring well in the Building C-23/C-23 Annex
  - Install one groundwater monitoring well, RIGW-102, at the north end of the Building C-23 Annex at the location shown on Figure 5i. Sample the well as part of Site-wide groundwater monitoring discussed in Section 6.6.
  - Based on previous investigations within this area and depending on the season, sufficient groundwater may not be available to complete a fully functional groundwater monitoring well. In this case, the well will be completed as designed (see SAP; Appendix A) and periodically monitored to demonstrate the absence of groundwater in this area and/or to potentially be used for collection of soil gas samples. The well will be constructed of fiberglass to withstand temperatures exceeding the boiling point of water in the event that soil heating is implemented in the area as a cleanup remedy.
- Characterize groundwater and/or soil near the former oil shed and de-burr area east of Building C-23
  - Groundwater and/or soil will be sampled from one boring, RISB-104, to be advanced at the location shown on Figure 5i. Soil and groundwater samples will be analyzed for VOCs, DRO, ORO, cPAHs, and naphthalene. The groundwater sample will also be analyzed for 1,4-dioxane.

- Determine if one or more USTs are present near the southwest corner of Building C-23 and evaluate soil and groundwater conditions in the area of the UST(s)
  - Conduct a survey of the area using GPR or other geophysical survey methods to identify the location of the tank(s).
  - Groundwater and/or soil will be sampled from two borings, RISB-109 and RISB-110, to be advanced at the approximate locations shown on Figure 5i. Actual boring locations will be based on the results of the GPR survey. Soil and groundwater samples will be analyzed for VOCs, TPH-G/DRO/ORO, cPAHs, and MTCA metals.

6.4 Former Buildings C-29 and C-27 and Former East Fuel Farm

This section identifies the data gaps, RI objectives, and planned RI activities for the former Building C-29 and former East Fuel Farm investigation area.

6.4.1 Data Gaps

The following data gaps have been identified for the former Buildings C-29 and C-27 and the former East Fuel Farm:

- The extent of chlorinated solvents in soil and groundwater to the southwest of former Building C-27 has not been adequately delineated.
- The nature and extent of VOCs in soil gas within the chlorinated solvent plume centered around former Building C-27 have not been characterized. These data would be useful in assessing the vapor intrusion risk and in the evaluation of cleanup alternatives in this area during the FS.
- Chromium was detected in soil samples collected from RISB-48 and C29-TP5A at the north end of former Building C-29 at concentrations above applicable screening levels. The extent of chromium contamination in soil has not been adequately delineated to the north of these locations.
- An assessment for the potential for PFAS to be present within the former Building C-29 and former East Fuel Farm investigation area or anywhere on the Site has not been completed.

6.4.2 Remedial Investigation Objectives and Planned Activities

The objectives of the RI in the former Building C-29/former East Fuel Farm area and the planned RI activities to address the objectives are as follows:

- Further delineate the extent of chlorinated solvents in groundwater and/or soil southwest of former Building C-27
  - Groundwater and/or soil will be sampled from three borings (RISB-111, RISB-116, and RISB-117) to be advanced at the locations shown on Figure 6i. Samples will be analyzed for VOCs. The groundwater samples will also be analyzed for 1,4-dioxane.
  - Additional borings (i.e., contingent borings) will be advanced at locations extending radially outward (i.e., southwest) from RISB-111, RISB-116, and RISB-117 during a second phase of the RI, if needed, to delineate the extent of VOC contamination within this area. The locations of the contingent borings will be determined based on the data obtained from

sampling RISB-111, RISB-116, and RISB-117 and on consultation with Ecology prior to selecting the final locations.

- Characterize the nature and extent of VOCs in soil gas within the VOC plume centered around former Building C-27
  - Shallow soil gas will be sampled from 10 soil gas probes (RISG-209 through RISG-218) to be installed at the locations shown on Figure 6i. Samples will be analyzed for VOCs.
- Delineate the northerly extent of chromium contamination in soil at the north end of former Building C-29
  - Soil will be sampled from one boring (RISB-112) to be advanced at the location shown on Figure 6i. The sample(s) will be analyzed for total chromium, hexavalent chromium, and trivalent chromium. Groundwater will not be sampled at RISB-112.
  - Additional borings (i.e., contingent borings) will be advanced at locations extending radially outward (i.e., north) from RISB-112 during a second phase of the RI, if needed, to delineate the extent of chromium contamination within this area. The locations of the contingent borings will be determined based on the data obtained from sampling RISB-112 and on consultation with Ecology prior to selecting the final locations.
- Evaluate for the presence of PFAS at the Site by sampling groundwater at a Site location where PFAS have the greatest likelihood of detection based on available information
  - Groundwater will be sampled from well HMB1 (Figure 6a) located to the east of Hangar 1 in the general area where two separate releases of AFFF have occurred in the past 31 years. PFAS are known components of AFFF blends that were in use at the time of the releases. HMB1 will be sampled during two separate events as part of Site-wide groundwater monitoring discussed in Section 6.6.

Previous investigations indicate that TCE has migrated vertically to the deep aquifer over the former Building C-29/former East Fuel Farm area. Planned RI activities associated with the deep aquifer in this area are discussed in Section 6.5.

6.5 Deep Aquifer

This section identifies the data gaps, RI objectives, and planned RI activities for the deep aquifer.

6.5.1 Data Gaps

The following data gaps were identified for the deep aquifer:

- As discussed in Section 3.4, a significant potential exists for the observed presence of elevated concentrations of VOCs in deep aquifer samples from DW1 and DW2 to be related to DW1 and DW2 well design and construction methods that do not provide an adequate seal between the shallow perched groundwater zone and the deep aquifer. Results from these wells may not be representative of actual aquifer conditions or the potential for migration to the deep aquifer. The current characterization of the nature and extent of contamination in the deep aquifer based on data from these wells is considered suspect and a data gap requiring further evaluation.

6.5.2 Remedial Investigation Objectives and Planned Activities

The objectives of the RI in the deep aquifer and the planned RI activities to address the objectives are as follows:

- Re-characterize deep aquifer groundwater conditions in the immediate vicinity of DW1 and DW2
  - Decommission DW1 and DW2 by over-drilling in accordance with Chapter 173-360 WAC such that the wells can no longer provide a conduit for contamination to reach the deep aquifer. These two wells will be decommissioned in the early stages of the RI to maximize the amount of time between decommissioning and development of the two replacement wells to provide more time for groundwater impacted by leakage to migrate away from the area. DW1 and DW2 will be sampled immediately prior to decommissioning. Samples will be analyzed for VOCs and 1,4-dioxane.
  - Construct and sample new groundwater monitoring wells RIDW-7 and RIDW-8 in the deep aquifer at the locations shown on Figures 3i and 6i, respectively, using the methods described in the SAP including double casing during drilling and the use of bentonite grout to properly isolate shallow groundwater from the deep aquifer. The new wells will be located approximately 20 ft crossgradient from the existing wells. Groundwater samples from both the new and existing wells will be analyzed for VOCs and 1,4-dioxane during two separate events as part of Site-wide groundwater monitoring (see Section 6.6).

6.6 Site-Wide Groundwater Monitoring

This section identifies the data gaps, RI objectives, and planned RI activities for Site-wide groundwater monitoring.

6.6.1 Data Gaps

The following data gaps were identified for Site-wide groundwater monitoring:

- A comprehensive set of relatively recent, dry-season and wet-season groundwater quality data for COCs from new wells installed in the last 5 years (including wells installed during this RI) and from existing wells does not exist for the Site. These data are needed to better characterize the nature and extent of contamination at the Site and to evaluate historical and seasonal trends. The COC list will include 1,4-dioxane, which has been sampled for sporadically at the Site.
- A comprehensive set of annual groundwater elevation data collected during the same monitoring event from all new (i.e., installed during this RI) and existing monitoring wells does not exist for the Site. These data can be used to evaluate seasonal fluctuations in groundwater elevations and flow directions and to compare the shallow groundwater to MTCA criteria as a potable water supply.

6.6.2 Remedial Investigation Objectives and Planned Activities

The objectives of the RI for Site-wide groundwater monitoring and the planned RI activities to address the objectives are as follows:

- Collect Site-wide groundwater quality data from new and existing wells during dry and wet seasons
  - Sample groundwater from the following new and existing shallow groundwater monitoring wells once during the dry season (i.e., July, August, September, October) and once during the wet season (i.e., December, January, February, March): SCPWD-1, SCPWD-2, SCPWD-3, SCPWD-4, RIGW-1, RIGW-2, RIGW-3, RIGW-55, HMB1, MW1, MW2, MW3, MW4, C29-MW1, C29-MW2, RIGW-100, RIGW-101, RIGW-102, RIGW-103, and RIGW-104. Analyze the groundwater samples for the COCs identified in Table 20.
  - Sample groundwater from the following new and existing deep aquifer groundwater monitoring wells once during the dry season (i.e., July, August, September, October) and once during the wet season (i.e., December, January, February, March): DW3, RIDW-1 RIDW-2, RIDW-3, RIDW-4, RIDW-5, RIDW-6, RIDW-7, and RIDW-8. Analyze the groundwater samples for the COCs identified in Table 20.
- Collect Site-wide groundwater elevation data from all new and existing Site monitoring wells over an entire year to the extent feasible given schedule constraints.
  - Measure groundwater elevations in all Site monitoring wells (i.e., same wells listed above for groundwater quality monitoring) plus the five deep aquifer monitoring wells owned by The Boeing Company near Hangar 3 (MW1, MW2, MW3, MW4, MW6, and MW7)[6] once during four consecutive calendar quarters.
  - Groundwater elevation measurements will begin during first quarter 2024 to accommodate the overall project schedule. This schedule will allow groundwater elevation measurements to be completed during the fourth quarter of 2024. However, groundwater elevation measurements will not be obtained in the seven new monitoring wells to be installed during this RI (RIGW-100, RIGW-101, RIGW-102, RIGW-103, RIGW-104, RIDW-7 and RIDW-8) for first quarter 2024 and may not be obtained in the second quarter 2024 since the wells may not be installed until third quarter 2024.

6.7 Cultural Resources Protections During the Remedial Investigation

An Inadvertent Discovery Plan (IDP) has been completed to address monitoring protocols and procedures to be used in the event of an inadvertent discovery of an archaeological resource and/or human remains during the proposed RI activities. The IDP, prepared by the Airport in consultation with Ecology for use during the course of RI implementation, is provided as Appendix D.

In support of the additional investigation proposed in this work plan, Ecology consulted with the following entities regarding the potential for impacts to cultural resources:

- Washington State Department of Archaeology and Historic Preservation (DAHP)
- Muckleshoot Indian Tribe
- Sauk-Suiattle Indian Tribe

[6] Assuming authorization to access the wells is obtained from The Boeing Company.

- Snoqualmie Indian Tribe
- Stillaguamish Tribe of Indians
- Suquamish Tribe
- Swinomish Indian Tribal Community
- Tulalip Tribe.

Based on Ecology's analysis of the requirements of MTCA and consultation with the above-noted department and governments, the Site has a low potential to impact cultural resources. The IDP included as Appendix D is sufficient to mitigate any impacts to cultural resources.

If apparent archaeological artifacts are encountered, the County will be notified immediately. The County will then notify Ecology, DAHP, the Tulalip Tribes, the Stillaguamish Tribe of Indians, the Muckleshoot Indian Tribe, the Samish Indian Nation, and, if appropriate, will invite the parties to attend an onsite inspection with the professional archaeologist under contract with the Airport. If the archaeological artifacts are confirmed, an archaeologist will document the discovery in a report for submittal to DAHP to allow access control to information regarding potentially sensitive locations, in accordance with Chapter 27.53 of the Revised Code of Washington (RCW).

In the event of an inadvertent discovery of potential human remains, project activities will stop immediately in the area of discovery and the apparent remains will be covered and secured against further disturbance. The Snohomish County Sheriff's Office and the Snohomish County Medical Examiner will be notified immediately, along with DAHP and authorized Tribal representatives. If appropriate, a management plan will be developed by a professional archaeologist in accordance with applicable state laws.

7.0 TERRESTRIAL ECOLOGICAL EVALUATION

A terrestrial ecological evaluation (TEE) will be conducted during the RI and documented in the RI report to determine if hazardous substances in Site soil may pose a threat to the terrestrial environment in accordance with MTCA regulations WAC 173-340-7490 through 173-340-7494. Information collected during the evaluation may be used in developing and evaluating cleanup action alternatives and in selecting a recommended cleanup action in the FS, depending on the results of the evaluation.

The Site does not meet the criteria described in WAC 173-340-7491(1) to exclude the Site from conducting a TEE. In addition, the Site does not meet the criteria described in WAC 173-340-7491(2)(a) for requiring a site-specific TEE for the following reasons:

- The Site is not located on or directly adjacent to an area where management or land-use plans will maintain or restore native or semi-native vegetation
- The Site is not used by a threatened or endangered species
- The Site is not located on a property that contains at least 10 acres of native vegetation within 500 feet of the Site
- Ecology has not determined that the Site may present a risk to significant wildlife populations.

In addition, the Airport has prepared and implements a Wildlife Hazard Management Plan to actively manage wildlife populations at the Site to minimize collisions involving wildlife and aircraft. The plan, which has been approved by the Federal Aviation Administration (FAA), is based on a strategy that minimizes habitat that could be attractive to wildlife, such as ponds and wetlands, grassy fields, and forested areas.

Therefore, in accordance with WAC 173-340-7491(2)(b), a simplified TEE will be completed in accordance with WAC 173-340-7492 during preparation of the RI report. A properly completed TEE form[7] summarizing the results of the simplified TEE will be prepared and submitted as an appendix to the RI report. Collection of Site-specific data to support the TEE, other than that already described in this work plan, is not needed at this time.

[7] https://apps.ecology.wa.gov/publications/SummaryPages/ECY090300.html

8.0 FEASIBILITY STUDY

The purpose of the FS is to develop, evaluate, and select cleanup action alternatives for the Site. The FS will:

- Identify applicable or relevant and appropriate requirements (ARARs) for Site cleanup
- Identify media and locations where remedial action is needed
- Develop remedial action objectives (RAOs)
- Develop, screen, and evaluate cleanup alternatives
- Identify a preferred alternative.

The FS will be conducted in accordance with the recently amended MTCA cleanup regulation, which was adopted on August 23, 2023 and becomes effective on January 1, 2024. Specifically, the FS will be conducted in accordance with the following new or recently amended sections of MTCA: WAC 173-340-351, WAC 173-340-355, WAC 173-340-357, WAC 173-340-360 and WAC 173-340-370. The following subsections provide additional discussion of details for each of the above bulleted items.

8.1 Applicable or Relevant and Appropriate Requirements

In accordance with MTCA, all cleanup actions must comply with applicable state and federal laws [WAC 173-340-710(1)]. MTCA defines applicable state and federal laws to include legally applicable requirements and those requirements that are relevant and appropriate. Collectively, these requirements are referred to as ARARs. The starting point for ARARs is the MTCA CULs and regulations that address implementation of a cleanup under MTCA (Chapter 70A.305 RCW; Chapter 173-340 WAC). Other potential ARARs may include the following:

- State Water Pollution Control Act (Chapter 90.48 RCW)
- US Environmental Protection Agency (EPA) National Recommended Water Quality Criteria – Section 304 of the federal Clean Water Act
- EPA Water Quality Standards (National Toxics Rule) – 40 Code of Federal Regulations (CFR) 131
- Minimum Standards for Construction and Maintenance of Wells (Chapter 173-160 RCW)
- Washington Pollution Control Act and the implementing regulations, Water Quality Standards for Surface Waters of the State of Washington (Chapter 173-201A WAC)
- Washington Hazardous Waste Management Act and the implementing regulations, Dangerous Waste Regulations (Chapter 173-303 WAC), to the extent that any dangerous wastes are discovered or generated during the cleanup action
- Endangered Species Act, due to listing of Puget Sound chinook salmon and the potential listing of coastal/Puget Sound bull trout
- Washington Clean Air Act (Chapter 70.94 WAC)
- Occupational Safety and Health Act, 29 CFR Subpart 1910.120
- Washington Industrial Safety and Health Act.

From MTCA and the other ARARs, CULs and points of compliance (collectively referred to as cleanup standards) will be developed for media and parameters that require remedial action. In addition, the FS will identify likely permits required for implementation of the cleanup action.

8.2 Delineation of Media Requiring Remedial Action

The RI process will determine if soil or groundwater analytical results exceed preliminary CULs and, if so, identify the locations of the exceedances. The RI will also evaluate soil vapor analytical results to identify locations where a potential exists for exceedance of indoor air CULs. Based on any exceedances and the established points of compliance, the FS will identify the areas that require remedial action.

8.3 Development of Remedial Action Objectives

The RAOs identify the goals that must be achieved by a cleanup alternative to meet cleanup standards and provide adequate protection of human health and environment including likely vulnerable populations and overburdened communities. The RAOs must address all affected media and a cleanup alternative must achieve all RAOs to be considered a viable cleanup action. RAOs will be developed for portions of the Site requiring remedial action.

The RAOs will be action-specific and/or media-specific. Action-specific RAOs are based on actions required for environmental protection that are not intended to achieve a specific chemical criterion. Media-specific RAOs are based on the CULs. The RAOs will specify the COCs, the potential exposure pathways and receptors, and acceptable contaminant levels or range of levels for each exposure pathway, as appropriate.

The extent to which each alternative meets the RAOs will be determined by applying the specific evaluation criteria identified in the MTCA regulation.

8.4 Screening of Cleanup Alternatives

Cleanup alternatives will be developed for portions of the Site that require remedial action. Initially, general remediation technologies will be identified for the purpose of meeting RAOs. General remediation technologies consist of specific remedial action technologies and process options. General remediation technologies will be considered and evaluated based on the properties of identified contaminant(s) and may include institutional controls, containment, or other engineering controls, removal, *in situ* treatment, and natural attenuation.

Specific remedial action technologies are the engineering components of a general remediation technology and process options are those specific processes within each specific technology. Specific remedial action technologies and representative process options will be selected for evaluation based on documented development or documented successful use for the observed contamination conditions at the Site. Cleanup alternatives will be developed from the general and specific remedial technologies and process options consistent with Ecology's expectations identified in WAC 173-340-351, 355, 357, and 360 using best professional judgment and guidance documents as appropriate.

During the development of cleanup alternatives, both the current and planned future land use will be considered.

8.5 Evaluation of Cleanup Alternatives

MTCA requires that cleanup alternatives be compared to a number of criteria as set forth in WAC 173-340-360 to evaluate the adequacy of each alternative in achieving the intent of the regulations, and as a basis for comparing the relative merits of the developed cleanup alternatives. Consistent with MTCA, the alternatives will be evaluated with respect to compliance with the general requirements, action-specific requirements, media-specific requirements, and the public concerns and tribal rights and interests described in WAC 173-340-360(3). The results of the evaluation will be documented in the FS report.

8.5.1 General Requirements

As specified in WAC 173-340-360(3)(a), all cleanup actions are required to meet the following general requirements:

- Protect human health and the environment including likely vulnerable populations and overburdened communities
- Comply with cleanup standards specified under MTCA
- Comply with applicable state and federal laws
- Prevent or minimize present and future releases and migration of hazardous substances in the environment
- Provide resilience to climate change impacts that have a high likelihood of occurring and severely compromising its long-term effectiveness
- Provide for compliance monitoring
- Not rely primarily on institutional controls and monitoring at a site, or portion thereof, if it is technically possible to implement a more permanent cleanup action
- Not rely primarily on dilution and dispersion unless the incremental costs of any active remedial measures over the costs of dilution and dispersion grossly exceed the incremental degree of benefits of active remedial measures over the benefits of dilution and dispersion
- Provide for a reasonable restoration timeframe
- Use permanent solutions to the maximum extent practicable (see Section 8.5.3 below).

8.5.2 Other Requirements and Considerations

Other cleanup action requirements included in the recently amended MTCA cleanup regulation include action-specific requirements [WAC 173-340-360(2)(b)] and media-specific requirements [WAC 173-340-360(2)(c)]. Ecology will also consider public concerns, including the concerns of vulnerable populations and overburdened communities, and tribal rights and interests when selecting a cleanup action [WAC 173-340-360(2)(d)].

The revised MTCA rule, adopted January 1, 2024, requires evaluation of whether a population threatened by a contaminated site includes a likely vulnerable population or overburdened community during the RI/FS process. The FS will evaluate if vulnerable populations and overburdened communities are located in the immediate vicinity of the Site using the methods described in Ecology's Implementation Memorandum No. 25: Identifying Likely Vulnerable Populations and Overburdened Communities under the Cleanup Regulations, published January 2024 (Ecology 2024b).

8.5.3 Requirement for Permanent Solution to the Maximum Extent Practicable

WAC 173-340-200 defines a permanent solution as one in which cleanup standards can be met without further action being required at the original site or any other site involved with the cleanup action, other than the approved disposal site for any residue from the treatment of hazardous substances. Ecology recognizes that permanent solutions may not be practicable for all sites. To determine whether a cleanup action is permanent to the "maximum extent practicable," MTCA requires that a disproportionate cost analysis [WAC 173-340-360(5)] be used. In accordance with WAC 173-340-360(5)(d), the following criteria will be used to evaluate and compare each cleanup action alternative when conducting a disproportionate cost analysis:

- Overall protectiveness of human health and the environment, including the degree to which Site risks are reduced, the risks during implementation, and the improvement of overall environmental quality
- Long-term effectiveness, including the degree of certainty that the alternative will be successful, the long-term reliability, the magnitude of residual risk, and the effectiveness of controls required to manage treatment residues and remaining waste
- Management of short-term risks, including the protection of human health and the environment during construction and implementation
- Permanent reduction in toxicity, mobility, and volume of hazardous substances, including the reduction or elimination of hazardous substance releases and sources of releases
- Implementability, including consideration of whether the alternative is technically possible; the availability of necessary offsite facilities, services, and materials; administrative and regulatory requirements; scheduling, size, and complexity of construction; monitoring requirements; access for construction, operations, and monitoring; and integration with existing facility operations
- Cleanup costs, including capital costs and operation and maintenance costs
- Consideration of public concerns, which will be addressed through public comment on the cleanup action plan.

Procedures that will be used for conducting a disproportionate cost analysis are described in Section 8.6.

8.5.4 Requirements for a Reasonable Restoration Timeframe

WAC 173-340-360(4) specifies that the following factors be considered in establishing a "reasonable" timeframe:

- Potential risks to human health and the environment including vulnerable populations and overburdened communities
- Practicability of achieving a shorter restoration timeframe
- Long-term effectiveness of the alternative
- Current use of the site, surrounding areas, and associated resources that are, or may be, affected by releases from the site
- Potential future use of the site, surrounding areas, and associated resources that are, or may be, affected by releases from the site
- Availability of alternate water supplies
- Likely effectiveness and reliability of institutional controls
- Ability to control and monitor migration of hazardous substances from the site
- Toxicity of the hazardous substances at the site
- Natural processes that reduce concentrations of hazardous substances and have been documented to occur at the site or under similar site conditions
- Public concerns and Indian tribes' rights and interests.

8.6 Disproportionate Cost Analysis Procedures

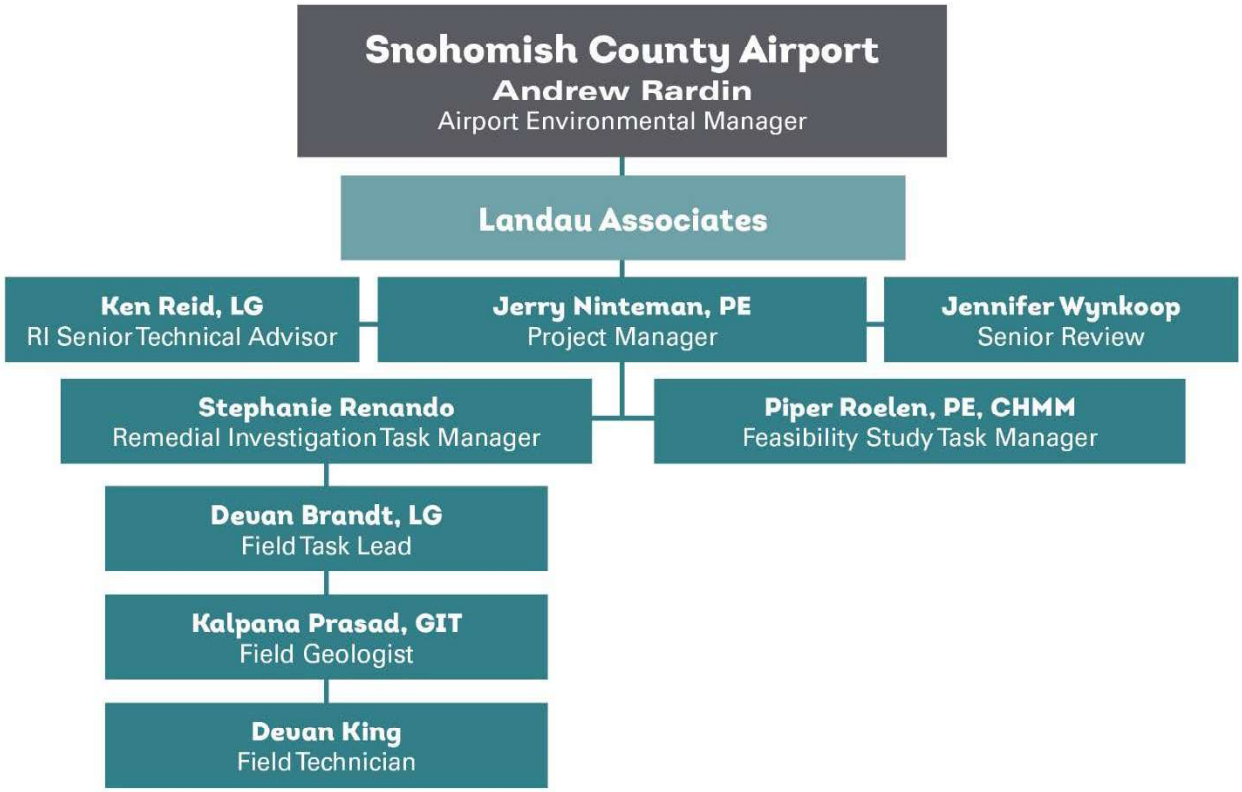
As described in Section 8.5.3, MTCA requires that cleanup actions be permanent to the maximum extent practicable and requires that a disproportionate cost analysis be used when the cleanup alternatives being considered are not permanent as defined under WAC 173-340-200. Evaluation of the practicability of a given alternative is a comparative evaluation of whether the incremental increase in cost associated with increasingly protective cleanup actions is substantial and disproportionate to the incremental increase in environmental benefit. In the disproportionate cost analysis, cleanup alternatives are arranged from most to least permanent based on the criteria specified in WAC 173-340-360(5)(d) and described in Section 8.5.3. Costs are disproportionate to benefits if the incremental costs of the more permanent alternative exceed the incremental benefits achieved by the lower-cost alternative. Alternatives that exhibit disproportionate costs are considered "impracticable." Where the benefits of two alternatives are equivalent, MTCA specifies that Ecology select the least costly alternative.

8.7 Recommendation of Remedial Action Alternatives

This section of the FS will recommend a remedial action alternative based on the results of the comparative evaluation. The recommended alternative will meet the minimum requirements for cleanup actions: protect human health and the environment, comply with cleanup standards, comply with applicable state and federal laws, provide for compliance monitoring, use permanent solutions to the extent practicable, provide for a reasonable timeframe, and consider public concerns.

9.0 PROJECT MANAGEMENT AND REPORTING

The responsibility and authority of the organizations and key personnel involved in conducting the RI and FS are outlined below.



The County and the Airport are the project owners and Andrew Rardin of the Airport is the owner's representative. The Airport has contracted Landau Associates (Landau) to prepare and implement this work plan. Landau key personnel are shown on the above organization chart. Mr. Rardin will be the primary contact for Ecology in the implementation and oversight of this work plan. David Unruh is the Ecology Site Manager. Mr. Rardin has delegated authority to Landau to communicate directly with Ecology on minor issues as appropriate to promote project efficiencies.

An RI report will be prepared in accordance with MTCA (WAC 173-340-350) to document the investigative activities conducted at the Site and the nature and extent of contamination, and provide the data required to support the preparation of an FS for potential cleanup actions at the Site. The RI report will document the findings of the activities outlined in this work plan and the data collected using text, tables, figures, geologic/hydrogeologic cross sections, and groundwater contour maps, as appropriate. The report will include an assessment of the quality of the analytical data based on a quality assurance/quality control review, and present and discuss the data relative to the screening levels and the MTCA CULs. All Site analytical data will be submitted to Ecology's Environmental Information Management (EIM) system database, in accordance with the Order.

The RI report will incorporate, as appropriate, the findings of the RI field investigations with existing data from previous investigations and remedial actions at the Site to document and evaluate the conceptual Site model including: the Site stratigraphy, hydrogeology, seasonal groundwater occurrence and flow, potential receptors and pathways, and potential contaminant sources, occurrence, and migration.

The FS report will be prepared as described in Section 8.0 of this work plan and in accordance with WAC 173-340-350.

Project progress reports will be submitted to Ecology quarterly and will include a description of activities completed in the prior quarter, summaries of significant findings, deviations from the approved work plan, summaries of problems or anticipated problems, and a description of work planned for the next reporting period. Weekly reports documenting field work completed will be submitted to Ecology during active implementation of RI field activities.

10.0 SCHEDULE

A preliminary schedule for the RI/FS is summarized below. This schedule assumes that all necessary approvals of this work plan will be in place by May 1, 2024.

Tasks	Date Range
Conduct first round of quarterly, Site-wide groundwater elevation data collection.	February 2024 (complete)
Collection and laboratory analysis of soil and groundwater grab samples from new soil borings in each of the investigation areas. Installation and development of five new shallow wells.	05/20/2024 – 06/30/2024
Decommission existing deep wells DW1 and DW2 and installation and development of two replacement wells. Conduct top-of-casing elevation survey on new wells and confirm elevation at existing deep well RIDW-4. Conduct second round of quarterly, Site-wide groundwater elevation data collection.	06/01/2024 – 06/30/2024
Collection and laboratory analysis of soil gas samples from shallow vapor implants. Conduct first round of Site-wide semiannual groundwater sampling and third quarter groundwater elevation data collection.	07/01/2024 – 09/30/2024
Collect fourth quarter groundwater elevation data and conduct second Site-wide semiannual groundwater sampling.	11/01/2024 – 12/31/2024
Preparation of RI report.	01/01/2025 – 06/06/2025
Preparation of FS report.	07/01/2025 – 12/31/2025

Variations from this schedule may be necessary based on unanticipated findings, Site access constraints, weather delays, and potential revisions to the existing scope and budget authorization, if needed. If additional RI activities are needed to meet the objectives of the RI work plan, the scope, schedule, and submittal requirements for this additional work will be developed and submitted to the County for review and concurrence.

11.0 USE OF THIS WORK PLAN

This work plan has been prepared for the use of Snohomish County and its designated representatives for specific application to the remedial investigation at the TECT Aerospace Lease Area at Paine Field in Everett, Washington. No other party, except applicable regulatory agencies, is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau. Further, the reuse of information and recommendations provided herein for extensions of this project or for any other project, without review and authorization by Landau, shall be at the user's sole risk. Landau warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. Landau makes no other warranty, either express or implied.

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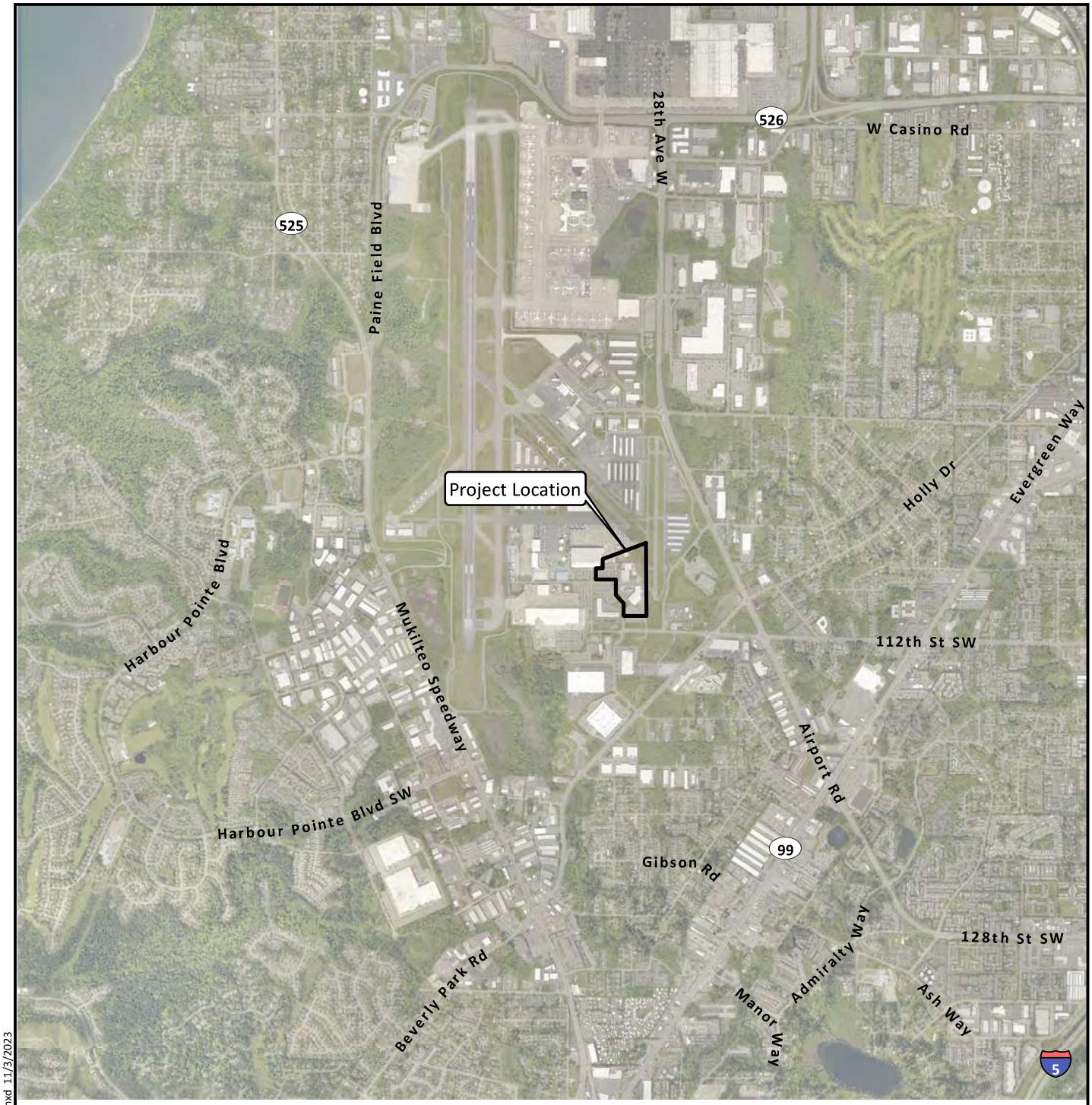
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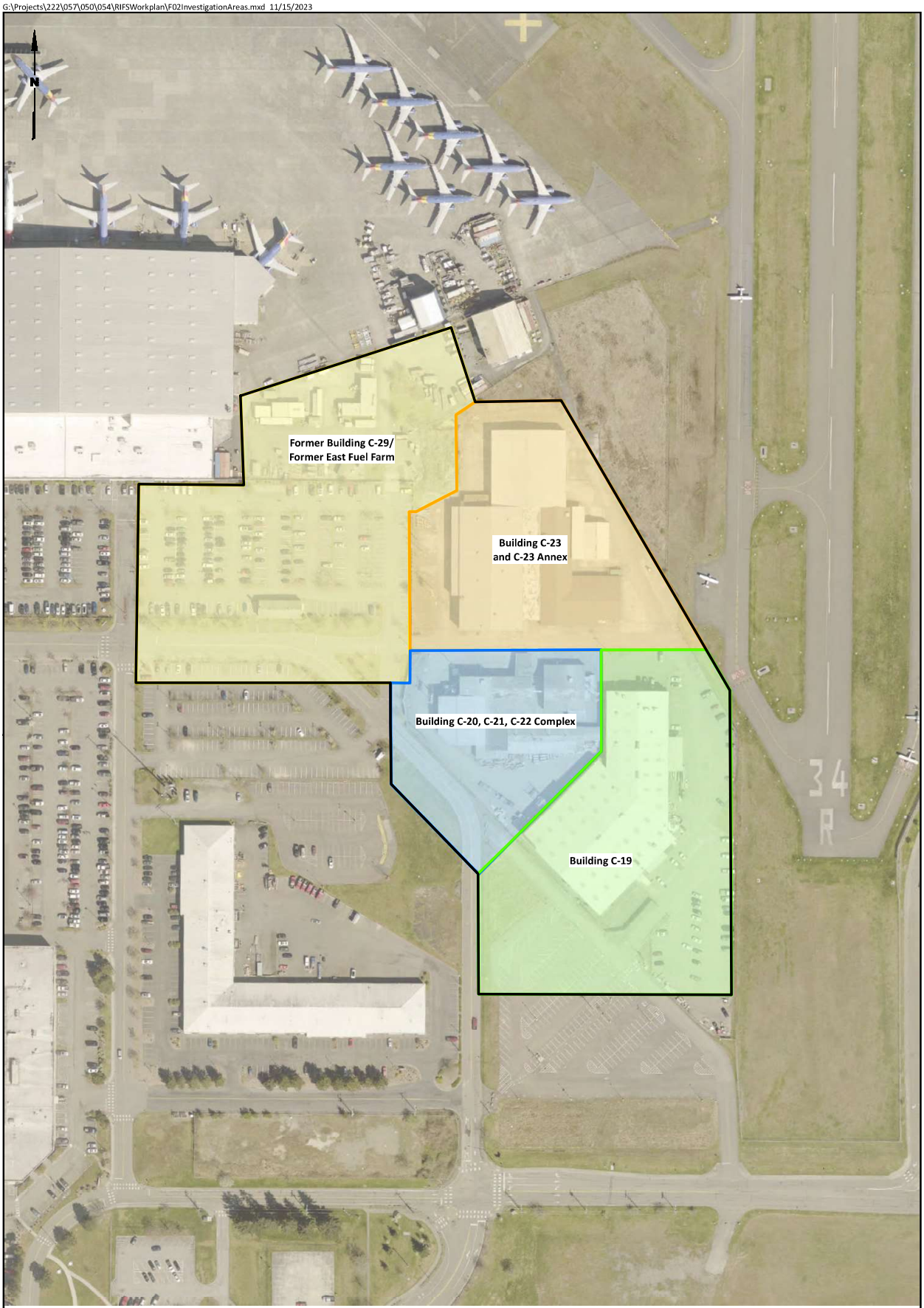
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TECT Aerospace Everett, Washington	**Vicinity Map**	Figure 1

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Legend

Approximate Site Boundary

Investigation Areas

- Building C-19
- Building C-20, C-21, C-22 Complex
- Building C-23 and C-23 Annex
- Former Building C-29/ Former East Fuel Farm

0 150 300

Scale in Feet

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

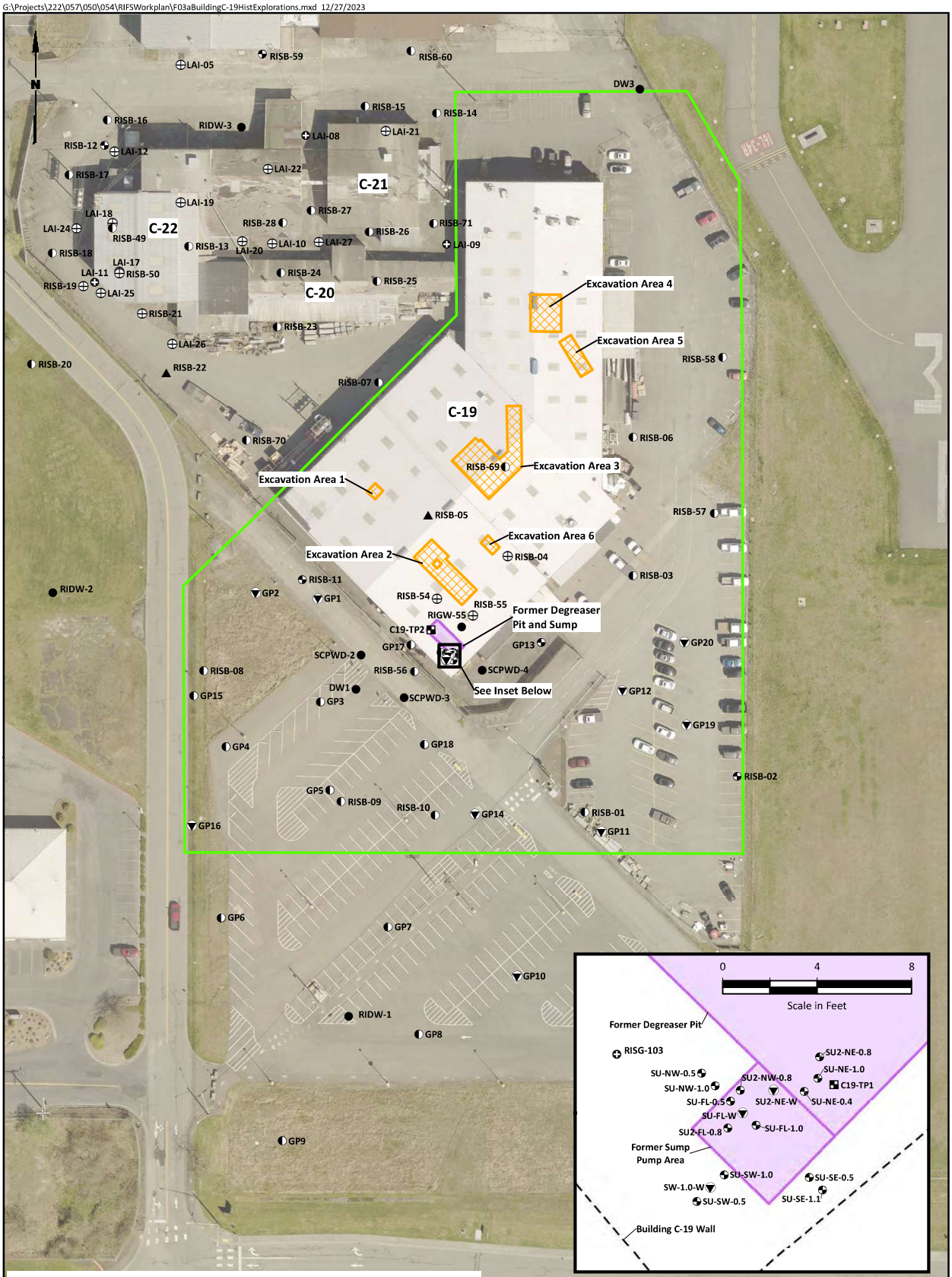
Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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TECT Aerospace Everett, Washington	**Investigation Areas**	Figure 2

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Legend

- Monitoring Well Location
- Groundwater Sampling Location
- Soil Boring Location
- Indoor Air Sampling Location
- Soil and Soil Gas Sampling Location
- Soil Gas Sampling Location
- Test Pit
- Soil and Groundwater Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Building C-19 Investigation Area
- Previous Remedial Action Areas

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

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Scale in Feet

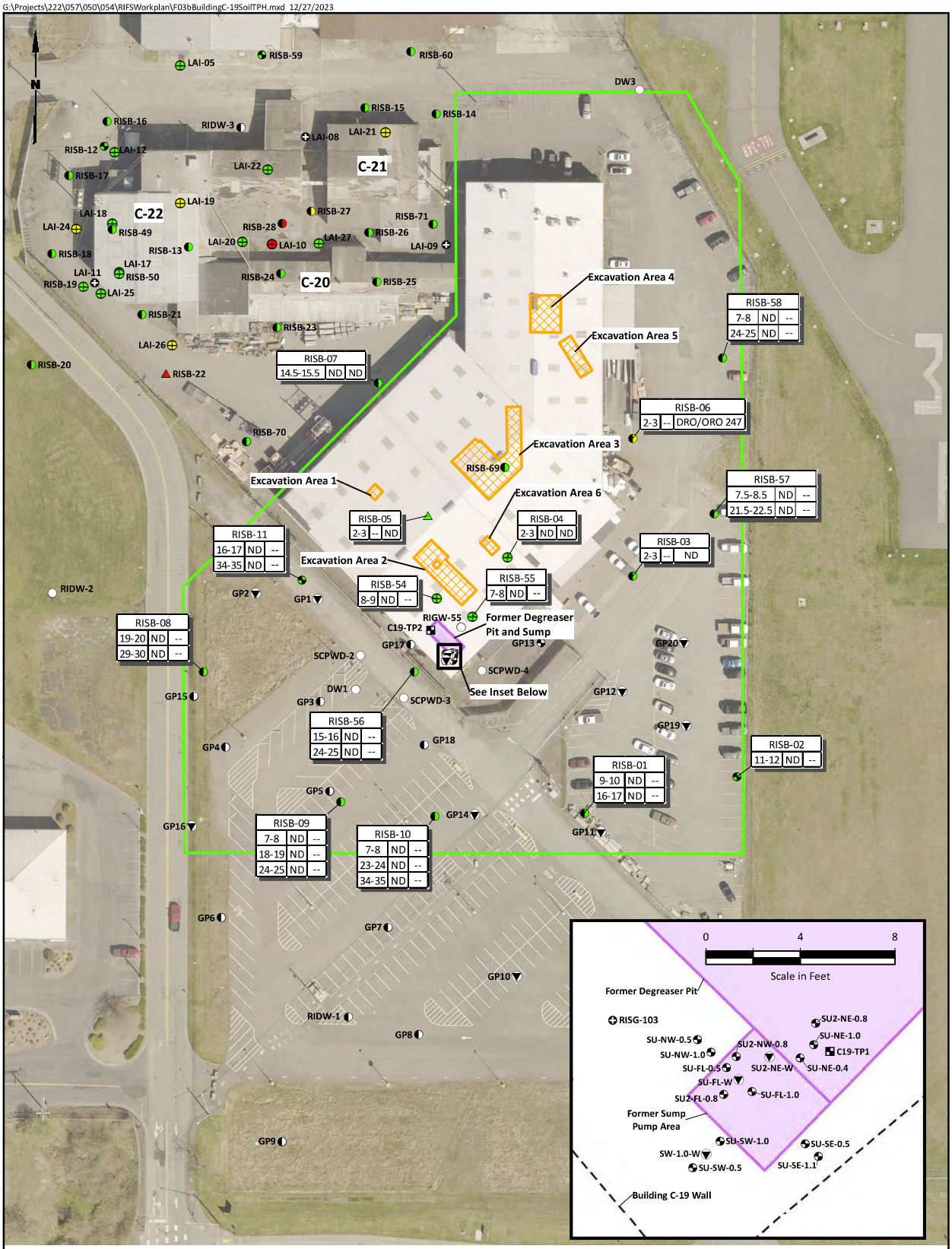
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TECT Aerospace
Everett, Washington

Building C-19
Historical Exploration Locations

Figure
3a

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Test Pit

Building C-19 Investigation Area

Data Box Key

Sample Location		
Sample Depth (ft, BGS)	Benzene Concentration (µg/kg)	Max. TPH-G, or Total TPH-D and TPH-O Conc. (mg/kg)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

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Scale in Feet

LANDAU ASSOCIATES

Notes

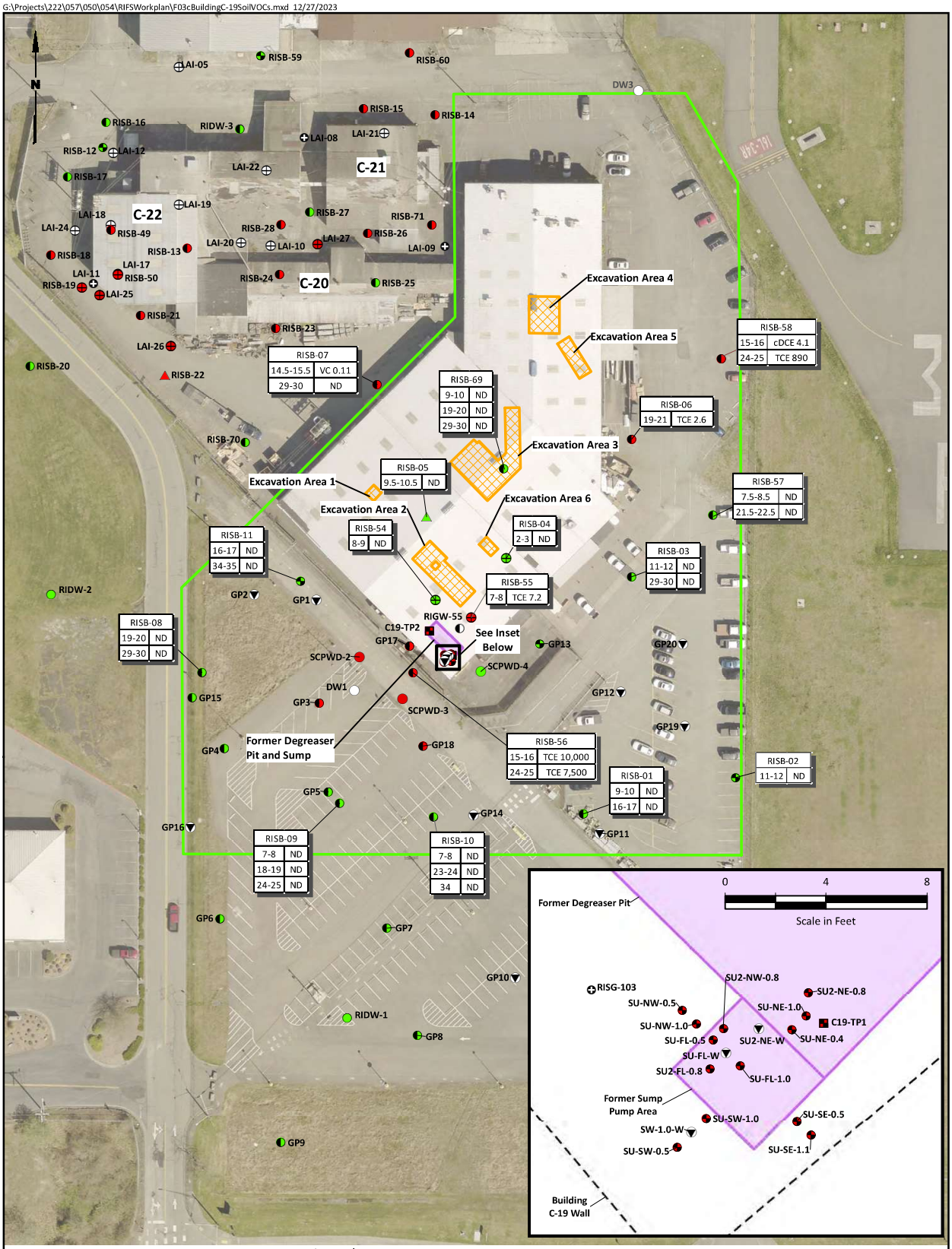
1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for TPH-G are 30 mg/kg with benzene present and 100 mg/kg without benzene present.
3. Screening level for TPH-D and TPH-O are 2,000 mg/kg, separate or combined.
4. Screening level for benzene is 1.7 µg/kg.
5. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

TECT Aerospace
Everett, Washington

Building C-19
Benzene and TPH in Soil

Figure
3b

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Building C-19 Investigation Area

Data Box Key

Sample Location	
Sample Depth (ft, BGS)	Maximum PCE, TCE, cDCE, or VC Concentration (µg/kg)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 2.8, 1.5, 5.2, and 0.090 µg/kg, respectively.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

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Scale in Feet

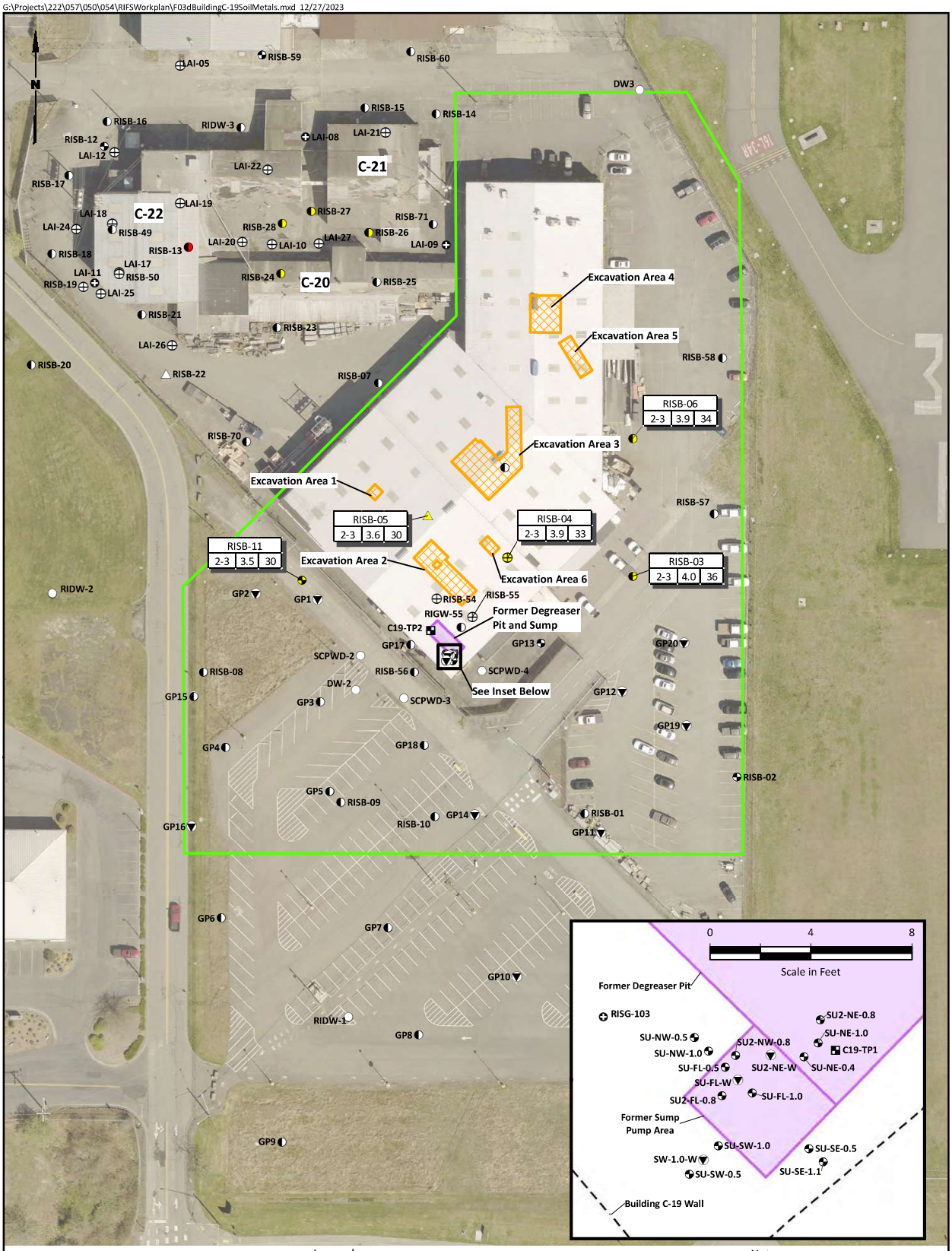
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TECT Aerospace
Everett, Washington

Building C-19
VOCs in Soil

Figure
3c

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Building C-19 Investigation Area

Notes

1. Screening level is 7 mg/kg for arsenic and 42 mg/kg for total chromium.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Box Key

Sample Location		
Sample Depth (ft, BGS)	Maximum Arsenic Concentration (mg/kg)	Maximum Total Chromium Concentration (mg/kg)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 70 140
Scale in Feet

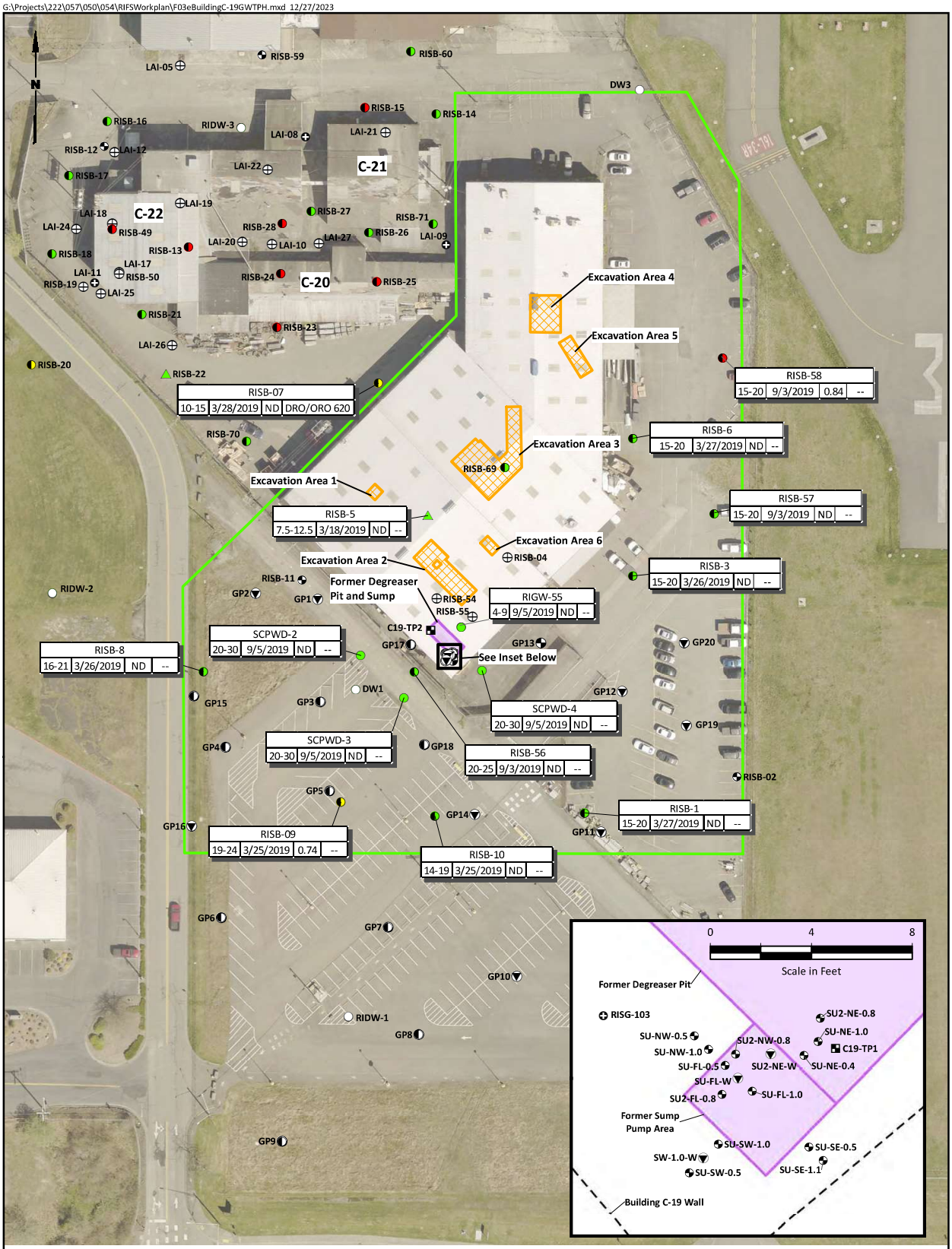
LANDAU ASSOCIATES

TECT Aerospace
Everett, Washington

Building C-19
Metals in Soil

Figure
3d

G:\Projects\222\057\050\054\RIFSWorkplan\F03eBuildingC-19GWTPH.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Building C-19 Investigation Area

Data Box Key

Sample Location			
Screen Depth (ft, BGS)	Date	Benzene Conc. (µg/L)	Max. TPH-G or Total TPH-D and TPH-O Conc. (µg/L)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for TPH-G are 800 µg/L with benzene present and 1,000 µg/L without benzene present.
3. Screening level for TPH-D and TPH-O are 500 µg/L, separate or combined.
4. Screening level for benzene is 0.80 µg/L.
5. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 70 140
Scale in Feet

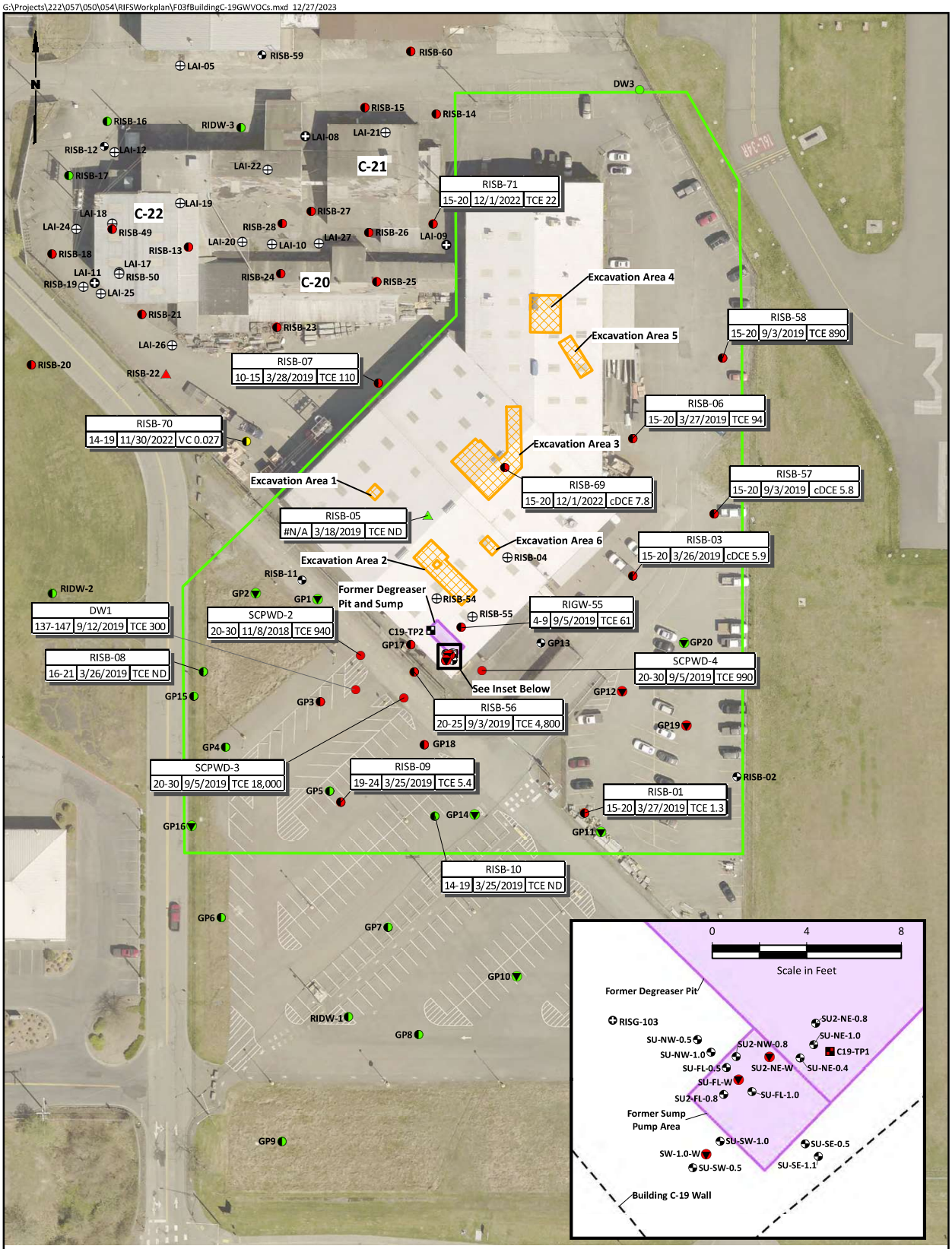
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Everett, Washington

Building C-19
TPH and Benzene in Groundwater

Figure
3e

G:\Projects\222\057\050\054\RIFSWorkplan\F03fBuildingC-19GWVOCs.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Building C-19 Investigation Area

Data Box Key

Sample Location		
Screen Depth (ft, BGS)	Date	Max. PCE, TCE, cDCE, or VC Conc. (µg/L)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 5, 0.54, 16, and 0.029 ug/L, respectively.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 70 140
Scale in Feet

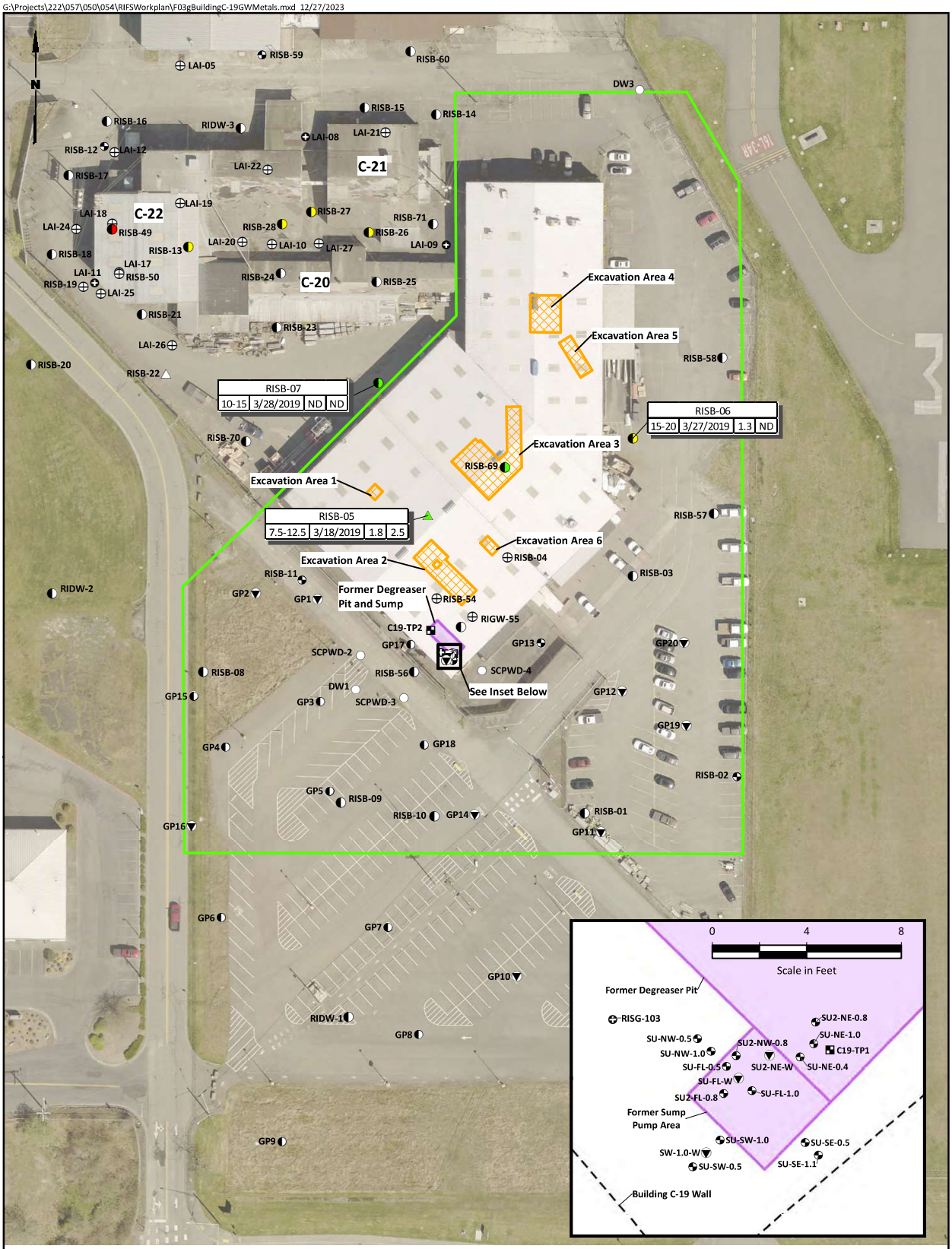
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Everett, Washington

Building C-19
VOCs in Groundwater

Figure
3f

G:\Projects\222\057\050\054\RIFSWorkplan\F03gBuildingC-19GWMetals.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Building C-19 Investigation Area

Data Box Key

Sample Location			
Screen Depth (ft, BGS)	Date	Arsenic Conc. (µg/L)	Total Chromium Conc. (µg/L)

Notes

1. Screening level is 13.6 µg/L for arsenic and 100 µg/L for total chromium
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 70 140
Scale in Feet

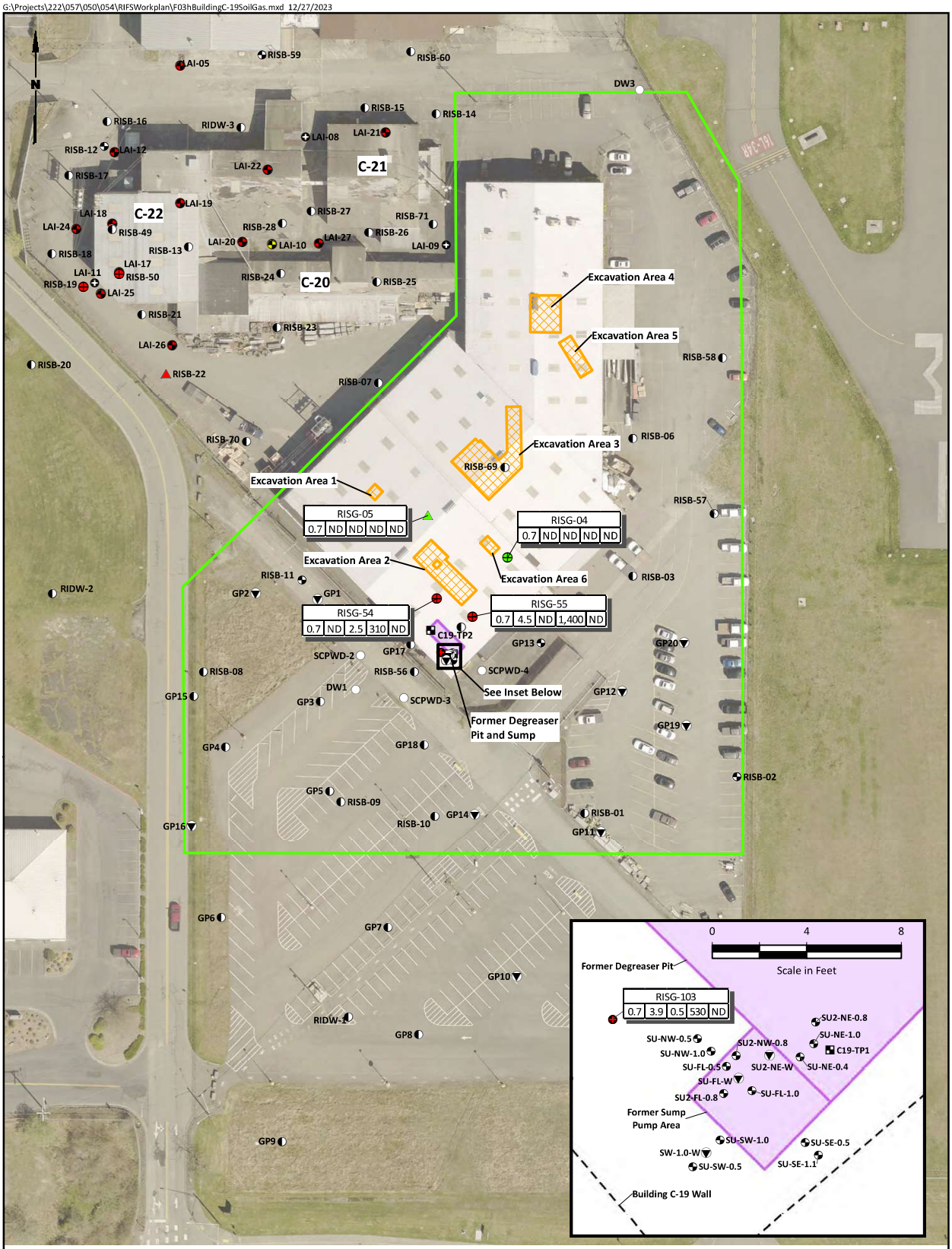
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Everett, Washington

Building C-19
Metals in Groundwater

Figure
3g

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Building C-19 Investigation Area

Notes

1. Screening levels for 1,1-DCA, Benzene, TCE, and VC are 52, 11, 11, and 9.5 $\mu g/m^3$, respectively.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Box Key

Sample Location				
Sample Depth	1,1-DCA Conc. ($\mu g/m^3$)	Benzene Conc. ($\mu g/m^3$)	TCE Conc. ($\mu g/m^3$)	VC Conc. ($\mu g/m^3$)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 70 140
Scale in Feet

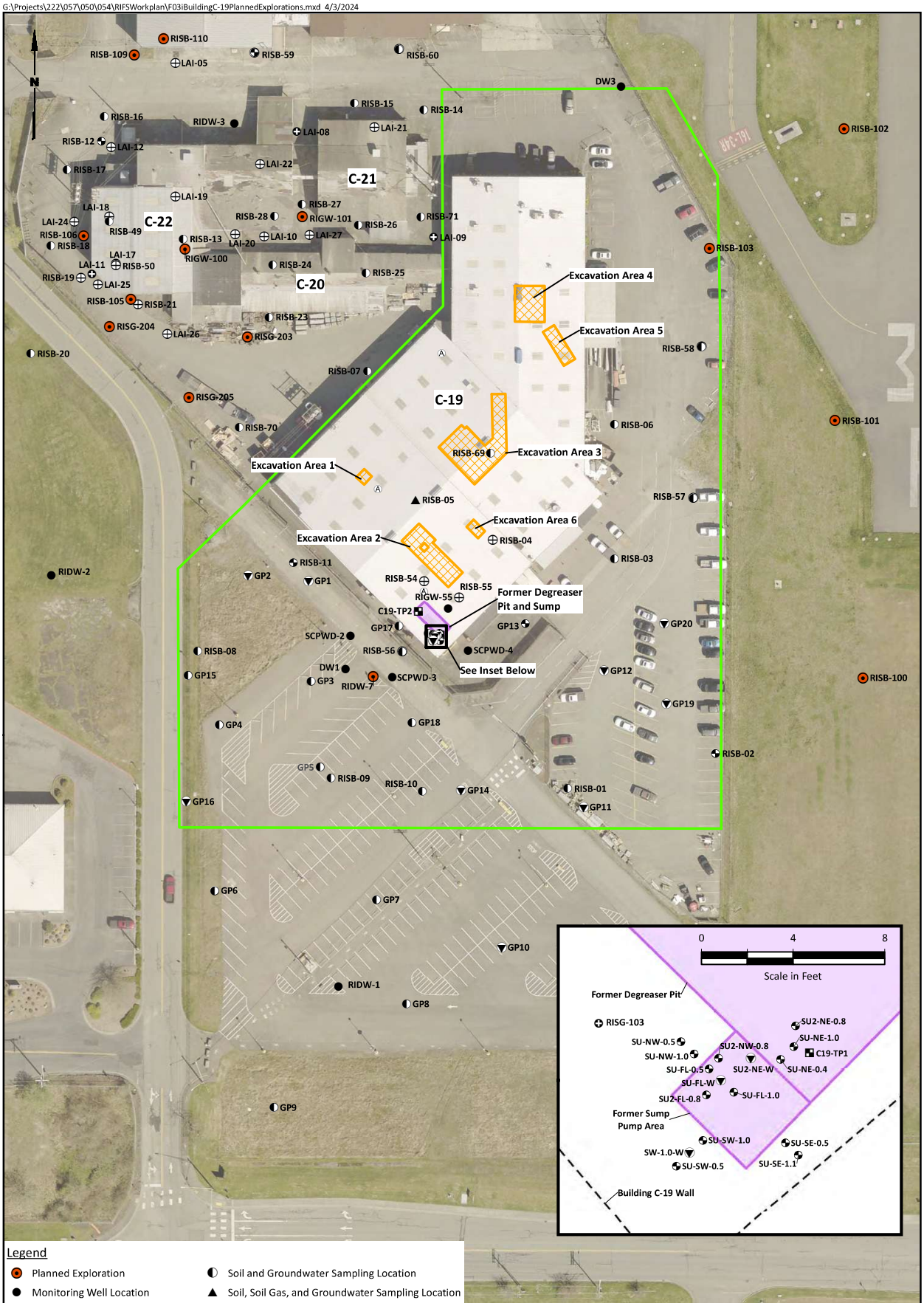
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Everett, Washington

Building C-19 Soil Gas

Figure 3h

G:\Projects\222\057\050\054\RIFSWorkplan\F03iBuildingC-19PlannedExplorations.mxd 4/3/2024



Legend

- Planned Exploration
- Monitoring Well Location
- Groundwater Sampling Location
- Soil Boring Location
- Indoor Air Sampling Location
- Soil and Soil Gas Sampling Location
- Soil Gas Sampling Location
- Test Pit
- Soil and Groundwater Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Building C-19 Investigation Area
- Previous Remedial Action Areas

0 70 140
Scale in Feet

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Exploration Key

RISB = Soil Boring
RIGW = Shallow Groundwater Monitoring Well
RIDW = Deep Aquifer Groundwater Monitoring Well
RISG = Soil Gas Probe

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

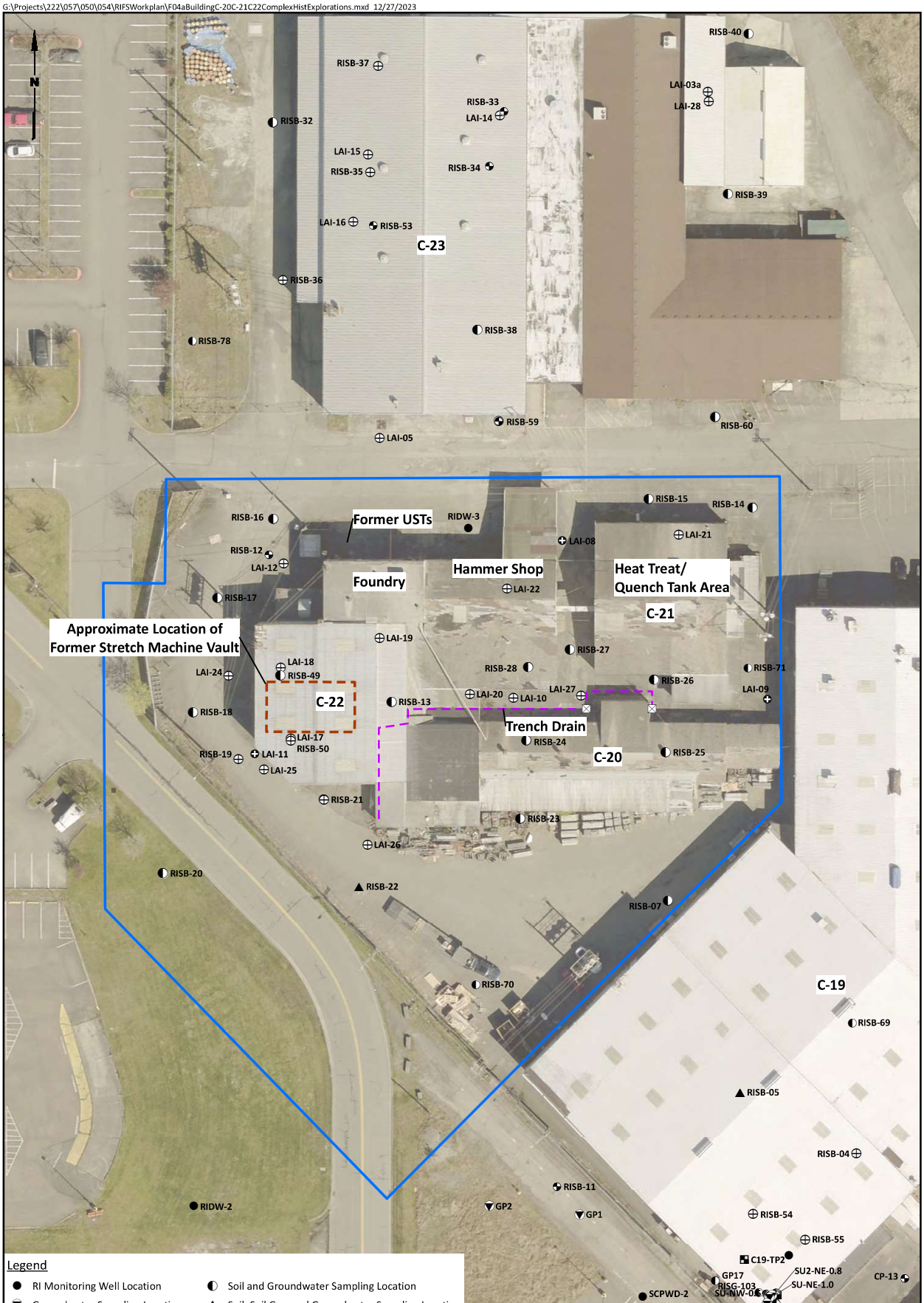
Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

TECT Aerospace
Everett, Washington

Building C-19 Planned AO Remedial Investigation Locations

Figure 3i

G:\Projects\222\057\050\054\RIFSWorkplan\F04aBuildingC-20C-21C22ComplexHistExplorations.mxd 12/27/2023



Legend

- RI Monitoring Well Location
- Groundwater Sampling Location
- Soil Boring Location
- Indoor Air Sampling Location
- Soil and Soil Gas Sampling Location
- Soil Gas Sampling Location
- Test Pit
- Soil and Groundwater Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Catch Basin
- Trench Drain
- Building C-20, C-21, C-22 Complex Investigation Area
- Approximate Location of Former Stretch Machine Vault

0 50 100

Scale in Feet

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

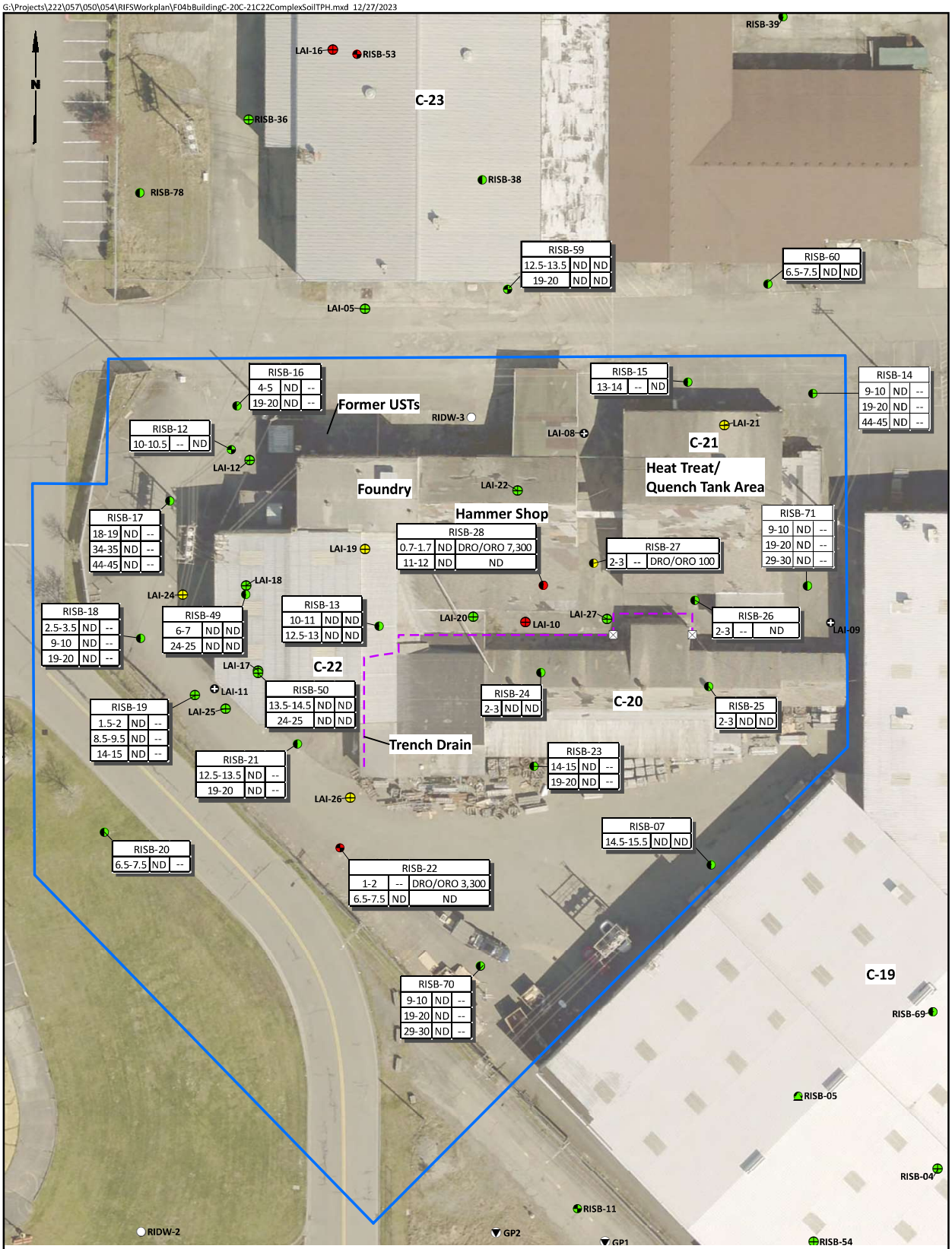
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Everett, Washington

Building C-20, C-21, C-22 Complex Historical Exploration Locations

Figure 4a

G:\Projects\222\057\050\054\RIFSWorkplan\F04bBuildingC-20C-21C22ComplexSoilTPH.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

- Catch Basin
- Trench Drain
- Building C-20, C-21, C-22 Complex

Data Box Key

Sample Location		
Sample Depth (ft, BGS)	Benzene Concentration (µg/kg)	Max. TPH-G, or Total TPH-D and TPH-O Conc. (mg/kg)

Notes

1. Screening levels for TPH-G are 30 mg/kg with benzene present and 100 mg/kg without benzene present.
2. Screening level for TPH-D and TPH-O are 2,000 mg/kg, separate or combined.
3. Screening level for benzene is 1.7 µg/kg.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80
Scale in Feet

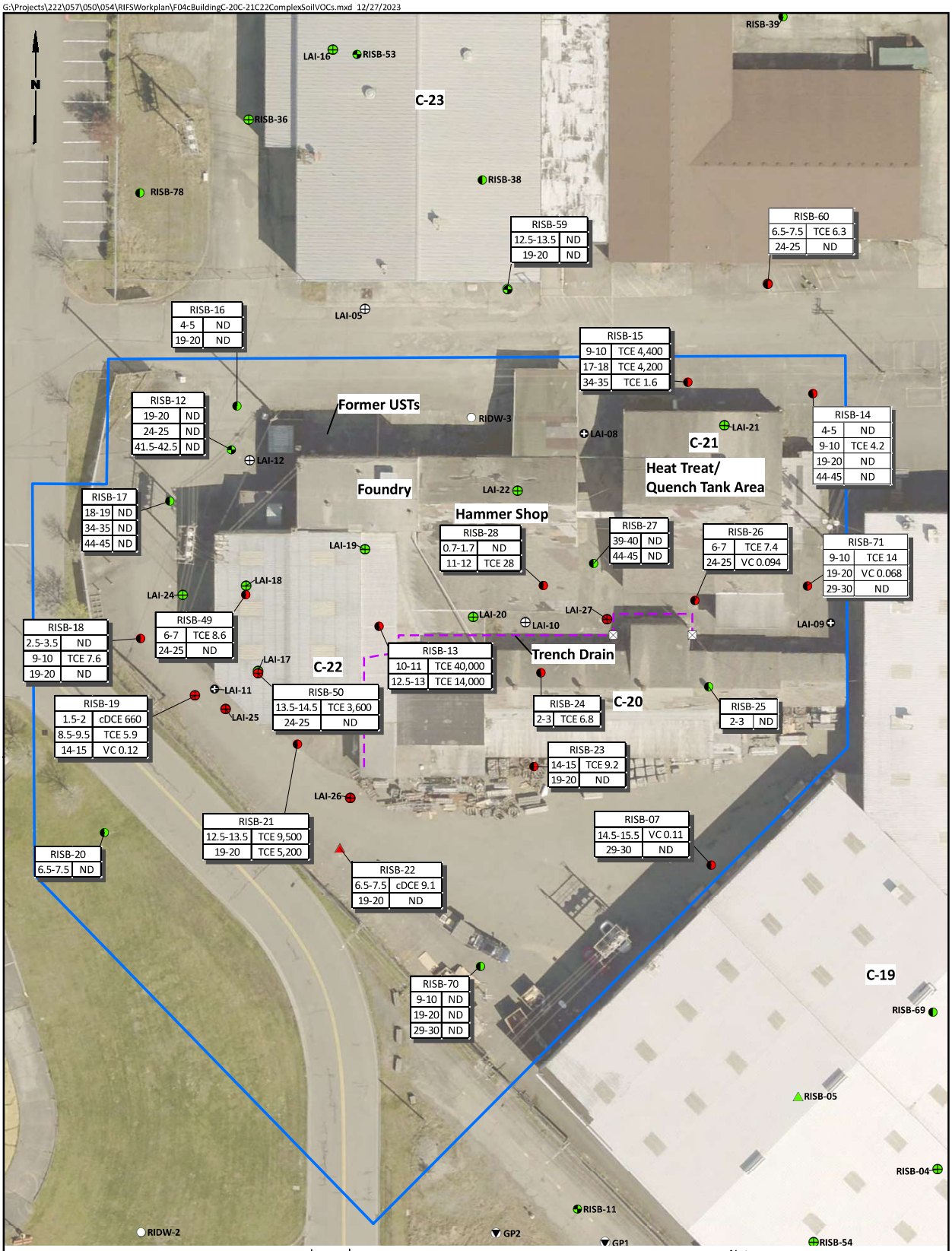
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Building C-20, C-21, C-22 Complex
Benzene and TPH in Soil

Figure
4b

G:\Projects\222\057\050\054\RIFSWorkplan\F04cBuildingC-20C-21C22ComplexSoilVOCs.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

- Catch Basin
- Trench Drain
- Building C-20, C-21, C-22 Complex

Data Box Key

Sample Location	
Sample Depth (ft, BGS)	Maximum PCE, TCE, cDCE, or VC Concentration (µg/kg)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 2.8, 1.5, 5.2, and 0.090 µg/kg, respectively.
4. UST = Underground Storage Tank
5. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80

Scale in Feet

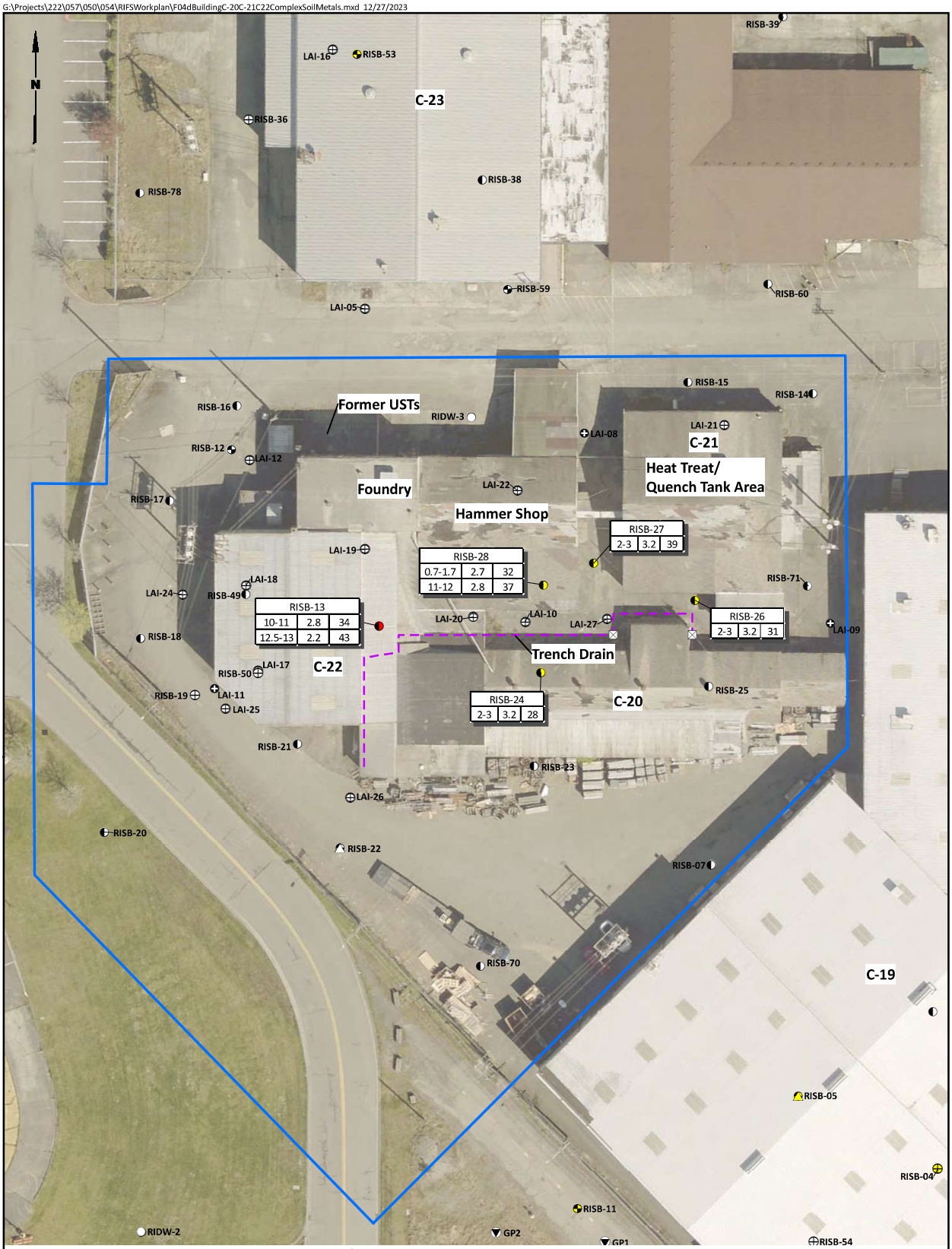
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Everett, Washington

Building C-20, C-21, C-22 Complex VOCs in Soil

Figure 4c

G:\Projects\222\057\050\054\RIFSWorkplan\F04dBuildingC-20C-21C22ComplexSoilMetals.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

- Catch Basin
- Trench Drain
- Building C-20, C-21, C-22 Complex

Notes

1. Screening level is 7 mg/kg for arsenic and 42 mg/kg for total chromium.
2. UST = Underground Storage Tank
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Box Key

Sample Location		
Sample Depth (ft, BGS)	Maximum Arsenic Concentration (mg/kg)	Maximum Total Chromium Concentration (mg/kg)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80

Scale in Feet

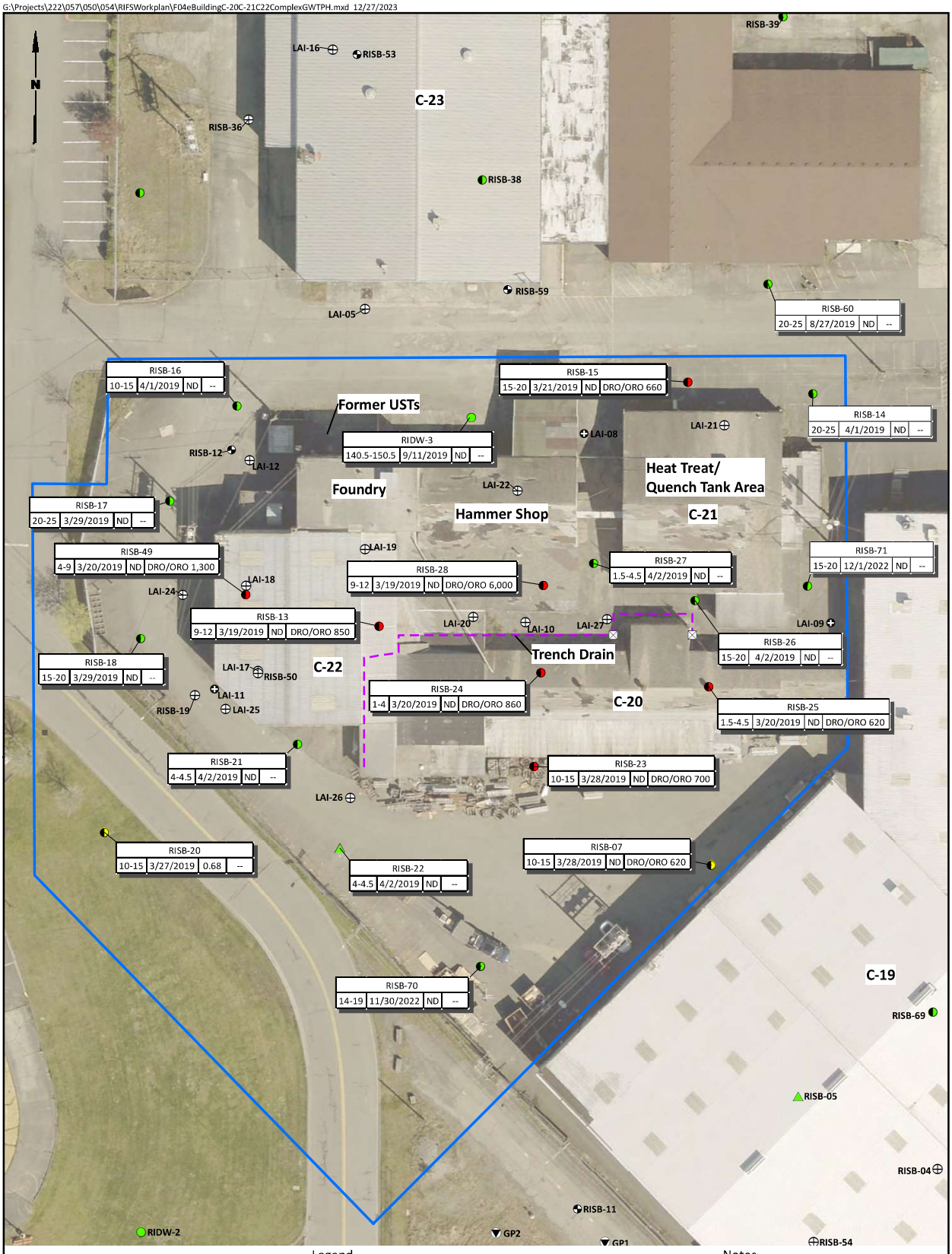
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Building C-20, C-21, C-22 Complex Metals in Soil

Figure 4d

G:\Projects\222\057\050\054\RIFSWorkplan\F04eBuildingC-20C-21C22ComplexGWTPH.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

- Catch Basin
- Trench Drain
- Building C-20, C-21, C-22 Complex

Data Box Key

Sample Location			
Screen Depth (ft, BGS)	Date	Benzene Conc. (µg/L)	Max. TPH-G or Total TPH-D and TPH-O Conc. (µg/L)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for TPH-G are 800 µg/L with benzene present and 1,000 µg/L without benzene present.
3. Screening level for TPH-D and TPH-O are 500 µg/L, separate or combined.
4. Screening level for benzene is 0.80 µg/L.
5. UST = Underground Storage Tank
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 40 80
Scale in Feet

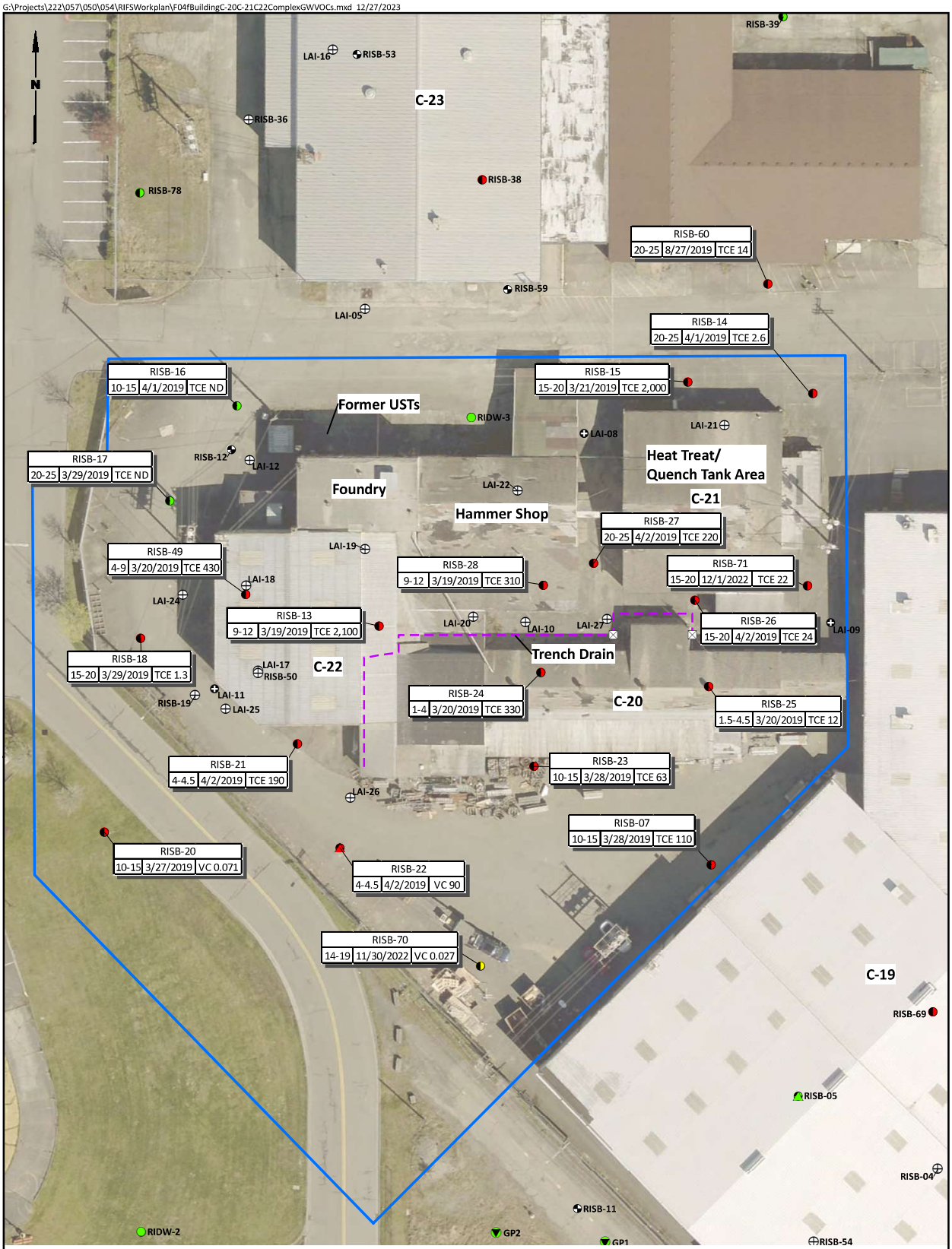
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Everett, Washington

Building C-20, C-21, C-22 Complex
TPH and Benzene in Groundwater

Figure
4e

G:\Projects\222\057\050\054\RIFSWorkplan\F04fBuildingC-20C-21C22ComplexGWVOCs.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

- Catch Basin
- Trench Drain
- Building C-20, C-21, C-22 Complex

Data Box Key

Sample Location		
Screen Depth (ft, BGS)	Date	Max. PCE, TCE, cDCE, or VC Conc. (µg/L)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 5, 0.54, 16, and 0.029 ug/L, respectively.
3. UST = Underground Storage Tank
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80

Scale in Feet

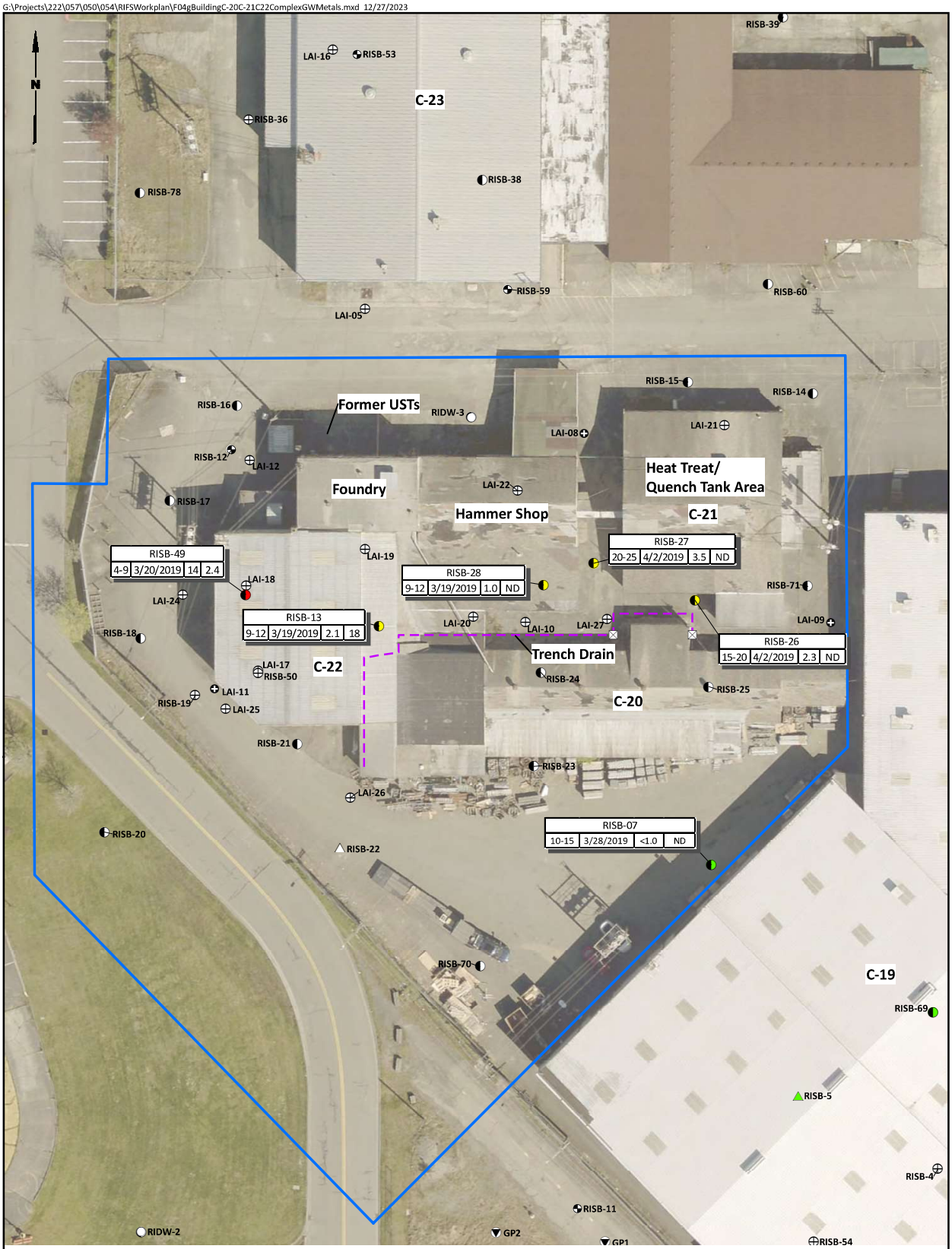
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Everett, Washington

Building C-20, C-21, C-22 Complex
VOCs in Groundwater

Figure
4f

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

- Catch Basin
- Trench Drain
- Building C-20, C-21, C-22 Complex

Data Box Key

Sample Location			
Screen Depth (ft, BGS)	Date	Arsenic Conc. (µg/L)	Total Chromium Conc. (µg/L)

Notes

1. Screening level is 13.6 µg/L for arsenic and 100 µg/L for total chromium.
2. UST = Underground Storage Tank
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80
Scale in Feet

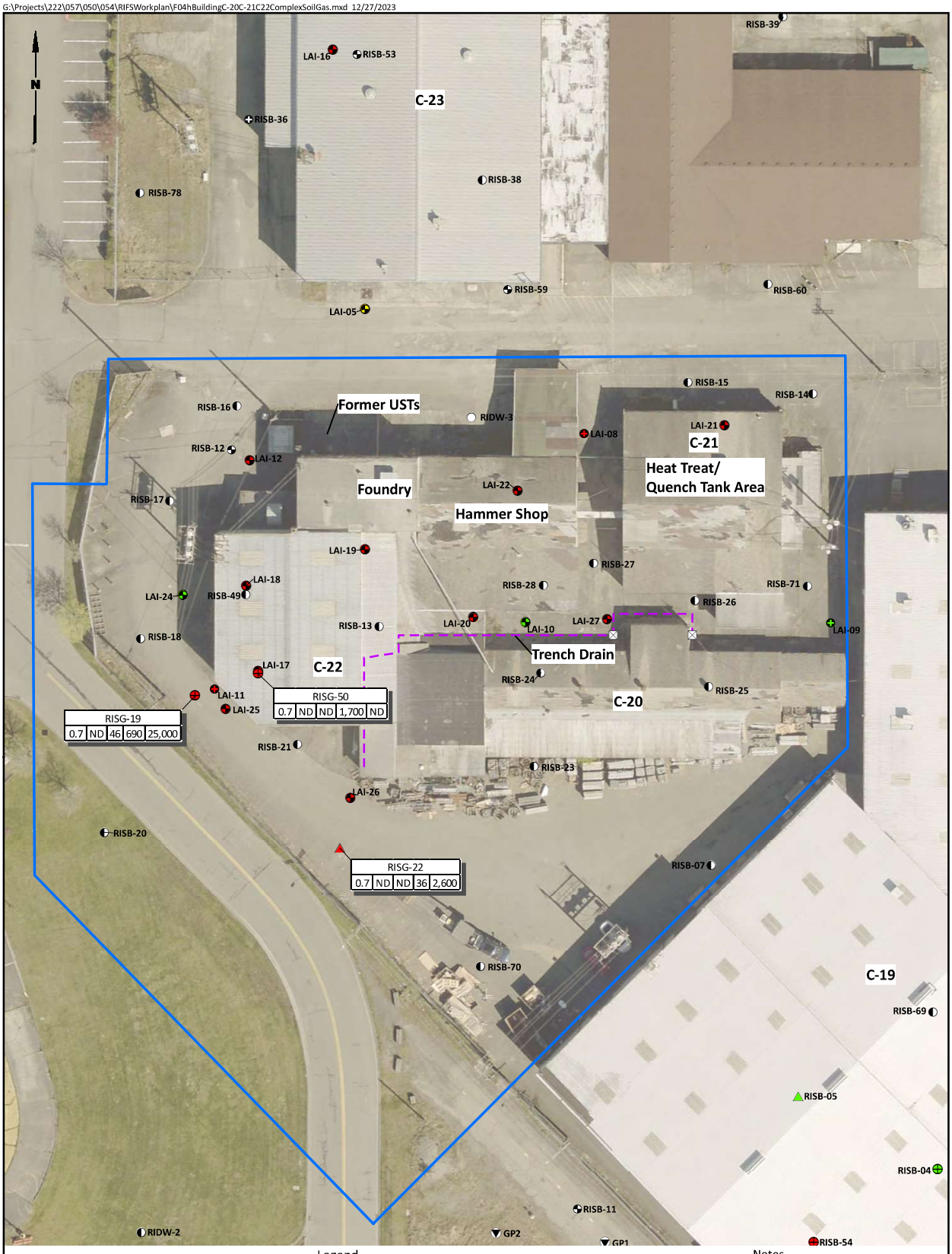
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Building C-20, C-21, C-22 Complex
Metals in Groundwater

Figure
4g

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit
- Catch Basin
- Trench Drain
- Building C-20, C-21, C-22 Complex

Data Box Key

Sample Location				
Sample Depth	1,1-DCA Conc. ($\mu g/m^3$)	Benzene Conc ($\mu g/m^3$)	TCE Conc. ($\mu g/m^3$)	VC Conc. ($\mu g/m^3$)

Notes

1. Screening levels for 1,1-DCA, Benzene, TCE, and VC are 52, 11, 11, and 9.5 $\mu g/m^3$, respectively.
2. UST = Underground Storage Tank
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80
Scale in Feet

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Everett, Washington

Building C-20, C-21, C-22 Complex Soil Gas

Figure 4h

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Legend

- Planned Exploration
- RI Monitoring Well Location
- Groundwater Sampling Location
- Soil Boring Location
- Indoor Air Sampling Location
- Soil and Soil Gas Sampling Location
- Soil Gas Sampling Location
- Test Pit
- Soil and Groundwater Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Catch Basin
- Trench Drain
- Building C-20, C-21, C-22 Complex Investigation Area

Exploration Key

RISB = Soil Boring
RIGW = Shallow Groundwater Monitoring Well
RIDW = Deep Aquifer Groundwater Monitoring Well
RISG = Soil Gas Probe

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80
Scale in Feet

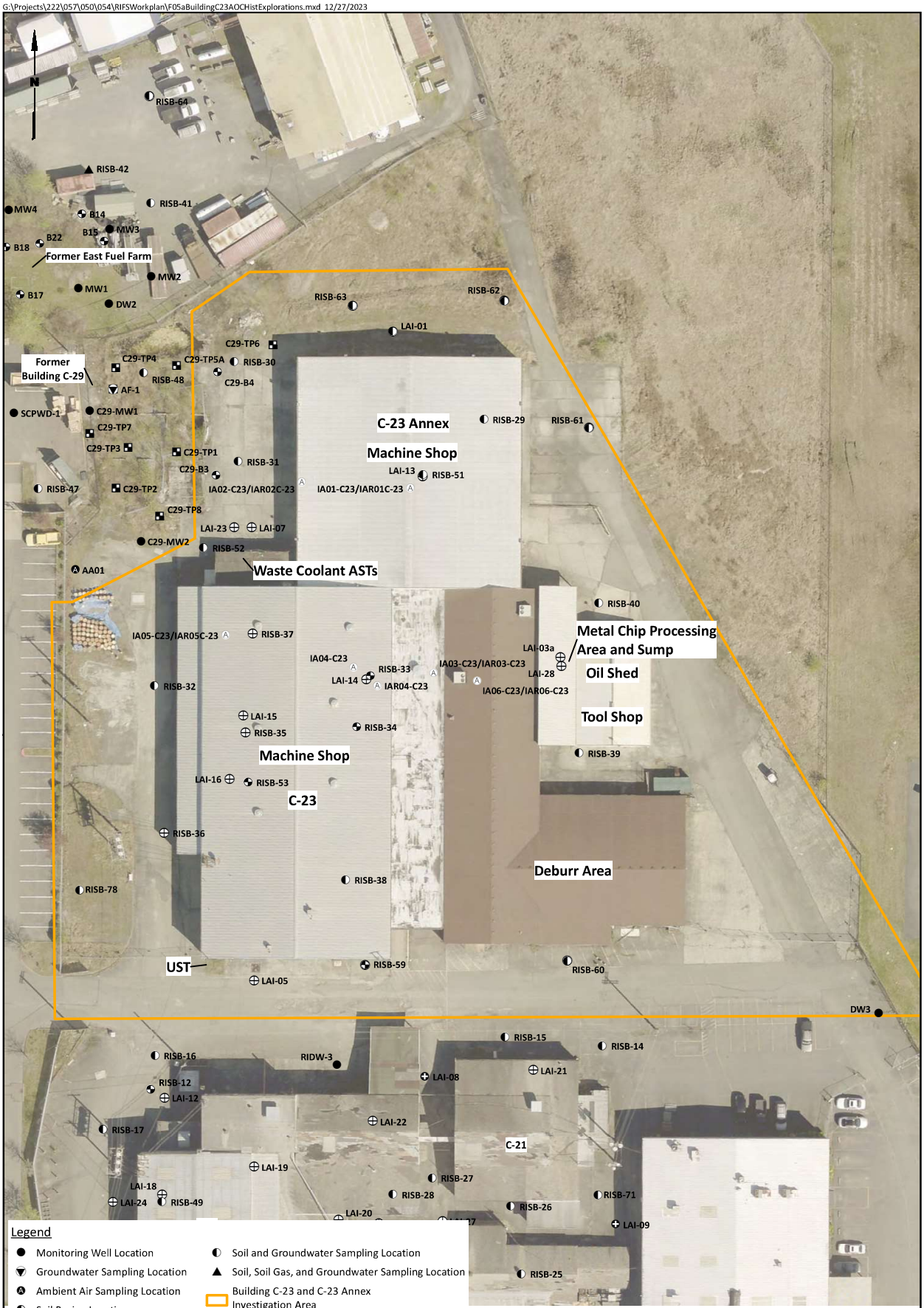
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Everett, Washington

Building C-20, C-21, C-22 Complex
Planned AO
Remedial Investigation Locations

Figure
4i

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Legend

- Monitoring Well Location
- Groundwater Sampling Location
- Ambient Air Sampling Location
- Soil Boring Location
- Indoor Air Sampling Location
- Soil and Soil Gas Sampling Location
- Soil Gas Sampling Location
- Test Pit
- Soil and Groundwater Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Building C-23 and C-23 Annex Investigation Area

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

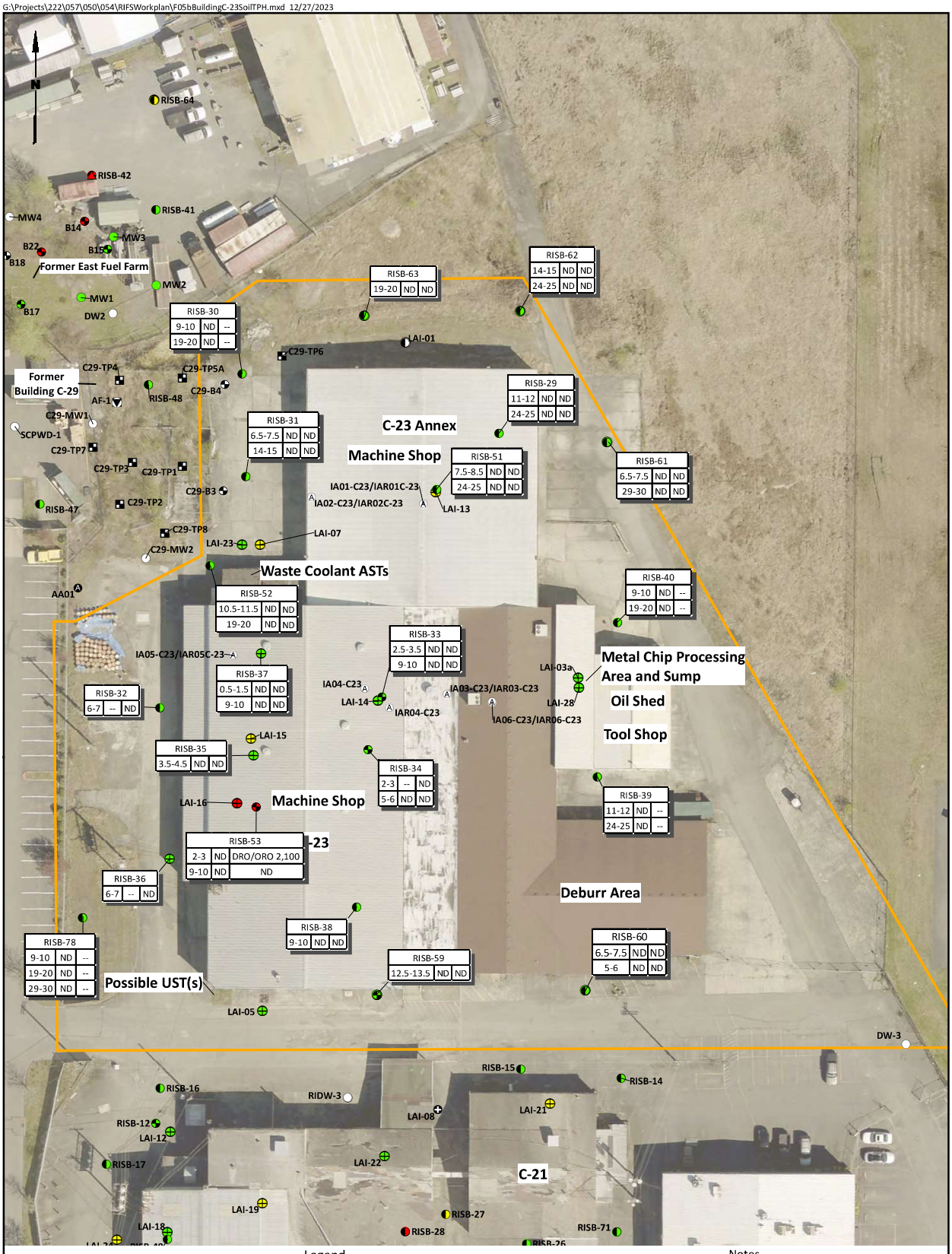
0 50 100

Scale in Feet

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TECT Aerospace Everett, Washington	**Building C-23 and C-23 Annex Historical Exploration Locations**	Figure 5a

G:\Projects\222\057\050\054\RIFSWorkplan\F05bBuildingC-23SoilTPH.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

- Catch Basin
- Trench Drain
- Building C-23 and C-23 Annex

Data Box Key

Sample Location		
Sample Depth (ft, BGS)	Benzene Concentration (µg/kg)	Max. TPH-G, or Total TPH-D and TPH-O Conc. (mg/kg)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for TPH-G are 30 mg/kg with benzene present and 100 mg/kg without benzene present.
3. Screening level for TPH-D and TPH-O are 2,000 mg/kg, separate or combined.
4. Screening level for benzene is 1.7 µg/kg.
5. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 50 100

Scale in Feet

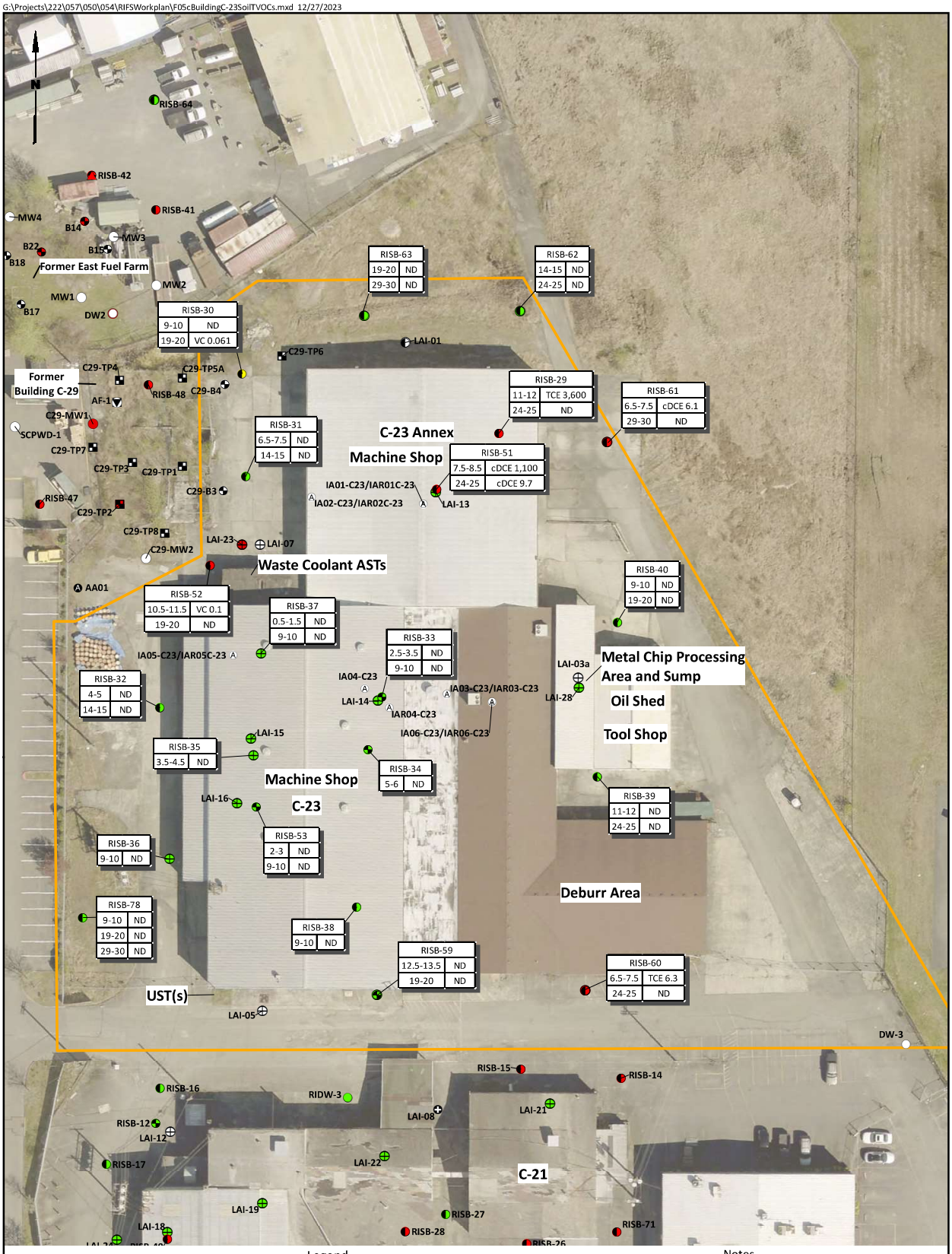
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Everett, Washington

Building C-23 and C-23 Annex
Benzene and TPH in Soil

Figure
5b

G:\Projects\222\057\050\054\RIFSWorkplan\F05cBuildingC-23SoilTVOCs.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit
- Catch Basin
- Trench Drain
- Building C-23 and C-23 Annex

Data Box Key

Sample Location	
Sample Depth (ft, BGS)	Maximum PCE, TCE, cDCE, or VC Concentration (µg/kg)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 2.8, 1.5, 5.2, and 0.090 µg/kg, respectively.
3. UST = Underground Storage Tank
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 50 100

Scale in Feet

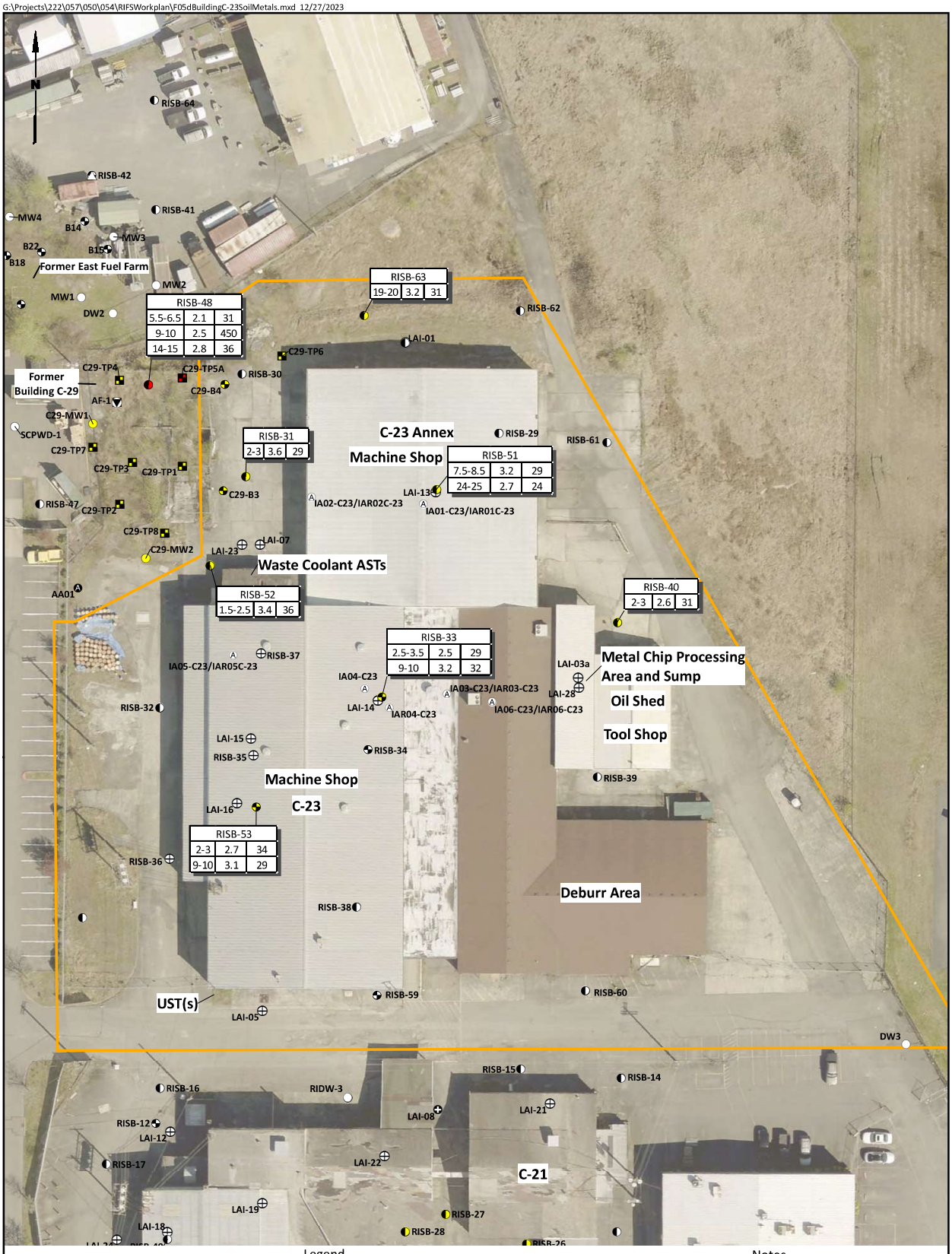
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Everett, Washington

Building C-23 and C-23 Annex VOCs in Soil

Figure 5c

G:\Projects\222\057\050\054\RIFSWorkplan\F05dBuildingC-23SoilMetals.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit
- Catch Basin
- Trench Drain
- Building C-23 and C-23 Annex

Notes

1. Screening level is 7 mg/kg for arsenic and 42 mg/kg for total chromium.
2. UST = Underground Storage Tank
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Box Key

Sample Location		
Sample Depth (ft, BGS)	Maximum Arsenic Concentration (mg/kg)	Maximum Total Chromium Concentration (mg/kg)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 50 100

Scale in Feet

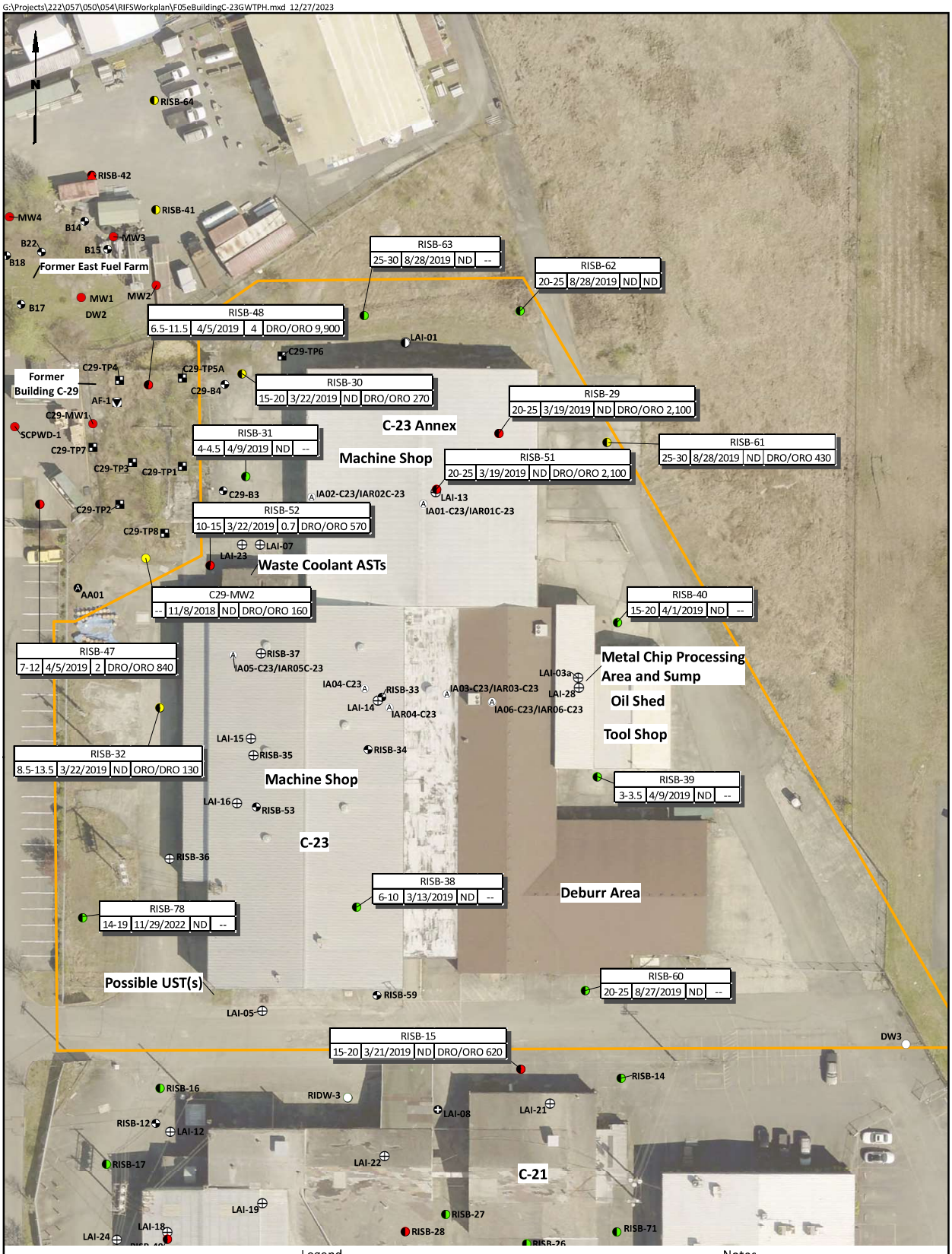
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Everett, Washington

Building C-23 and C-23 Annex Metals in Soil

Figure 5d

G:\Projects\222\057\050\054\RIFSWorkplan\F05eBuildingC-23GWTPH.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit
- Catch Basin
- Trench Drain
- Building C-23 and C-23 Annex

Data Box Key

Sample Location			
Screen Depth (ft, BGS)	Date	Benzene Conc. (µg/L)	Max. TPH-G or Total TPH-D and TPH-O Conc. (µg/L)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for TPH-G are 800 µg/L with benzene present and 1,000 µg/L without benzene present.
3. Screening level for TPH-D and TPH-O are 500 µg/L, separate or combined.
4. Screening level for benzene is 0.80 µg/L.
5. UST = Underground Storage Tank
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 50 100

Scale in Feet

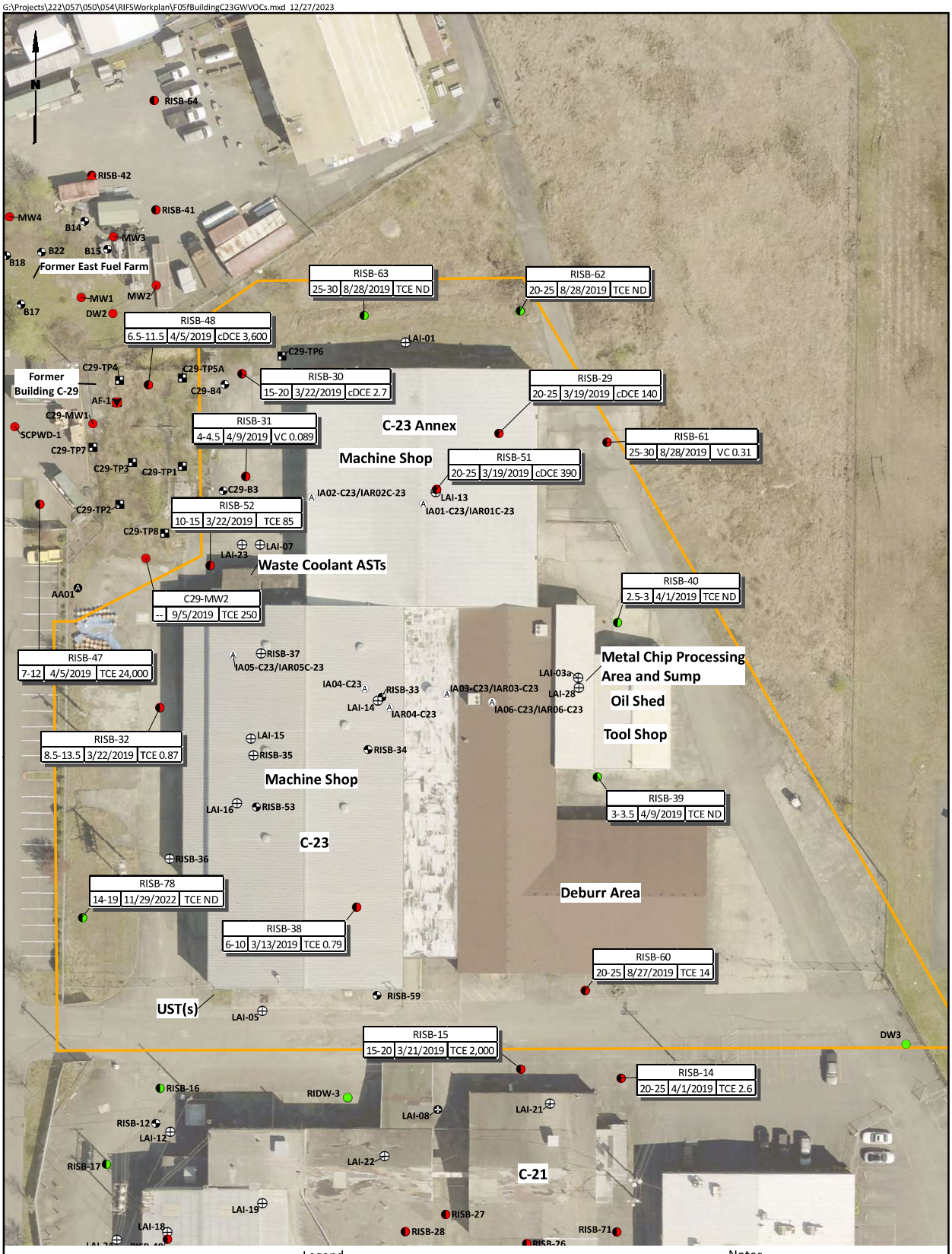
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Everett, Washington

Building C-23 and C-23 Annex
TPH and Benzene in Groundwater

Figure
5e

G:\Projects\222\057\050\054\RIFSWorkplan\F05fBuildingC23GWVOCs.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit
- Catch Basin
- Trench Drain
- Building C-23 and C-23 Annex

Data Box Key

Sample Location		
Screen Depth (ft, BGS)	Date	Max. PCE, TCE, cDCE, or VC Conc. (µg/L)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 5, 0.54, 16, and 0.029 ug/L, respectively.
3. UST = Underground Storage Tank
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 50 100
Scale in Feet

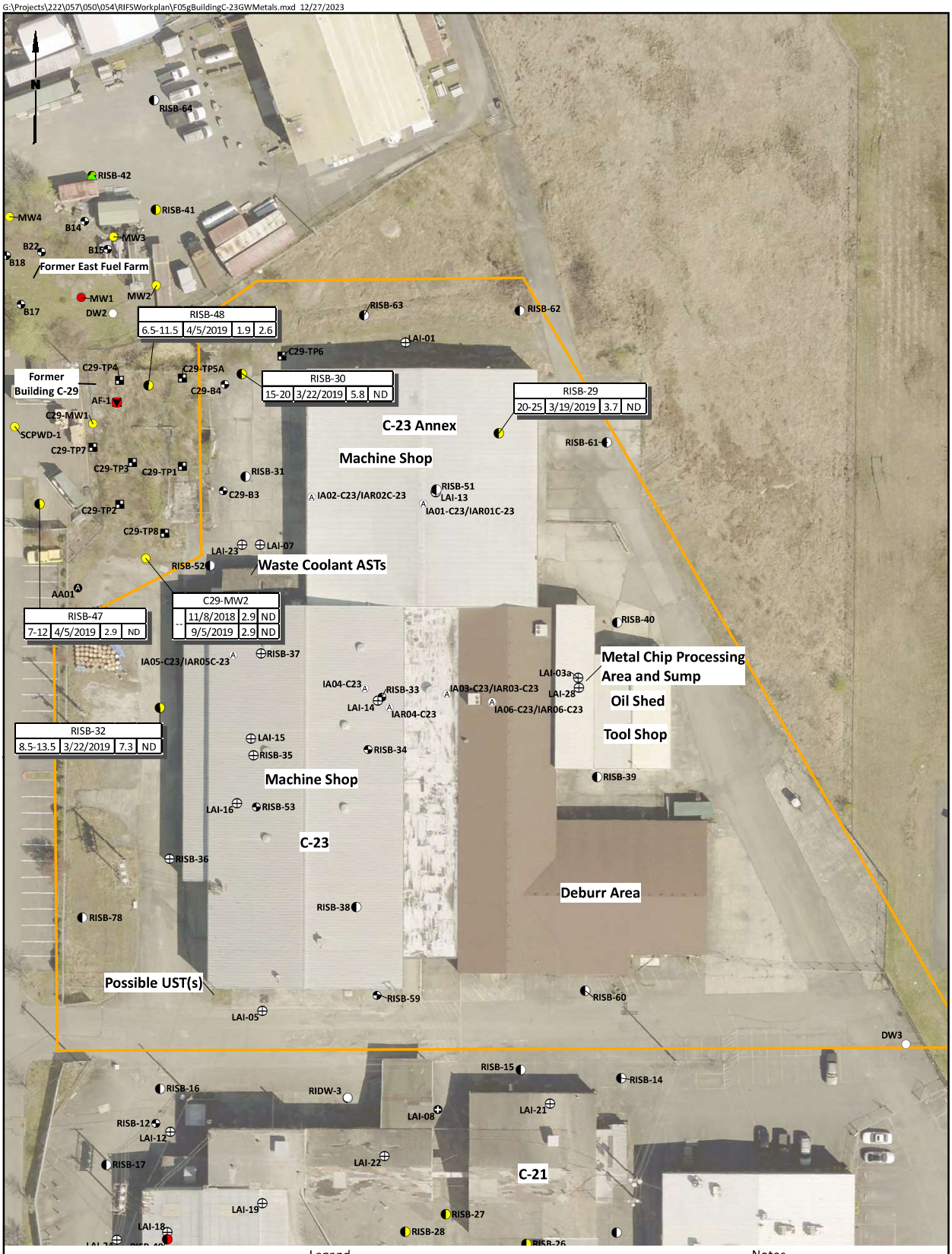
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Building C-23 and C-23 Annex VOCs in Groundwater

Figure 5f

G:\Projects\222\057\050\054\RIFSWorkplan\F05gBuildingC-23GWMetals.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit
- Catch Basin
- Trench Drain
- Building C-23 and C-23 Annex

Data Box Key

Sample Location			
Screen Depth (ft, BGS)	Date	Arsenic Conc. (µg/L)	Total Chromium Conc. (µg/L)

Notes

1. Screening level is 13.6 µg/L for arsenic and 100 µg/L for total chromium
2. UST = Underground Storage Tank
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 50 100

Scale in Feet

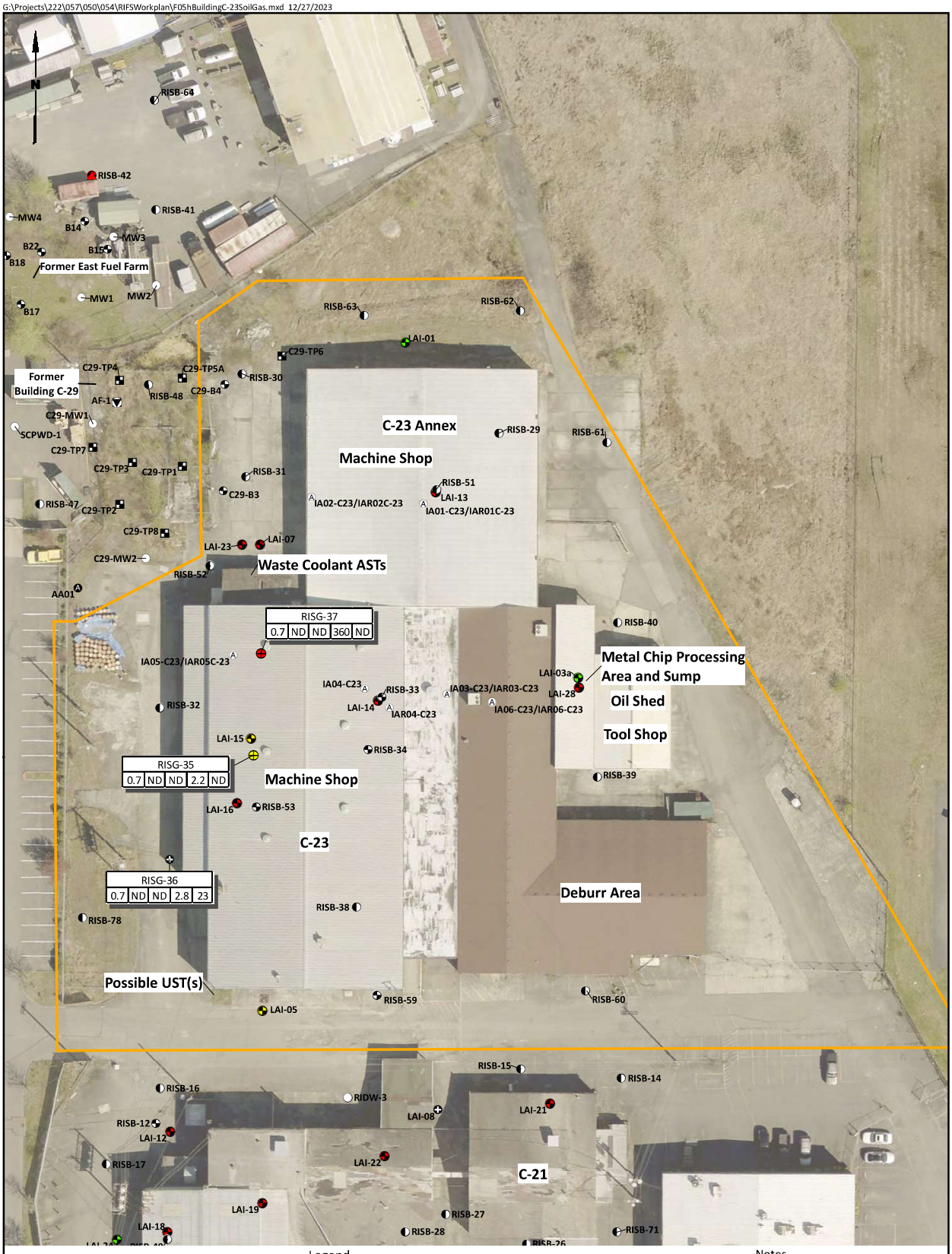
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TECT Aerospace Leasehold
Everett, Washington

Building C-23 and C-23 Annex Metals in Groundwater

Figure 5g

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit
- Catch Basin
- Trench Drain
- Building C-23 and C-23 Annex

Notes

1. Screening levels for 1,1-DCA, Benzene, TCE, and VC are 52, 11, 11, and 9.5 µg/m^3, respectively.
2. UST = Underground Storage Tank
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Box Key

Sample Location				
Sample Depth	1,1-DCA Conc. (µg/m^3)	Benzene Conc (µg/m^3)	TCE Conc. (µg/m^3)	VC Conc. (µg/m^3)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 50 100

Scale in Feet

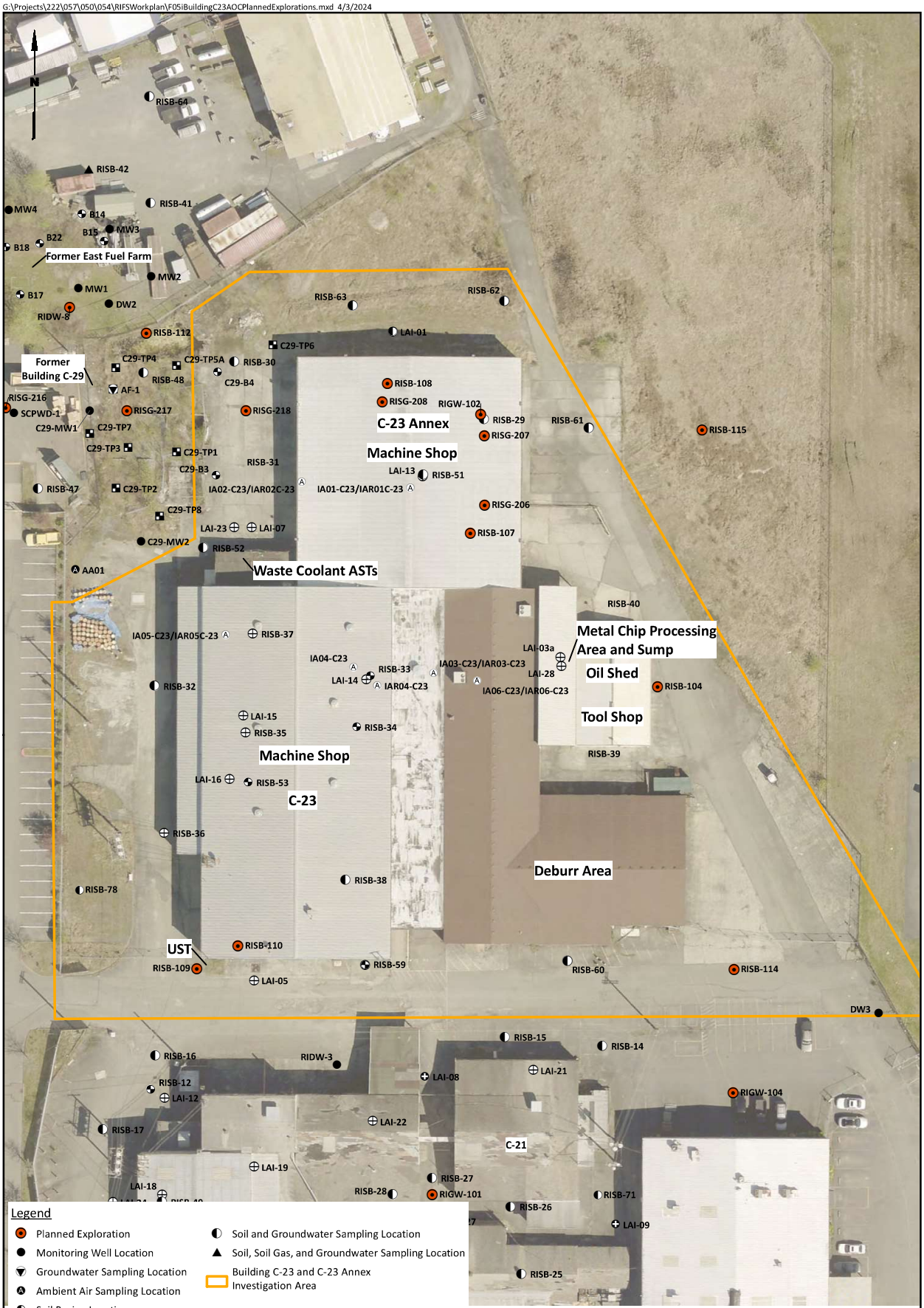
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Everett, Washington

Building C-23 and C-23 Annex Soil Gas

Figure 5h

G:\Projects\222\057\050\054\RIFSWorkplan\F05iBuildingC23AOCPlannedExplorations.mxd 4/3/2024



Legend

- Planned Exploration
- Monitoring Well Location
- Groundwater Sampling Location
- Ambient Air Sampling Location
- Soil Boring Location
- Indoor Air Sampling Location
- Soil and Soil Gas Sampling Location
- Soil Gas Sampling Location
- Test Pit
- Soil and Groundwater Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Building C-23 and C-23 Annex Investigation Area

Exploration Key

RISB = Soil Boring
RIGW = Shallow Groundwater Monitoring Well
RIDW = Deep Aquifer Groundwater Monitoring Well
RISG = Soil Gas Probe

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 50 100
Scale in Feet

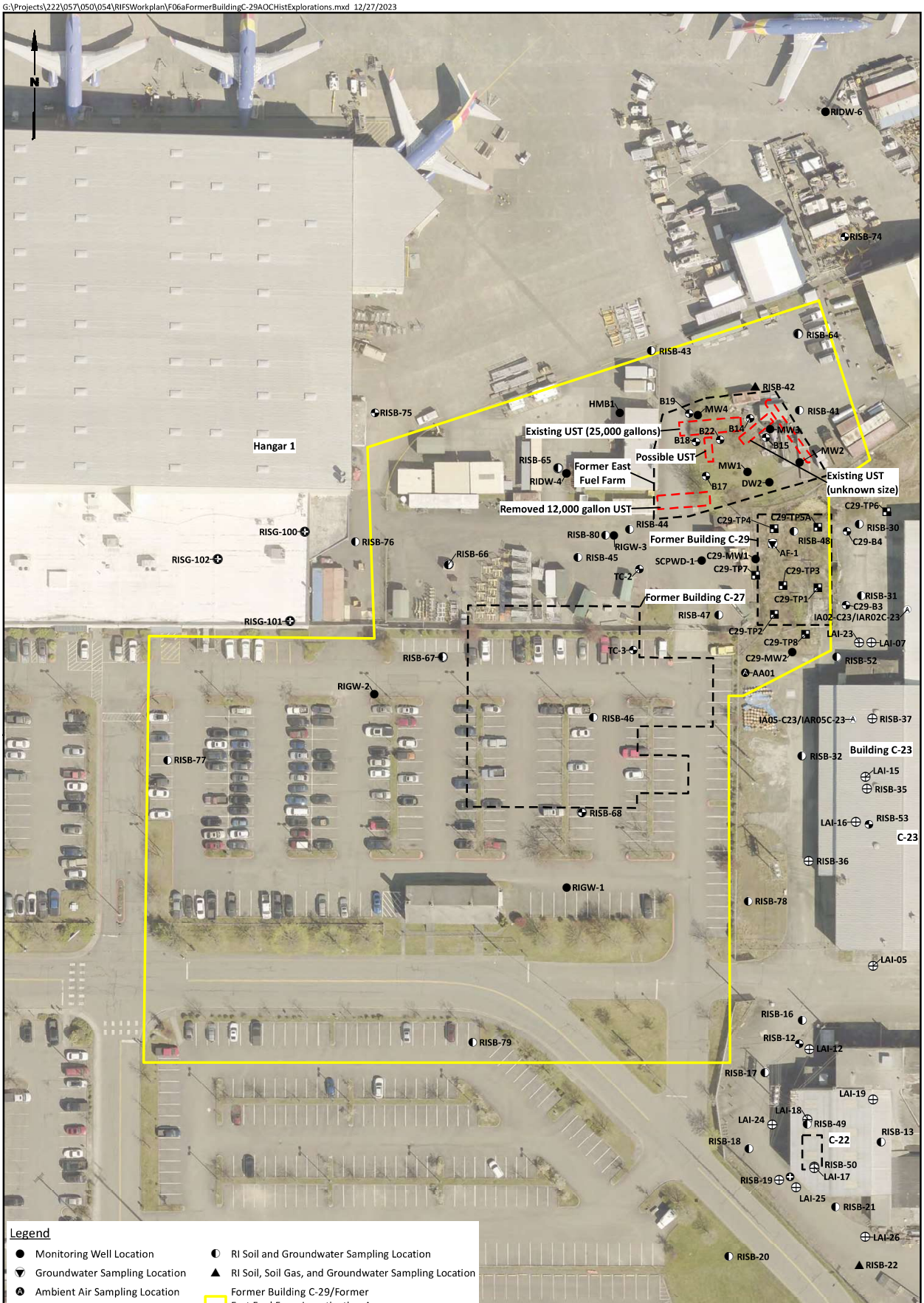
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Building C-23 and C-23 Annex
Planned AO
Remedial Investigation Locations

Figure
5i

G:\Projects\222\057\050\054\RIFSWorkplan\F06aFormerBuildingC-29AOCHistExplorations.mxd 12/27/2023



Legend

- Monitoring Well Location
- Groundwater Sampling Location
- Ambient Air Sampling Location
- Soil Boring Location
- Indoor Air Sampling Location
- Soil and Soil Gas Sampling Location
- Soil Gas Sampling Location
- Test Pit
- RI Soil and Groundwater Sampling Location
- RI Soil, Soil Gas, and Groundwater Sampling Location
- Former Building C-29/Former East Fuel Farm Investigation Area

Notes

1. UST = Underground Storage Tank
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 70 140

Scale in Feet

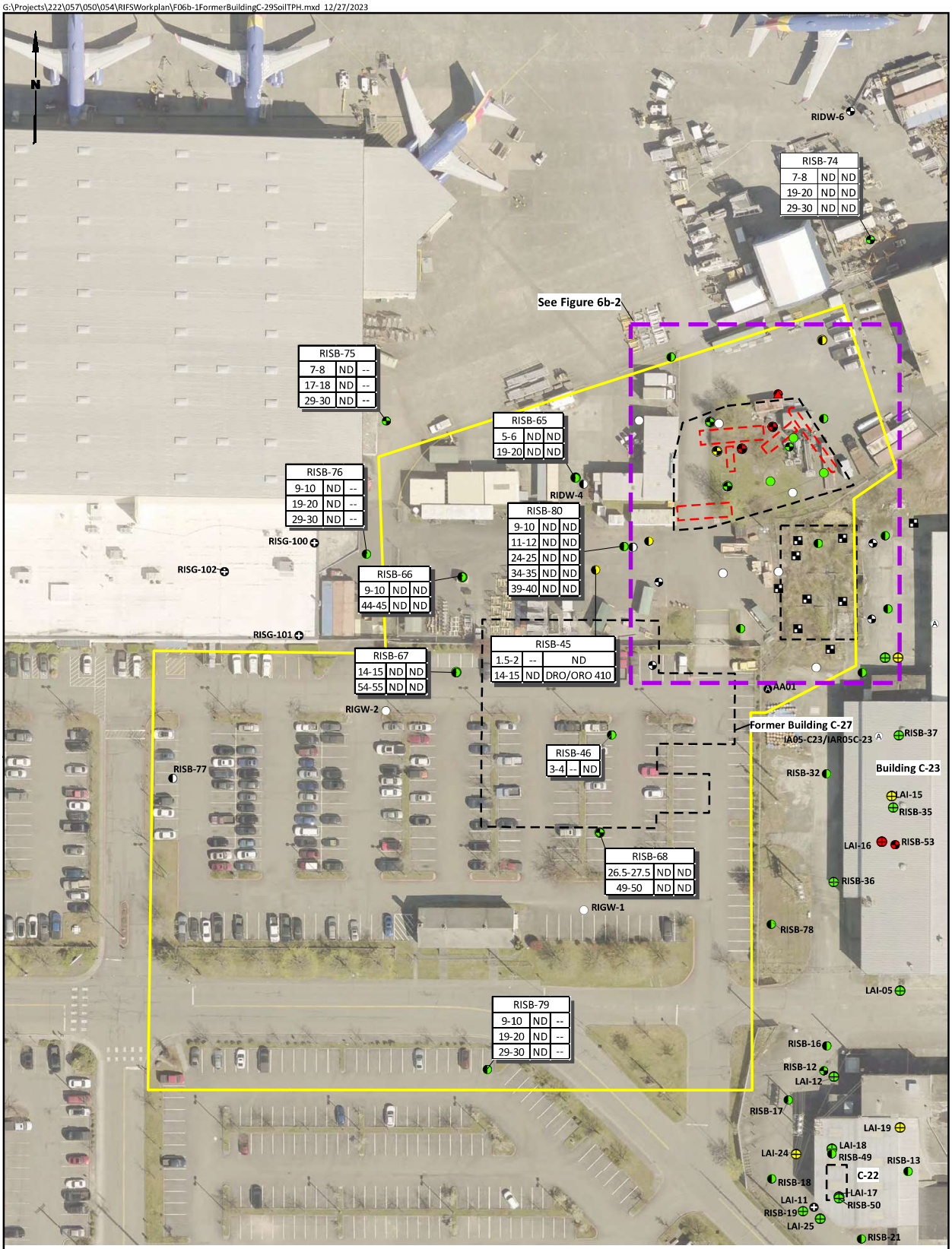
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Former Building C-29/Former Fuel Farm Historical Exploration Locations

Figure 6a

G:\Projects\222\057\050\054\RIFSWorkplan\F06b-1FormerBuildingC-29SoilTPH.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Data Box Key

Sample Location		
Sample Depth (ft, BGS)	Benzene Concentration (µg/kg)	Max. TPH-G, or Total TPH-D and TPH-O Conc. (mg/kg)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for TPH-G are 30 mg/kg with benzene present and 100 mg/kg without benzene present.
3. Screening level for TPH-D and TPH-O are 2,000 mg/kg, separate or combined.
4. Screening level for benzene is 1.7 µg/kg.
5. UST = Underground Storage Tank
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 70 140

Scale in Feet

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Everett, Washington

Former Building C-29/Former Fuel Farm
Benzene and TPH in Soil

Figure
6b-1

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Data Box Key

Sample Location		
Sample Depth (ft, BGS)	Benzene Concentration (µg/kg)	Max. TPH-G, or Total TPH-D and TPH-O Conc. (mg/kg)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for TPH-G are 30 mg/kg with benzene present and 100 mg/kg without benzene present.
3. Screening level for TPH-D and TPH-O are 2,000 mg/kg, separate or combined.
4. Screening level for benzene is 1.7 µg/kg.
5. UST = Underground Storage Tank
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 20 40
Scale in Feet

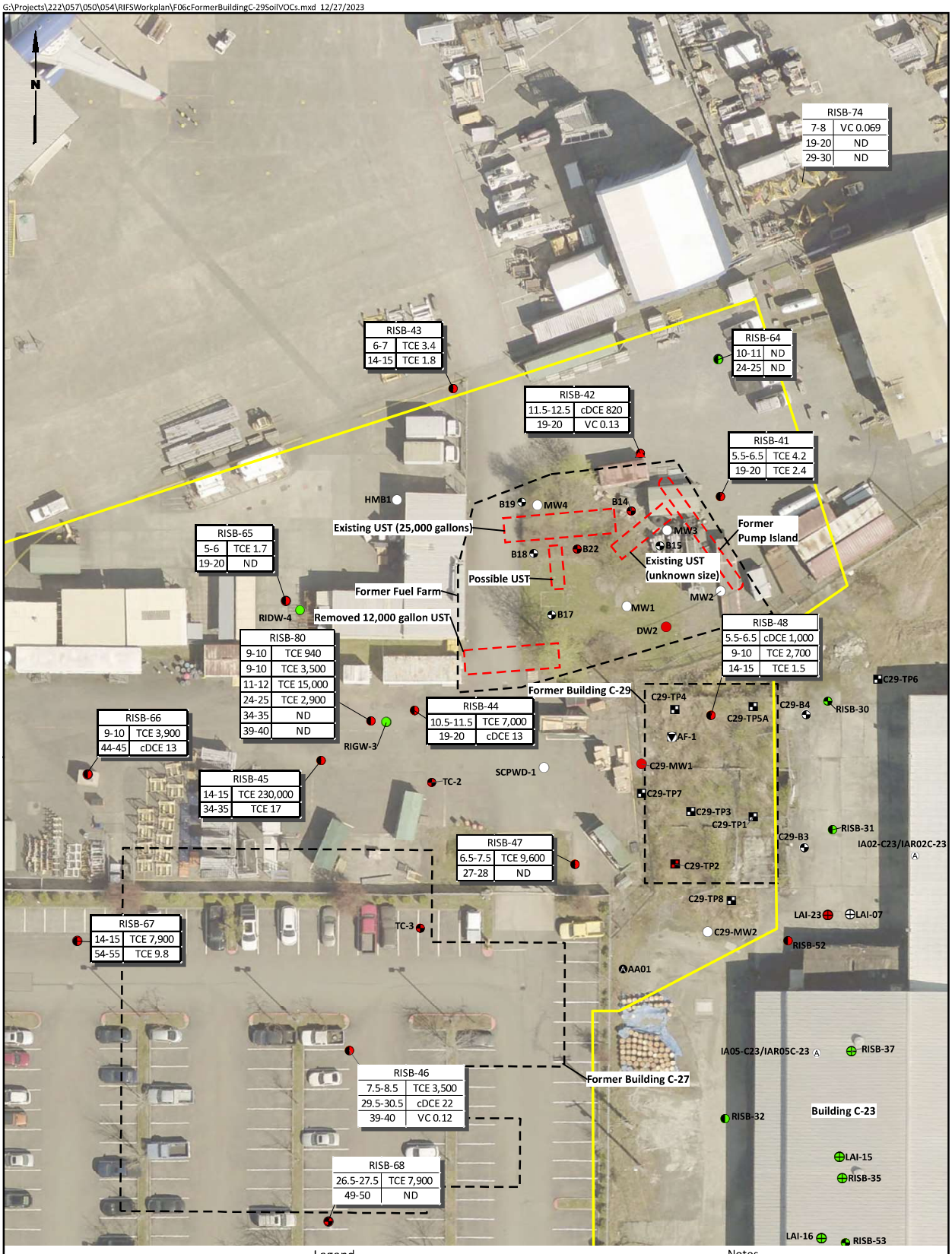
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Former Building C-29/Former Fuel Farm Benzene and TPH in Soil

Figure 6b-2

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Data Box Key

Sample Location	
Sample Depth (ft, BGS)	Maximum PCE, TCE, cDCE, or VC Concentration (µg/kg)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 2.8, 1.5, 5.2, and 0.090 µg/kg, respectively.
3. UST = Underground Storage Tank
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80
Scale in Feet

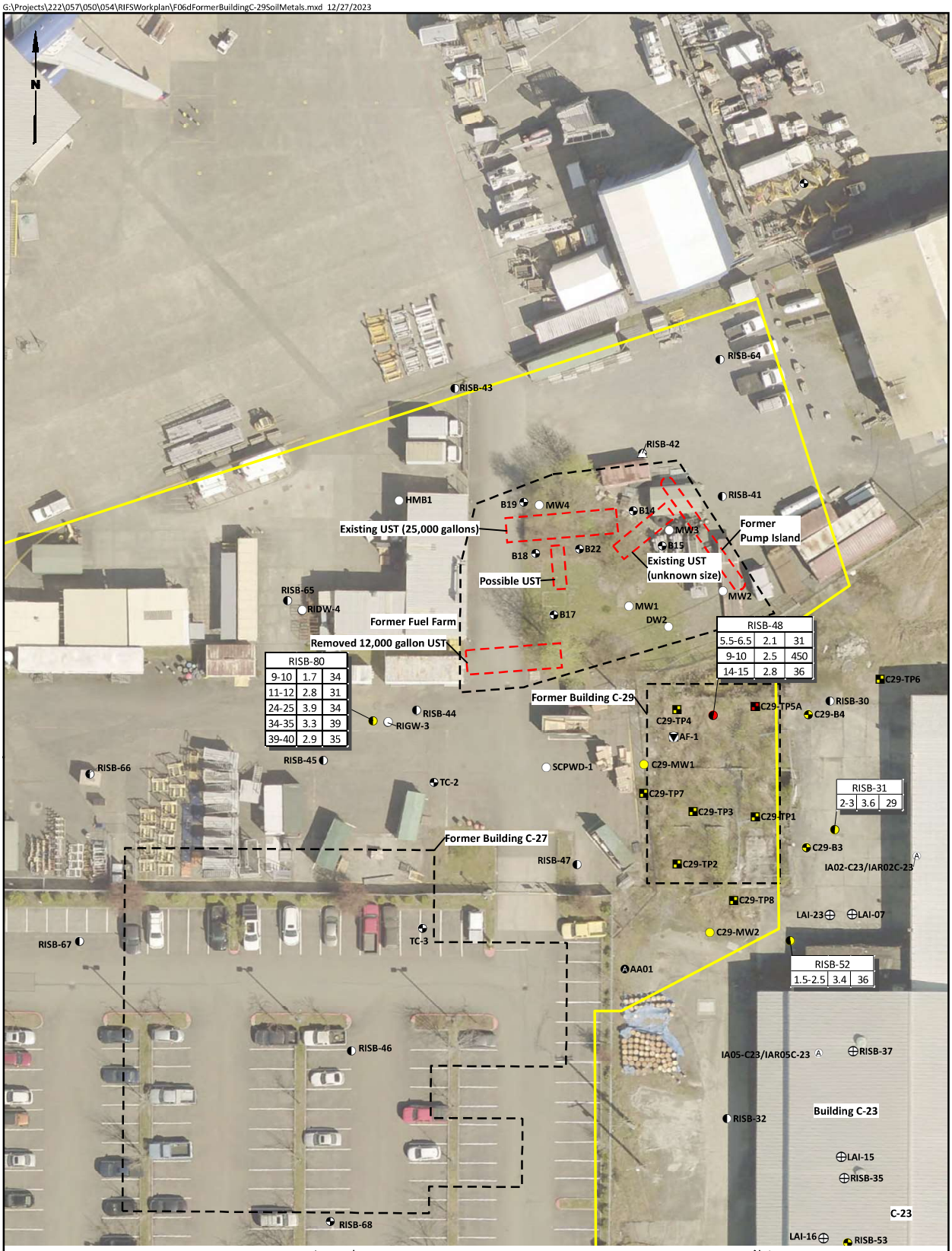
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Everett, Washington

Former Building C-29/Former Fuel Farm VOCs in Soil

Figure 6c

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Notes

1. Screening level is 7 mg/kg for arsenic and 42 mg/kg for total chromium.
2. UST = Underground Storage Tank
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Box Key

Sample Location		
Sample Depth (ft, BGS)	Maximum Arsenic Concentration (mg/kg)	Maximum Total Chromium Concentration (mg/kg)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80

Scale in Feet

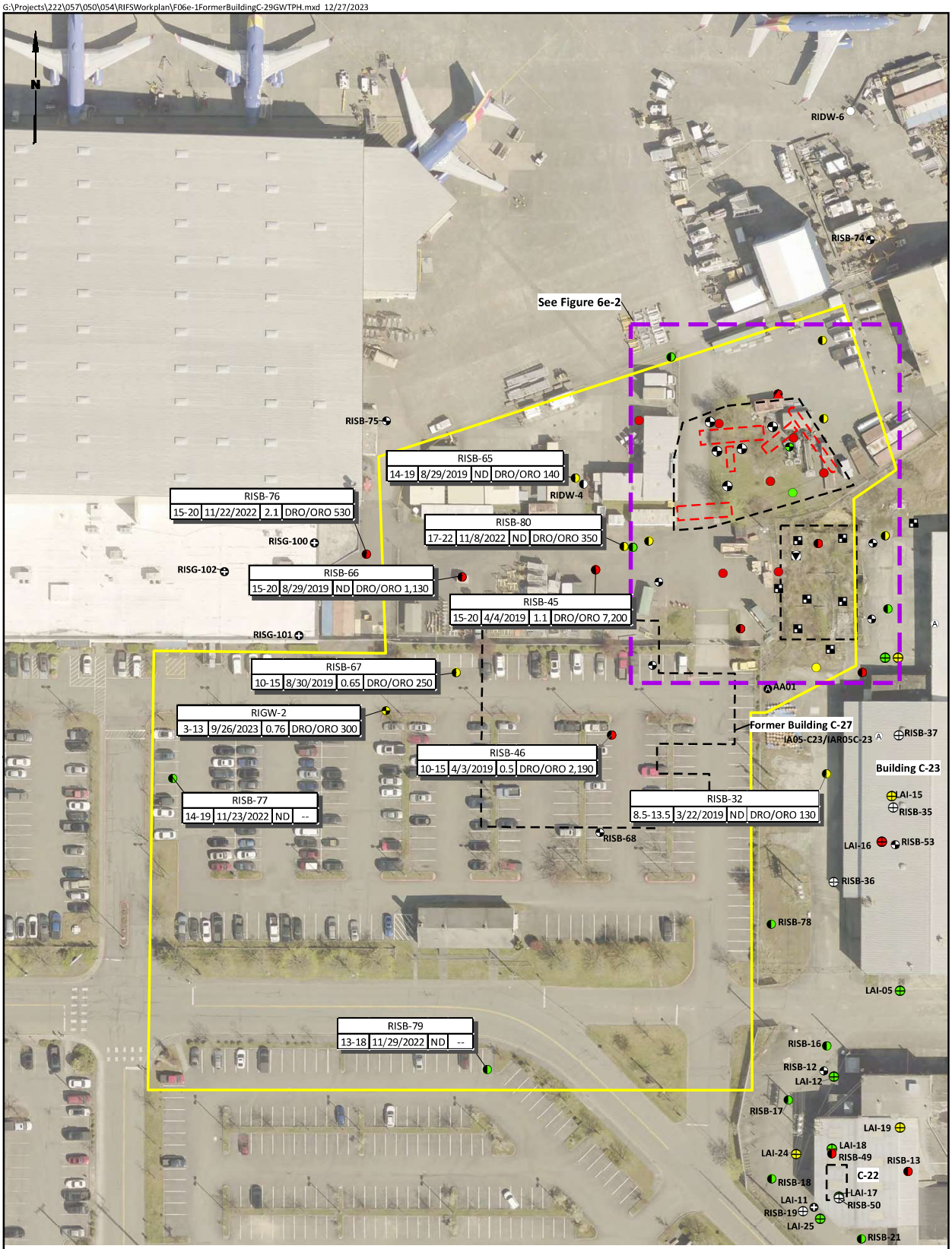
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Everett, Washington

Former Building C-29/Former Fuel Farm Metals in Soil

Figure 6d

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Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Data Box Key

Sample Location			
Screen Depth (ft, BGS)	Date	Benzene Conc. (µg/L)	Max. TPH-G or Total TPH-D and TPH-O Conc. (µg/L)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for TPH-G are 800 µg/L with benzene present and 1,000 µg/L without benzene present.
3. Screening level for TPH-D and TPH-O are 500 µg/L, separate or combined.
4. Screening level for benzene is 0.80 µg/L.
5. UST = Underground Storage Tank
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 70 140

Scale in Feet

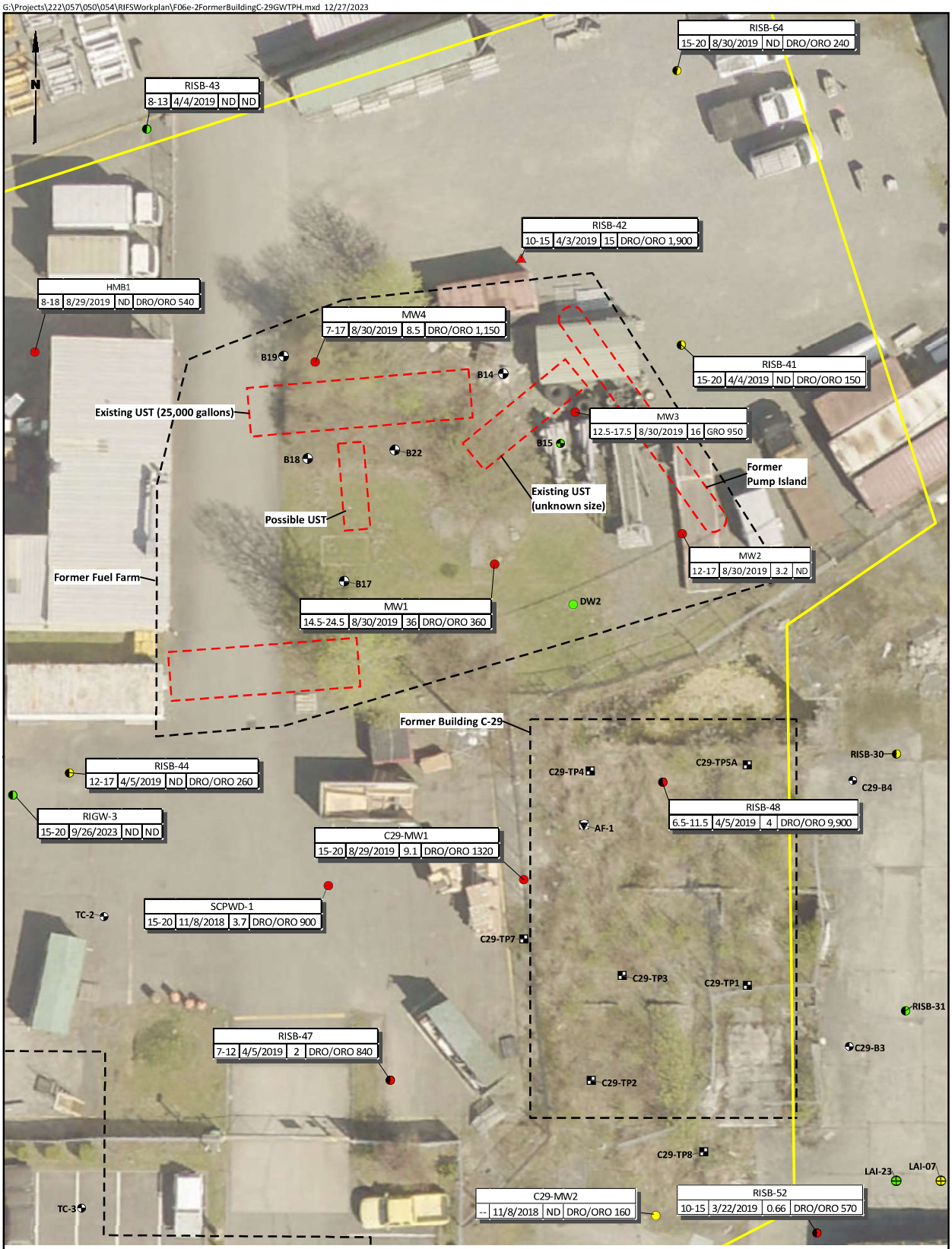
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Everett, Washington

Former Building C-29/Former Fuel Farm
Benzene and TPH in Groundwater

Figure
6e-1

G:\Projects\222\057\050\054\RIFSWorkplan\F06e-2FormerBuildingC-29GWTPH.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Data Box Key

Sample Location			
Screen Depth (ft, BGS)	Date	Benzene Conc. (µg/L)	Max. TPH-G or Total TPH-D and TPH-O Conc. (µg/L)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for TPH-G are 800 µg/L with benzene present and 1,000 µg/L without benzene present.
3. Screening level for TPH-D and TPH-O are 500 µg/L, separate or combined.
4. Screening level for benzene is 0.80 µg/L.
5. UST = Underground Storage Tank
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 20 40
Scale in Feet

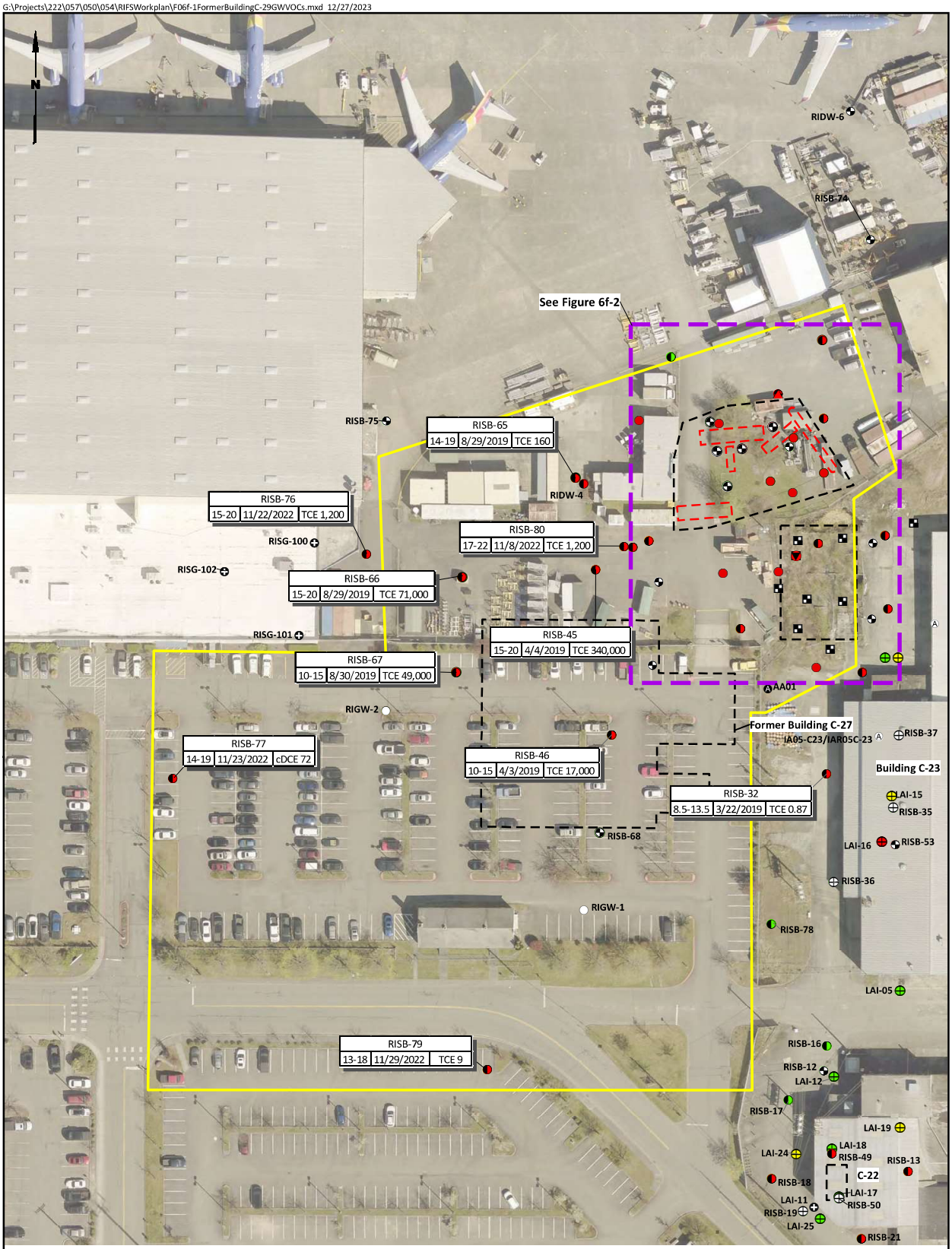
LANDAU ASSOCIATES

TECT Aerospace
Everett, Washington

Former Building C-29/Former Fuel Farm Benzene and TPH in Groundwater

Figure 6e-2

G:\Projects\222\057\050\054\RIFSWorkplan\F06f-1FormerBuildingC-29GWVOCs.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Data Box Key

Sample Location		
Screen Depth (ft, BGS)	Date	Max. PCE, TCE, cDCE, or VC Conc. (µg/L)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 5, 0.54, 16, and 0.029 ug/L, respectively.
3. UST = Underground Storage Tank
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 70 140
Scale in Feet

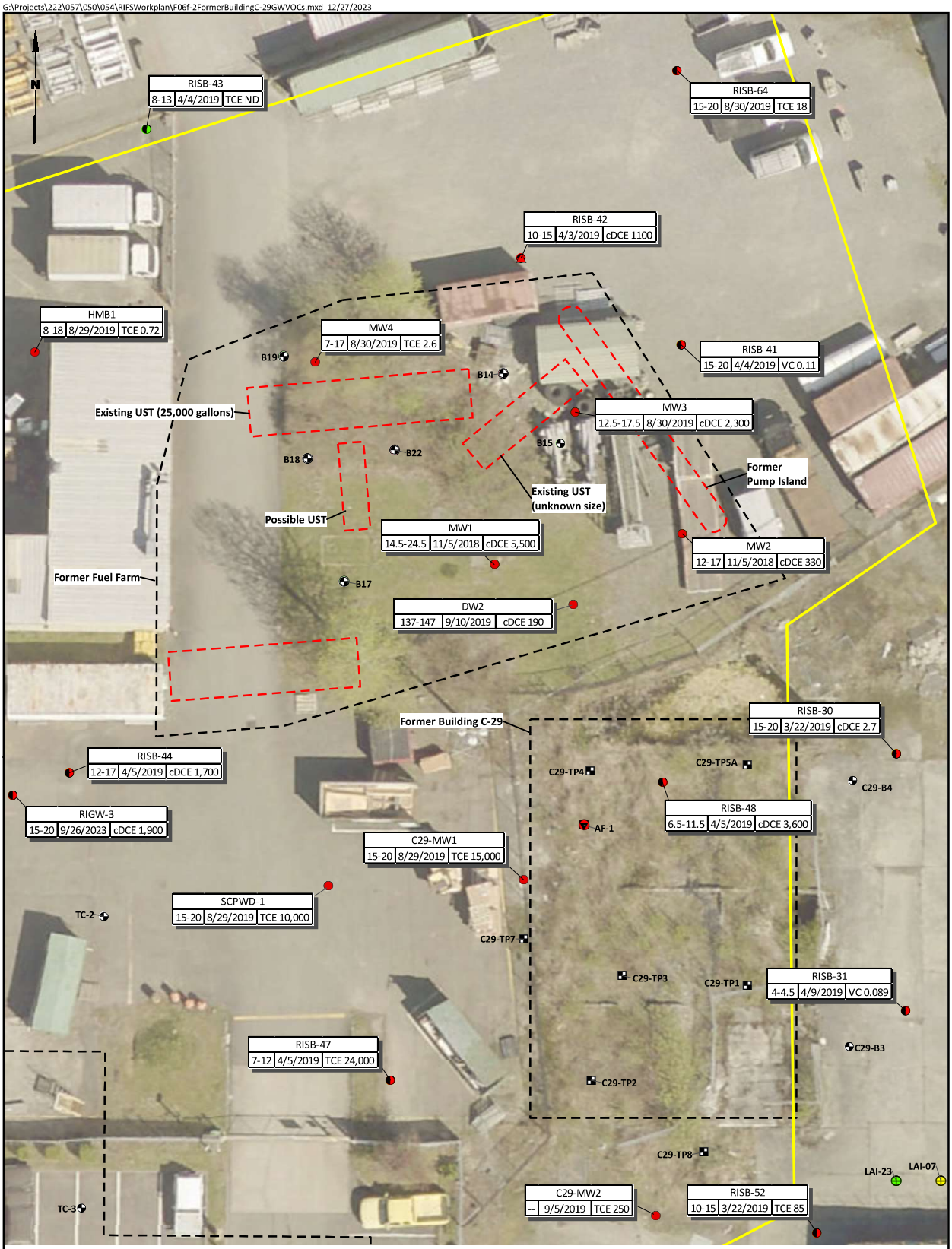
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Everett, Washington

Former Building C-29/Former Fuel Farm VOCs in Groundwater

Figure
6f-1

G:\Projects\222\057\050\054\RIFSWorkplan\F06f-2FormerBuildingC-29GWVOCs.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Data Box Key

Sample Location		
Screen Depth (ft, BGS)	Date	Max. PCE, TCE, cDCE, or VC Conc. (µg/L)

Notes

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 5, 0.54, 16, and 0.029 µg/L, respectively.
3. UST = Underground Storage Tank
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 20 40
Scale in Feet

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Former Building C-29/Former Fuel Farm VOCs in Groundwater

Figure 6f-2

G:\Projects\222\057\050\054\RIFSWorkplan\F06gFormerBuildingC-29GWMetals.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Data Box Key

Sample Location			
Screen Depth (ft, BGS)	Date	Arsenic Conc. (µg/L)	Total Chromium Conc. (µg/L)

Notes

1. Screening level is 13.6 µg/L for arsenic and 100 µg/L for total chromium
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 40 80
Scale in Feet

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Former Building C-29/Former Fuel Farm Metals in Groundwater

Figure 6g

G:\Projects\222\057\050\054\RIFSWorkplan\F06hFormerBuildingC-29SoilGas.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Ambient Air Sampling Location
- Indoor Air Sampling Location
- Monitoring Well Location
- Soil Boring Location
- Groundwater Sampling Location
- Soil Gas Sampling Location
- Soil and Groundwater Sampling Location
- Soil and Soil Gas Sampling Location
- Soil, Soil Gas, and Groundwater Sampling Location
- Test Pit

Former Building C-29/Former East Fuel Farm Investigation Area

Notes

1. Screening levels for 1,1-DCA, Benzene, TCE, and VC are 52, 11, 11, and 9.5 µg/m^3, respectively.
2. UST = Underground Storage Tank
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Box Key

Sample Location				
Sample Depth	1,1-DCA Conc. (µg/m^3)	Benzene Conc (µg/m^3)	TCE Conc. (µg/m^3)	VC Conc. (µg/m^3)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 50 100

Scale in Feet

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TECT Aerospace Leasehold
Everett, Washington

Former Building C-29/Former Fuel Farm Soil Gas

Figure 6h

G:\Projects\222\057\050\054\RIFSWorkplan\F06iFormerBuildingC-29AOCPlannedExplorations.mxd 4/3/2024



Legend

- Planned Exploration
- Monitoring Well Location
- Groundwater Sampling Location
- Ambient Air Sampling Location
- Soil Boring Location
- Indoor Air Sampling Location
- Soil and Soil Gas Sampling Location
- Soil Gas Sampling Location
- Test Pit
- RI Soil and Groundwater Sampling Location
- RI Soil, Soil Gas, and Groundwater Sampling Location
- Former Building C-29/Former East Fuel Farm Investigation Area

Exploration Key

RISB = Soil Boring
RIGW = Shallow Groundwater Monitoring Well
RIDW = Deep Aquifer Groundwater Monitoring Well
RISG = Soil Gas Probe

Notes

1. UST = Underground Storage Tank
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 80 160
Scale in Feet

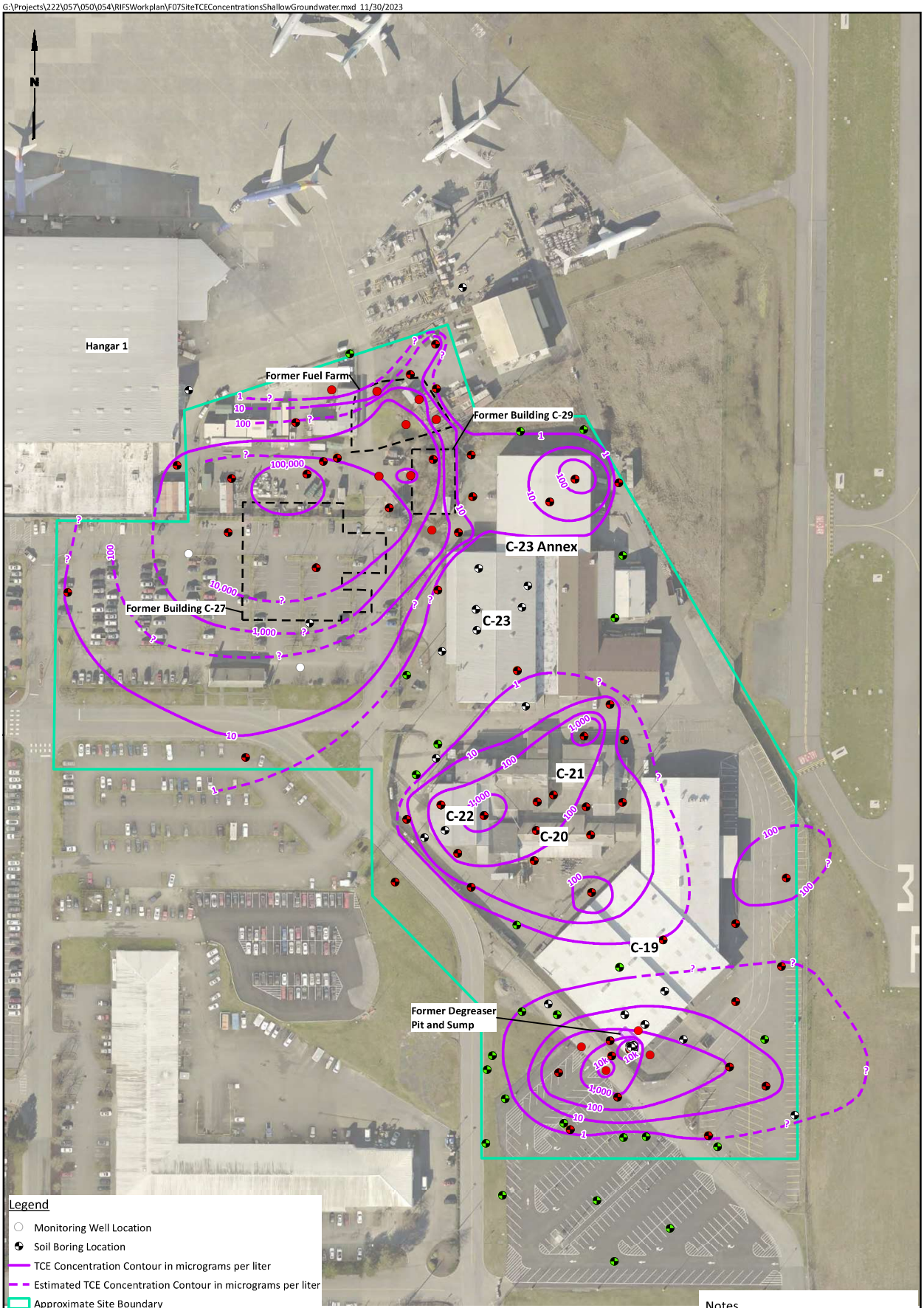
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TECT Aerospace
Everett, Washington

Former Building C-29/Former Fuel Farm
Planned AO
Remedial Investigation Locations

Figure
6i

G:\Projects\222\057\050\054\RIFSWorkplan\F07SiteTCEConcentrationsShallowGroundwater.mxd 11/30/2023



Notes

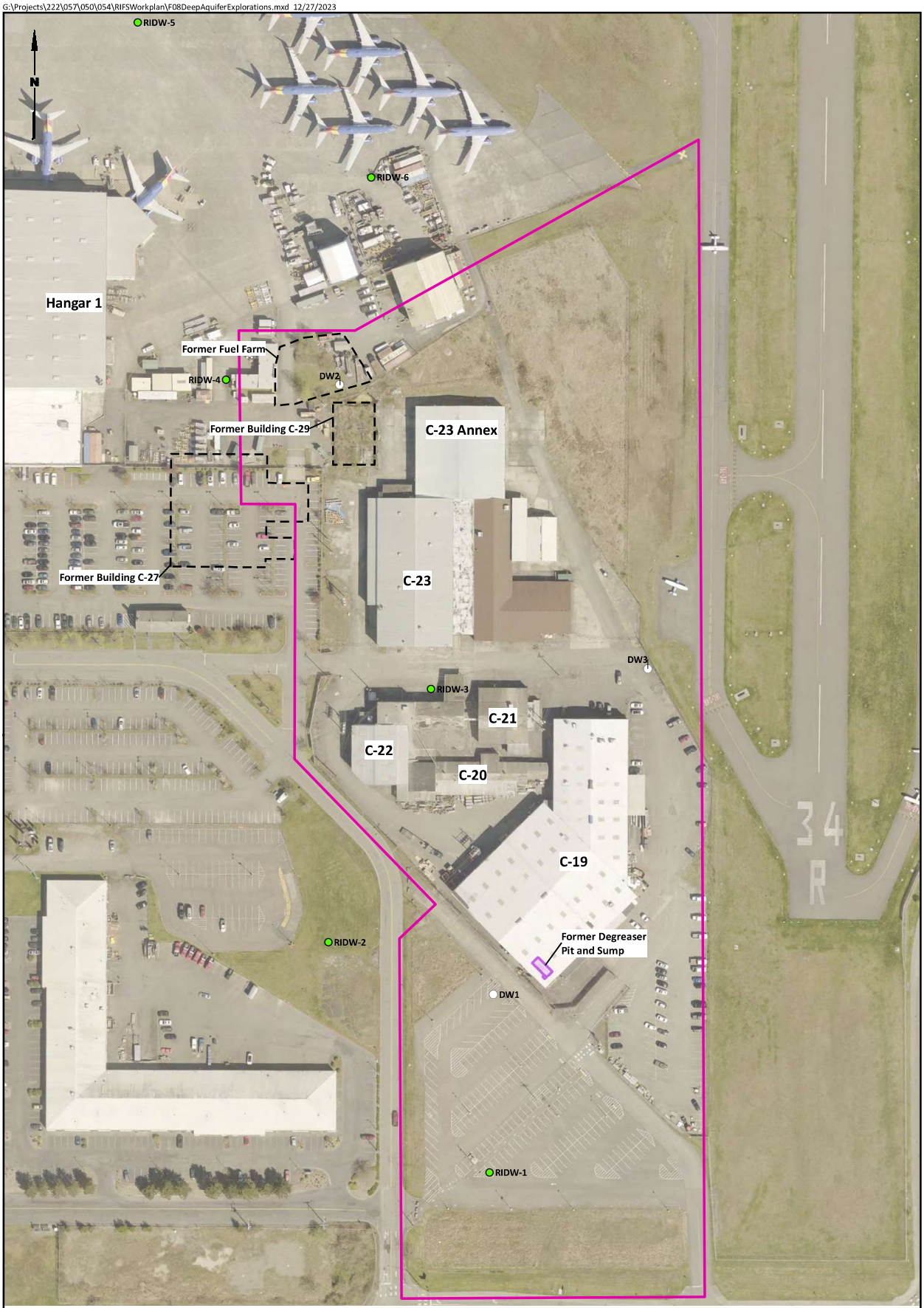
1. TCE Screening Level = 0.54 µg/L.
2. TCE = trichloroethene.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

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TECT Aerospace Everett, Washington	**TCE Concentration Contours in Shallow Groundwater**	Figure 7

G:\Projects\222\057\050\054\RIFSWorkplan\F08DeepAquiferExplorations.mxd 12/27/2023



Legend

- Soil and Groundwater Sampling Location
- Monitoring Well Location
- Deep Aquifer Investigation Area

0 125 250

Scale in Feet

Note

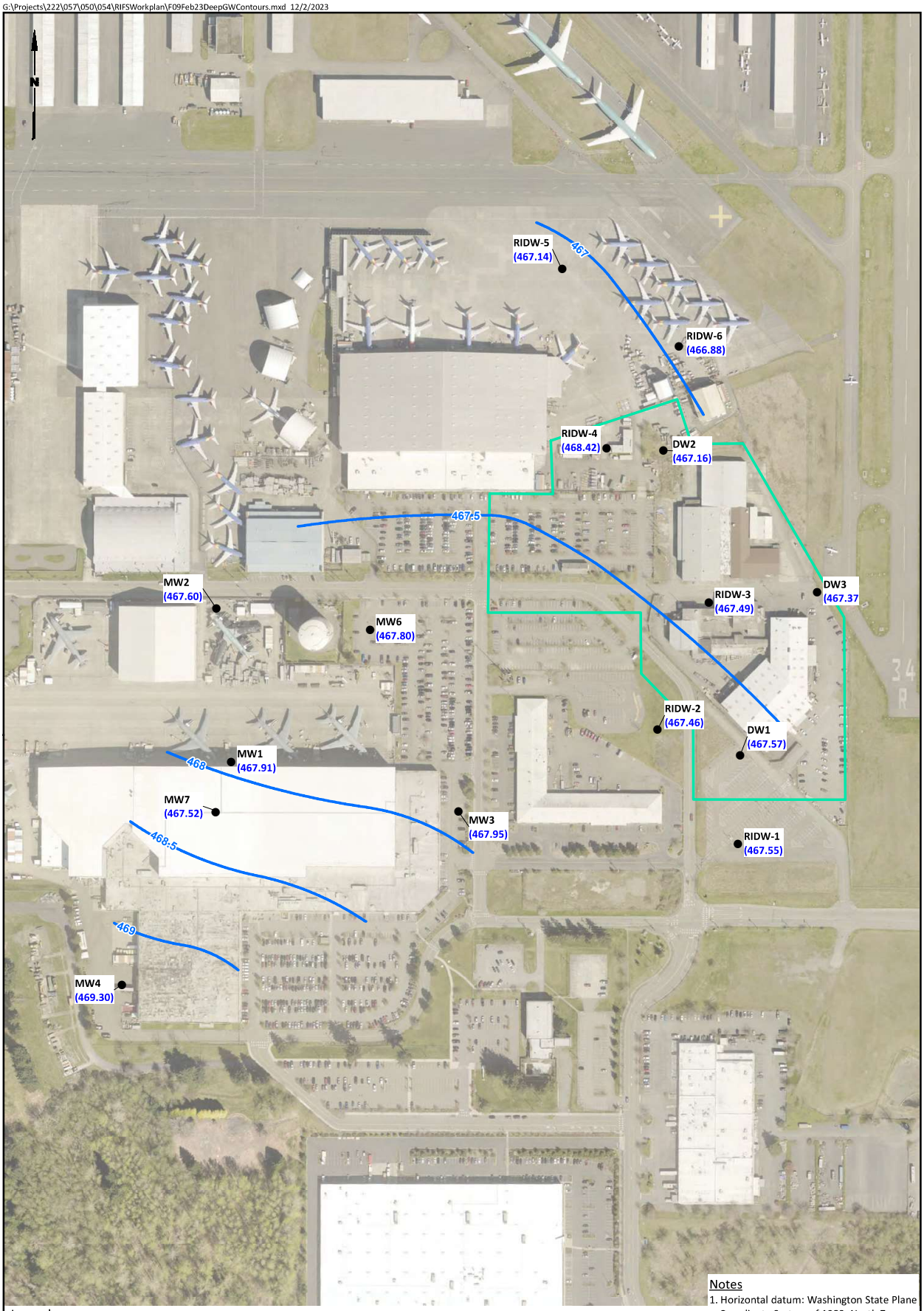
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

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TECT Aerospace Everett, Washington	**Deep Aquifer Historical Exploration Locations**	Figure 8

G:\Projects\222\057\050\054\RIFSWorkplan\F09Feb23DeepGWContours.mxd 12/2/2023



Legend

- Deep Aquifer Monitoring Well
- Groundwater Elevation Contours (NAVD88)
- Approximate Site Boundary

0 250 500

Scale in Feet

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

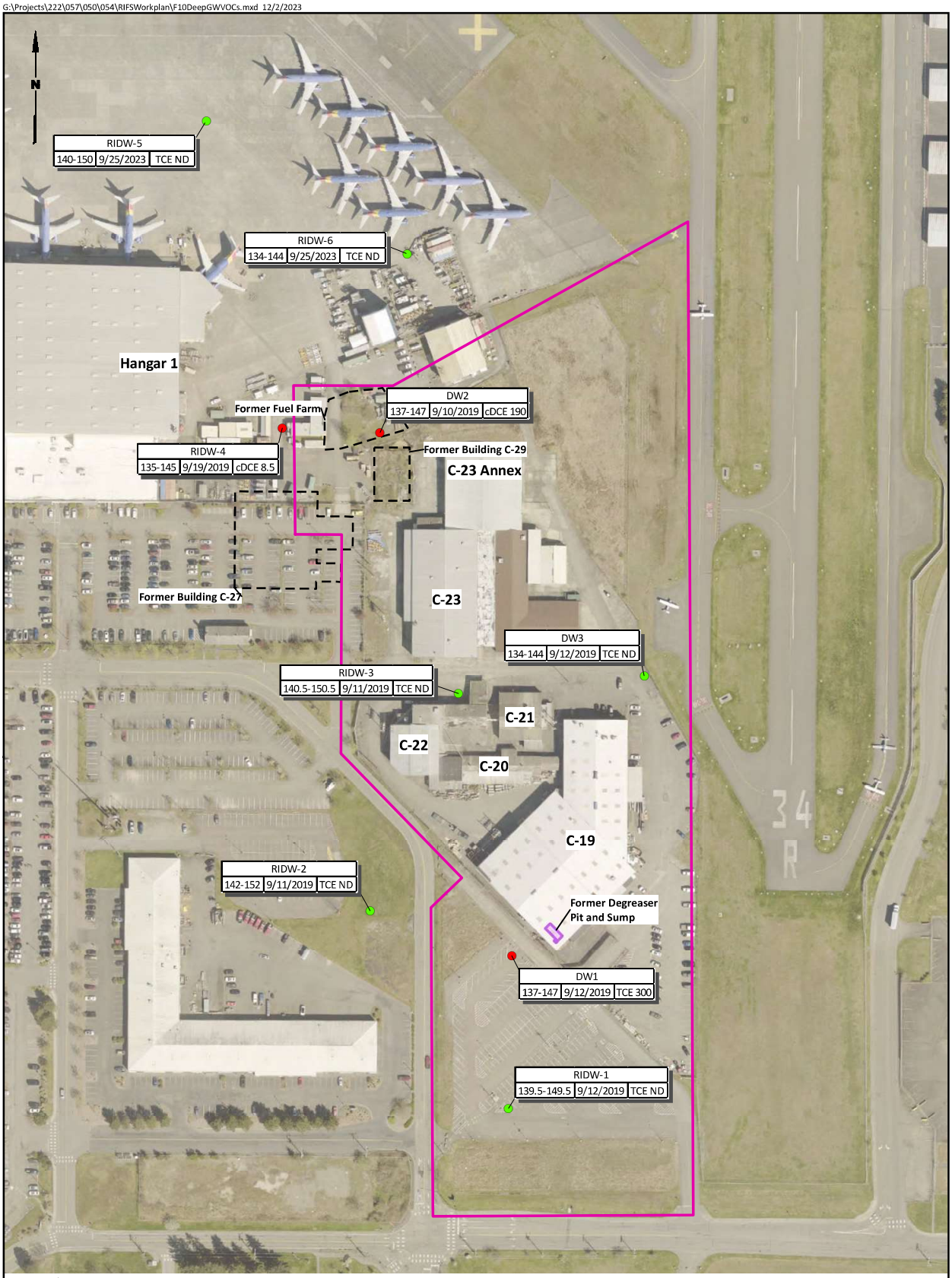
Notes

1. Horizontal datum: Washington State Plane Coordinate System of 1983, North Zone, NAD83-2011 EPOCH 2010.00.
2. Vertical datum: NAVD88.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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TECT Aerospace Everett, Washington	**February 2023** **Groundwater Elevation Contours - Deep Aquifer**	Figure 9

G:\Projects\222\057\050\054\RIFSWorkplan\F10DeepGWVOCs.mxd 12/2/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

- Monitoring Well
- Deep Aquifer Investigation Area

Data Box Key

Sample Location		
Screen Depth (ft, BGS)	Date	Max. PCE, TCE, cDCE, or VC Conc. (µg/L)

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

Note

1. Where more than one constituent was detected or exceeded site screening level, the constituent with the highest concentration is shown.
2. Screening levels for PCE, TCE, cDCE, and VC are 5, 0.54, 16, and 0.029 ug/L, respectively.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 150 300

Scale in Feet

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TECT Aerospace
Everett, Washington

Deep Aquifer VOCs in Groundwater

Figure 10

G:\Projects\222\057\050\054\RIFSWorkplan\F11SitewideGWDioxane.mxd 12/27/2023



Legend

Color Coding Key

- Concentration Exceeded Site Screening Levels for One or More Analytes
- One or More Analytes were Detected, but did not Exceed Site Screening Levels
- Analysis was Conducted, but Results were not detected above Laboratory Reporting Limits
- Analysis was not Conducted at this Location

Sampling Locations

- Monitoring Well Location
- Soil Boring Location
- Soil and Groundwater Sampling Locaiton
- Soil and Soil Gas Sampling Location
- Soil Gas Sampling Location

Data Box Key

Sample Location		
Screen Depth (ft, BGS)	Date	Max. 1,4-Dioxane Conc. (µg/L)

Notes

1. Screening level is 0.44 µg/L for 1,4-dioxane.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

0 120 240

Scale in Feet

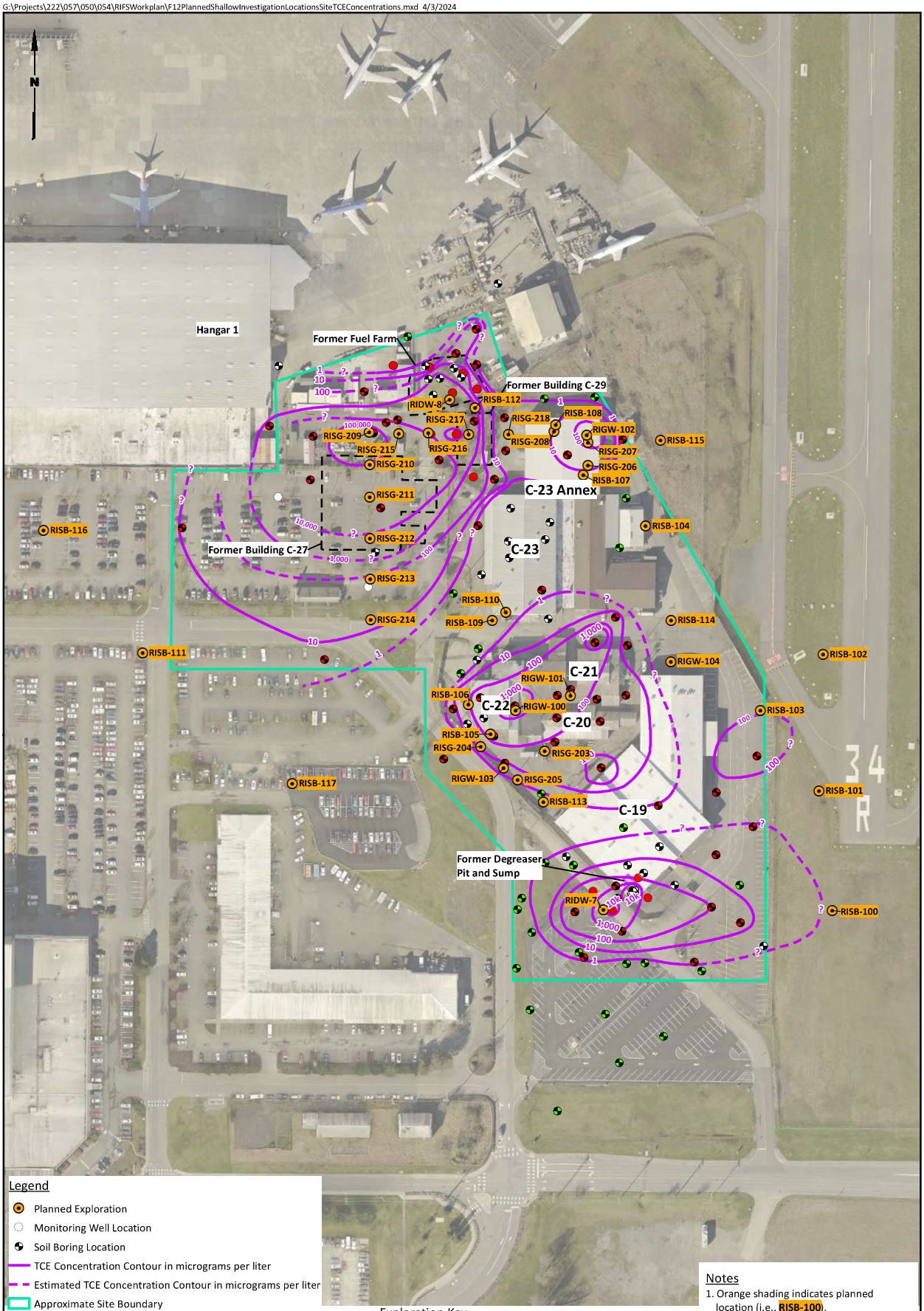
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TECT Aerospace Leasehold
Everett, Washington

1,4-Dioxane in Groundwater

Figure 11

G:\Projects\222\057\050\054\RIFSWorkplan\F12PlannedShallowInvestigationLocationsSiteTCEConcentrations.mxd 4/3/2024



Legend

- Planned Exploration
- Monitoring Well Location
- Soil Boring Location
- TCE Concentration Contour in micrograms per liter
- Estimated TCE Concentration Contour in micrograms per liter
- Approximate Site Boundary
- Concentration Exceeded Site Screening Levels for One or More Analytes
- Analysis was Conducted, but Results were not Detected above Laboratory Reporting Limits
- Samples Collected from this Location were not Analyzed

0 150 300
Scale in Feet

Exploration Key

RISB = Soil Boring
RIGW = Shallow Groundwater Monitoring Well
RIDW = Deep Aquifer Groundwater Monitoring Well
RISG = Soil Gas Probe

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

Notes

1. Orange shading indicates planned location (i.e., RISB-100).
2. TCE Screening Level = 0.54 µg/L.
3. TCE = trichloroethene.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

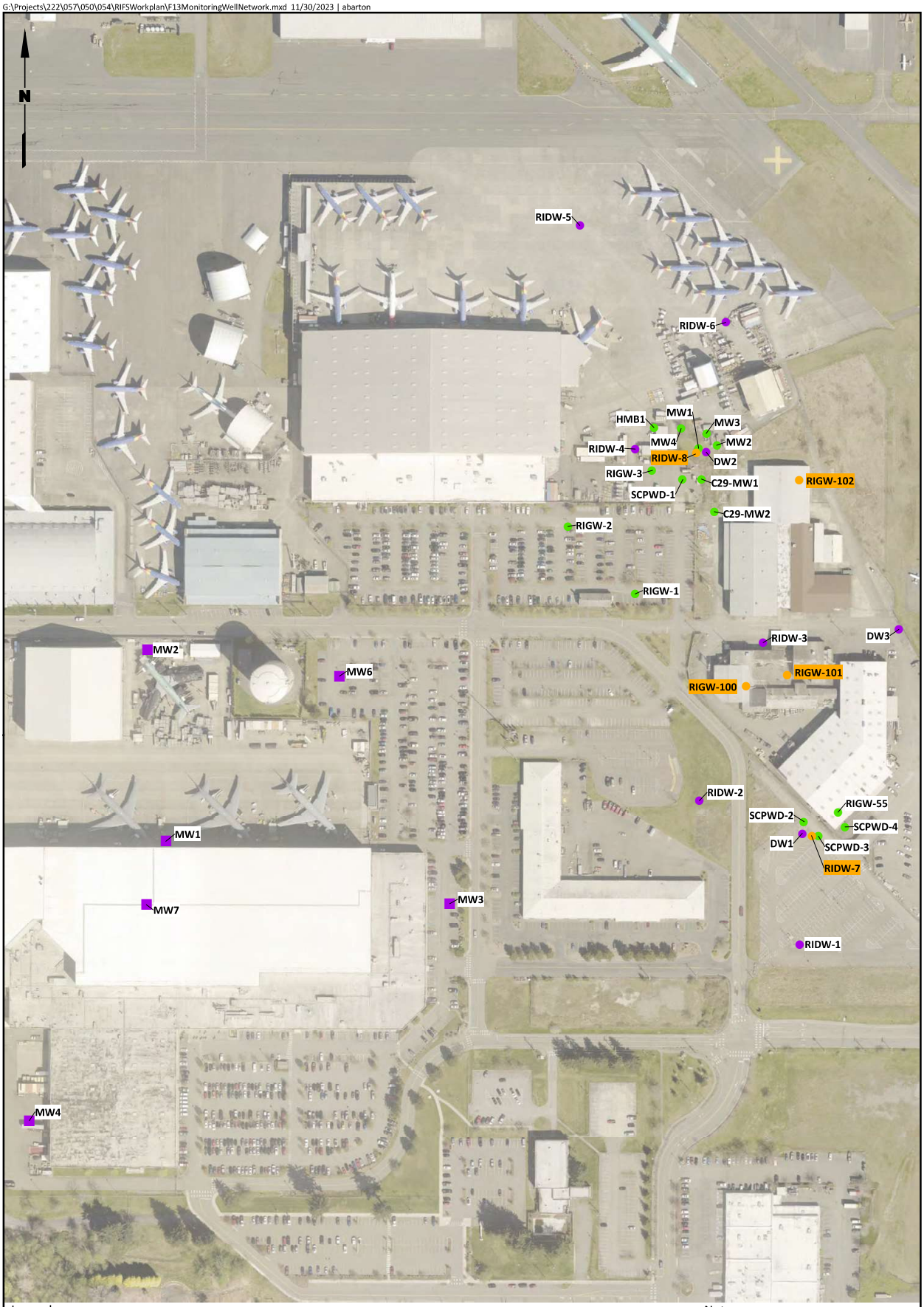
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TECT Aerospace
Everett, Washington

Planned Shallow Aquifer Investigation Locations and TCE Concentration Contours in Shallow Groundwater

Figure 12

G:\Projects\222\057\050\054\RIFSWorkplan\F13MonitoringWellNetwork.mxd 11/30/2023 | abarton



Legend

- Planned Monitoring Well
- Shallow Monitoring Well
- Deep Monitoring Well
- Boeing-Owned Deep Monitoring Well

0 200 400

Scale in Feet

Data Source: King County GIS.

Notes

1. Orange shading indicates planned location (i.e., RIDW-8).
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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TECT Aerospace
Everett, Washington

Monitoring Well Network

Figure 13

Table 1
C-19 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

							Analyte Group:	VOCs														TPH		Conventionals		Metals		
							Analyte:	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dibromoethane (EDB)	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Solids, Percent	Total Organic Carbon	Chromium, Total	Lead	Mercury
							Screening Level:	84	2.6	2.5	0.018	1.7	5.2	340	1.5	2.8	32	1.5	0.09	830	2,000	2,000	--	--	42	150	0.1
							Exceedance:	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	N	--	--	N	N	N
							Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	%	%	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**																					
C-19	C19-TP1	C19TP1-SO-0-19940214	0	0	2/14/1994	Historical		**44**	**2.3**	**2.2**	--	1.1 U	**8.1**	1.1 U	5.7 U	1.1 U	ND	**220**	ND	2.3 U	--	--	--	--	--	--	--
C-19	C19-TP1	C19TP1-SO-0.9-19940214	0.9	0.9	2/14/1994	Historical		**39**	**2**	ND	--	1.1 U	**11**	1.1 U	5.7 U	1.1 U	ND	**590**	ND	2.2 U	--	--	--	--	--	--	--
C-19	C19-TP2	C19TP2-SO-0.1-19940214	0.1	0.1	2/14/1994	Historical		**5.4**	ND	ND	--	1.1 U	ND	1.1 U	5.2 U	1.1 U	ND	**19**	ND	2.2 U	--	--	--	--	--	--	--
C-19	C19-TP2	C19TP2-SO-0.9-19940214	0.9	0.9	2/14/1994	Historical		ND	ND	ND	--	1.1 U	ND	1.1 U	5.6 U	1.1 U	ND	**27**	ND	2.3 U	--	--	--	--	--	--	--
C-19	DW1	DW1-SO-57.5-20001212	57.5	57.5	12/12/2000	Historical		--	--	--	--	--	10 U	--	--	--	10 U	**10**	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-SO-77-20001212	77	77	12/12/2000	Historical		--	--	--	--	--	10 U	--	--	--	10 U	10 U	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-SO-97.5-20001212	97.5	97.5	12/12/2000	Historical		--	--	--	--	--	10 U	--	--	--	10 U	10 U	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-SO-117-20001212	117	117	12/12/2000	Historical		--	--	--	--	--	10 U	--	--	--	10 U	10 U	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-SO-137-20001212	137	137	12/12/2000	Historical		--	--	--	--	--	10 U	--	--	--	10 U	10 U	--	--	--	--	--	--	--	--	--
C-19	GP13	GP13-SO-9-20030320	9	9	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP15	GP15-SO-3-20030320	3	3	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	**22**	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP17	GP17-SO-8-20030320	8	8	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	**43**	--	--	--	--	--	--	--	--	--
C-19	GP18	GP18-SO-2-20030320	2	2	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP18	GP18-SO-9-20030320	9	9	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	**59**	--	--	--	--	--	--	--	--	--
C-19	GP3	GP3-SO-4.5-20030320	4.5	4.5	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP3	GP3-SO-8-20030320	8	8	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	**63**	--	--	--	--	--	--	--	--	--
C-19	GP4	GP4-SO-3-20030320	3	3	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	**26**	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP5	GP5-SO-3-20030320	3	3	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP5	GP5-SO-8-20030320	8	8	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP6	GP6-SO-2-20030320	2	2	3/20/2003	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP7	GP7-SO-2-20130321	2	2	3/21/2013	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP8	GP8-SO-2-20130321	2	2	3/21/2013	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	GP9	GP9-SO-2-20130321	2	2	3/21/2013	ChlorSolv-DrivePoint		--	--	--	--	--	--	--	20 U	--	--	10 U	--	--	--	--	--	--	--	--	--
C-19	RISB-01	RISB-01-(9-10')	9	10	3/27/2019	ShallowInvest-Phasel		10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.9 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-01	RISB-01-(16-17')	16	17	3/27/2019	ShallowInvest-Phasel		10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-02	RISB-02-(11-12')	11	12	3/26/2019	ShallowInvest-Phasel		10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.7 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-03	RISB-03-(2-3')	2	3	3/26/2019	ShallowInvest-Phasel		--	--	--	--	--	--	--	--	--	--	--	--	--	25 U	50 U	--	--	**36**	**13**	**0.028**
C-19	RISB-03	RISB-03-(11-12')	11	12	3/26/2019	ShallowInvest-Phasel		10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-03	RISB-03-(29-30')	29	30	3/26/2019	ShallowInvest-Phasel		10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	**91.9**	--	--	--	--
C-19	RISB-04	RISB-04-(2-3')	2	3	3/18/2019	ShallowInvest-Phasel		10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	25 U	50 U	--	--	**33**	**5.3**	**0.026**

Table 1
C-19 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs													TPH		Conventionals		Metals		
Analyte:							1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dibromoethane (EDB)	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Solids, Percent	Total Organic Carbon	Chromium, Total	Lead	Mercury
Screening Level:							84	2.6	2.5	0.018	1.7	5.2	340	1.5	2.8	32	1.5	0.09	830	2,000	2,000	--	--	42	150	0.1
Exceedance:							N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	N	--	--	N	N	N
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	%	%	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**																				
C-19	RISB-05	RISB-05-(2-3')	2	3	3/18/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	25 U	50 U	--	--	**30**	**2.5**	**0.026**
C-19	RISB-05	RISB-05-(9.5-10.5')	9.5	10.5	3/18/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-06	RISB-06-(2-3')	2	3	3/27/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	**37**	**210**	--	--	**34**	**5.5**	**0.029**
C-19	RISB-06	DUP-SOIL-190327	19	21	3/27/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	**4.7**	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-06	RISB-06-(19-21')	19	21	3/27/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	**2.6**	**0.15**	20 U	--	--	--	--	--	--	--
C-19	RISB-07	DUP-SOIL-190328	14.5	15.5	3/28/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.6 U	1.5 U	10 U	1.5 U	**0.081**	20 U	25 U	50 U	--	**0.11**	--	--	--
C-19	RISB-07	RISB-07-(14.5-15.5')	14.5	15.5	3/28/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.7 U	1.5 U	10 U	1.5 U	**0.11**	20 U	25 U	50 U	--	**0.12**	--	--	--
C-19	RISB-07	RISB-07-(29-30')	29	30	3/28/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.6 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	**0.16**	--	--	--
C-19	RISB-08	RISB-08-(19-20')	19	20	3/26/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-08	RISB-08-(29-30')	29	30	3/26/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-09	RISB-09-(7-8')	7	8	3/25/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-09	RISB-09-(18-19')	18	19	3/25/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-09	RISB-09-(24-25')	24	25	3/25/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.7 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-10	RISB-10-(7-8')	7	8	3/25/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-10	RISB-10-(23-24')	23	24	3/25/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-10	RISB-10-(34-35')	34	34	3/25/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-11	RISB-11-(2-3')	2	3	3/25/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**30**	**2.5**	**0.021**
C-19	RISB-11	RISB-11-(16-17')	16	17	3/25/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	**0.12**	--	--	--
C-19	RISB-11	RISB-11-(34-35')	34	35	3/25/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.6 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	**0.12**	--	--	--
C-19	RISB-54	RISB-54-(8-9')	8	9	3/18/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-55	RISB-55-(7-8')	7	8	3/18/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	**7.2**	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-56	RISB-56-(15-16')	15	16	9/3/2019	Investigation-PhaseII	58 U	63 U	2.8 U	5.0 U	2.1 U	**190**	68 U	130 U	4.3 U	62 U	**10,000**	2.7 U	58 U	--	--	--	--	--	--	--
C-19	RISB-56	RISB-56-(24-25')	24	25	9/3/2019	Investigation-PhaseII	49 U	53 U	2.4 U	5.0 U	1.8 U	**240**	58 U	110 U	3.7 U	53 U	**7,500**	2.3 U	50 U	--	--	--	--	--	--	--
C-19	RISB-57	RISB-57-(7.5-8.5')	7.5	8.5	9/3/2019	Investigation-PhaseII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.6 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-57	RISB-57-(21.5-22.5')	21.5	22.5	9/3/2019	Investigation-PhaseII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.6 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-58	RISB-58-(7-8')	7	8	9/3/2019	Investigation-PhaseII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	**4.1**	10 U	1.9 U	1.5 U	10 U	1.5 U	**0.41**	20 U	--	--	--	--	--	--	--
C-19	RISB-58	RISB-58-(24-25')	24	25	9/3/2019	Investigation-PhaseII	10 U	1.5 U	**2.0**	5.0 U	1.5 U	**10**	10 U	1.6 U	1.5 U	10 U	**890**	**0.53**	20 U	--	--	--	--	--	--	--
C-19	RISB-69	RISB-69-(9-10')	9	10	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-69	RISB-69-(19-20')	19	20	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	**2.5**	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-69	RISB-69-(29-30')	29	30	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--

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Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs													TPH		Conventionals		Metals		
						Analyte:	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dibromoethane (EDB)	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Solids, Percent	Total Organic Carbon	Chromium, Total	Lead	Mercury
						Screening Level:	84	2.6	2.5	0.018	1.7	5.2	340	1.5	2.8	32	1.5	0.09	830	2,000	2,000	--	--	42	150	0.1
						Exceedance:	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	N	--	--	N	N	N
						Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	%	%	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**																				
C-19	RISB-70	RISB-70-(9-10')	9	10	11/30/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-70	RISB-70-(19-20')	19	20	11/30/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.7 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-70	RISB-70-(29-30')	29	30	11/30/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	RISB-71	DUP-SOIL-221201	9	10	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	**14**	**0.11**	20 U	--	--	--	--	--	--	--
C-19	RISB-71	RISB-71-(9-10')	9	10	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	**11**	**0.079**	20 U	--	--	--	--	--	--	--
C-19	RISB-71	RISB-71-(19-20')	19	20	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	**3.4**	1.5 U	10 U	1.5 U	**0.068**	20 U	--	--	--	--	--	--	--
C-19	RISB-71	RISB-71-(29-30')	29	30	12/2/2022	PhaseIII	10 U	1.5 U	1.5 U	5.0 U	1.5 U	1.5 U	10 U	**2.9**	1.5 U	10 U	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-SO-8.5-19961223	8.5	8.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	**64.9**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-SO-11.5-19961223	11.5	11.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	**69.4**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-SO-16.5-19961223	16.5	16.5	12/23/1996		--	--	--	--	--	**62.5**	--	--	--	--	**1,050**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-SO-8.5-19961223	8.5	8.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	**1,720**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-SO-11.5-19961223	11.5	11.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	**1,350**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-SO-13.5-19961223	13.5	13.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	**463**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-SO-16.5-19961223	16.5	16.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	**99.8**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-SO-18.5-19961223	18.5	18.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-SO-21.5-19961223	21.5	21.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	**1,990**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-SO-23.5-19961223	23.5	23.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	**2,100**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-SO-28.5-19961223	28.5	28.5	12/23/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	**4,300**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-SO-33.5-19961223	33.5	33.5	12/23/1996	Historical	--	--	--	--	--	**50**	--	--	--	--	**1,250**	--	--	--	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-SO-8.5-19961213	8.5	8.5	12/13/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-SO-13.5-19961213	13.5	13.5	12/13/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-SO-18.5-19961213	18.5	18.5	12/13/1996	Historical	--	--	--	--	--	50 U	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--
C-19	SU2-FL-0.8	SU2-FL-0.8-SO-19950727	0.8	0.8	7/27/1995	DgrPitSump-BldgC19	ND	ND	ND	--	--	**44**	--	**41**	ND	ND	**4,700**	ND	--	--	--	--	--	--	--	--
C-19	SU2-NE-0.8	SU2-NE-0.8-SO-19950727	0.8	0.8	7/27/1995	DgrPitSump-BldgC19	ND	ND	ND	--	--	**57**	--	**86**	ND	ND	**4,400**	ND	--	--	--	--	--	--	--	--
C-19	SU2-NW-0.8	SU2-NW-0.8-SO-19950727	0.8	0.8	7/27/1995	DgrPitSump-BldgC19	ND	ND	ND	--	--	**19**	--	**78**	ND	ND	**1,900**	ND	--	--	--	--	--	--	--	--
C-19	SU-FL-0.5	SU-FL-0.5-SO-19950727	0.5	0.5	7/27/1995	DgrPitSump-BldgC19	ND	**47**	**6.9**	--	--	**47**	--	ND	ND	**2.6**	**2,300**	ND	--	--	--	--	--	--	--	--
C-19	SU-FL-1.0	SU-FL-1.0-SO-19950727	1	1	7/27/1995	DgrPitSump-BldgC19	**29**	**73**	ND	--	--	**100**	--	**28**	ND	ND	**3,200**	ND	--	--	--	--	--	--	--	--
C-19	SU-NE-0.4	SU-NE-0.4-SO-19950727	0.4	0.4	7/27/1995	DgrPitSump-BldgC19	ND	**13**	**1.2**	--	--	**31**	--	ND	**2.2**	**2.1**	**8,900**	ND	--	--	--	--	--	--	--	--
C-19	SU-NE-1.0	SU-NE-1.0-SO-19950727	1	1	7/27/1995	DgrPitSump-BldgC19	ND	**24**	ND	--	--	**53**	--	ND	ND	ND	**10,000**	ND	--	--	--	--	--	--	--	--
C-19	SU-NW-0.5	SU-NW-0.5-SO-19950727	0.5	0.5	7/27/1995	DgrPitSump-BldgC19	ND	ND	ND	--	--	**54**	--	ND	ND	ND	**4,400**	ND	--	--	--	--	--	--	--	--

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Analyte Group:							VOCs														TPH		Conventionals		Metals		
Analyte:							1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dibromoethane (EDB)	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Solids, Percent	Total Organic Carbon	Chromium, Total	Lead	Mercury
Screening Level:							84	2.6	2.5	0.018	1.7	5.2	340	1.5	2.8	32	1.5	0.09	830	2,000	2,000	--	--	42	150	0.1
Exceedance:							N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	N	--	--	N	N	N
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	%	%	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**																				
C-19	SU-NW-1.0	SU-NW-1.0-SO-19950727	1	1	7/27/1995	DgrPitSump-BldgC19	ND	ND	ND	--	--	**47**	--	ND	ND	ND	**4,100**	ND	--	--	--	--	--	--	--	--
C-19	SU-SE-0.5	SU-SE-0.5-SO-19950727	0.5	0.5	7/27/1995	DgrPitSump-BldgC19	ND	**1.2**	ND	--	--	**46**	--	ND	ND	ND	**1,700**	ND	--	--	--	--	--	--	--	--
C-19	SU-SE-1.1	SU-SE-1.1-SO-19950727	1.1	1.1	7/27/1995	DgrPitSump-BldgC19	ND	ND	ND	--	--	**6.7**	--	ND	ND	ND	**69**	ND	--	--	--	--	--	--	--	--
C-19	SU-SW-0.5	SU-SW-0.5-SO-19950727	0.5	0.5	7/27/1995	DgrPitSump-BldgC19	**1.1**	ND	ND	--	--	**8.7**	--	ND	ND	ND	**160**	ND	--	--	--	--	--	--	--	--
C-19	SU-SW-1.0	SU-SW-1.0-SO-19950727	1	1	7/27/1995	DgrPitSump-BldgC19	ND	**17**	**4.8**	--	--	**53**	--	ND	ND	**1.9**	**5,700**	**4.7**	--	--	--	--	--	--	--	--

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Abbreviations and Acronyms:

-- = not analyzed
ND = not detected
ID = identification
DRO = diesel-range organics
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ORO = oil-range organics
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Table 2
C-19 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs															
					Analyte:	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	2-Chloroethyl vinyl ether
					CAS RN:	127-18-4	79-01-6	156-59-2	75-01-4	630-20-6	71-55-6	79-34-5	76-13-1	79-00-5	75-34-3	75-35-4	95-63-6	106-93-4	107-06-2	78-87-5	108-67-8	110-75-8
					Screening Level:	5	0.54	16	0.029	1.7	200	0.5	--	0.77	7.7	7	80	0.022	0.48	1.2	80	--
					Exceedance	Y	Y	Y	Y		Y			Y	Y	Y			Y	Y		
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**																
C-19	C19-TP1	C19TP1-W-19940214	2/14/1994	N	Historical	1 U	**15,000**	**94**	**5.1**	--	**230**	1 U	2 U	1 U	**32**	**21**	--	--	1 U	1 U	--	1 U
C-19	DW1	DW1-WG-19991228	12/28/1999	N	Historical	--	**8**	5 U	--	--	5 U	--	--	--	--	--	--	--	5 U	5 U	--	--
C-19	DW1	DW1-WG-20000308	3/8/2000	N	Historical	--	**62**	**5**	--	--	5 U	--	--	--	--	--	--	--	5 U	5 U	--	--
C-19	DW1	DW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-WG-20031017	10/17/2003	N	ChlorSolv-Aq	--	**81**	5 U	--	--	5 U	--	--	--	--	--	--	--	5 U	5 U	--	--
C-19	DW1	DW-1-181107	11/7/2018	N	Baseline	2.0 U	**25**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	DW1	DW1-190912	9/12/2019	N	Investigation-PhaseII	2.0 U	**300**	**16**	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	GP1	GP1-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP10	GP10-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP11	GP11-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP12	GP12-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	**100**	**17**	2 U	--	**7**	--	--	--	**6**	**3**	--	--	--	--	--	--
C-19	GP14	GP14-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP15	GP15-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP16	GP16-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP17	GP17-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	**1,300**	**130**	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP18	GP18-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	**5,000**	**220**	**44**	--	2 U	--	--	--	2 U	**4**	--	--	--	--	--	--
C-19	GP19	GP19-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	**24**	**3**	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP2	GP2-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP20	GP20-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP3	GP3-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	**240**	**100**	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP4	GP4-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP5	GP5-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP6	GP6-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP7	GP7-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP8	GP8-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	GP9	GP9-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	2 U	2 U	2 U	--	2 U	--	--	--	2 U	2 U	--	--	--	--	--	--
C-19	RIGW-55	RIGW-55-190415	4/15/2019	N	ShallowInvest-PhaseI	2.0 U	**59**	**5.0**	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RIGW-55	RIGW-55-20190905	9/5/2019	N	Investigation-PhaseII	2.0 U	**61**	**3.9**	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-01	RISB-01-GW	3/27/2019	N	ShallowInvest-PhaseI	2.0 U	**1.3**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--

Table 2
C-19 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs															
					Analyte:	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	2-Chloroethyl vinyl ether
					CAS RN:	127-18-4	79-01-6	156-59-2	75-01-4	630-20-6	71-55-6	79-34-5	76-13-1	79-00-5	75-34-3	75-35-4	95-63-6	106-93-4	107-06-2	78-87-5	108-67-8	110-75-8
					Screening Level:	5	0.54	16	0.029	1.7	200	0.5	--	0.77	7.7	7	80	0.022	0.48	1.2	80	--
					Exceedance	Y	Y	Y	Y		Y			Y	Y	Y			Y	Y		
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**																	
C-19	RISB-03	RISB-03-GW	3/26/2019	N	ShallowInvest-Phasel	2.0 U	**1.2**	**5.9**	**0.67**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-05	RISB-05-GW	3/18/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-06	RISB-06-GW	3/27/2019	N	ShallowInvest-Phasel	2.0 U	**94**	**31**	**1.2**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-07	RISB-07-GW	3/28/2019	N	ShallowInvest-Phasel	2.0 U	**110**	**23**	**0.46**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-08	RISB-08-GW	3/26/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-09	RISB-09-GW	3/25/2019	N	ShallowInvest-Phasel	2.0 U	**5.4**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-10	RISB-10-GW	3/25/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-56	RISB-56-GW	9/3/2019	N	Investigation-PhaseII	2.0 U	**4,800**	**590**	**8.0**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**17**	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-57	RISB-57-GW	9/3/2019	N	Investigation-PhaseII	2.0 U	**1.9**	**5.8**	**0.15**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-58	RISB-58-GW	9/3/2019	N	Investigation-PhaseII	2.0 U	**890**	**340**	**37**	0.50 U	**8.5**	0.50 U	--	0.50 U	**9.3**	**17**	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-69	RISB-69-GW-221201	12/1/2022	N	PhaseIII	2.0 U	**0.68**	**7.8**	**0.13**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-70	RISB-70-GW-221130	11/30/2022	N	PhaseIII	2.0 U	0.50 U	2.0 U	**0.027**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	RISB-71	RISB-71-GW-221201	12/1/2022	N	PhaseIII	2.0 U	**22**	**10**	**0.78**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	SCPWD-2	SCPWD-2-WG-19990309	3/9/1999	N	Historical	4 U	**39,000**	**2,500**	**9**	--	--	--	--	--	--	**24**	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-WG-20031017	10/17/2003	N	ChlorSolv-MW	4 U	**4,300**	**540**	5 U	--	--	--	--	--	--	5 U	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-181108	11/8/2018	N	Baseline	2.0 U	**940**	**110**	**0.73**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	SCPWD-2	SCPWD-2-20190905	9/5/2019	N	Investigation-PhaseII	2.0 U	**520**	**44**	**0.16**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	SCPWD-3	SCPWD-3-WG-19990309	3/9/1999	N	Historical	**12**	**140,000**	**4,200**	**68**	--	--	--	--	--	--	**110**	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-WG-20031017	10/17/2003	N	ChlorSolv-MW	4 U	**100,000**	**3,700**	**61**	--	--	--	--	--	--	**74**	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-181108	11/8/2018	N	Baseline	2.0 U	**14,000**	**840**	**9.1**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**33**	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	SCPWD-3	SCPWD-3-20190905	9/5/2019	N	Investigation-PhaseII	2.0 U	**18,000**	**1,000**	**11**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**34**	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	--
C-19	SCPWD-4	SCPWD-4-WG-19990309	3/9/1999	N	Historical	4 U	**580**	**260**	**82**	--	--	--	--	--	--	5 U	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-WG-20030321	3/21/2003	N	ChlorSolv-MW	4 U	**8**	**15**	5 U	--	--	--	--	--	--	5 U	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-WG-20031017	10/17/2003	N	ChlorSolv-MW	4 U	**190**	**200**	5 U	--	--	--	--	--	--	5 U	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-181108	11/8/2018	N	Baseline	2.0 U	**670**	**60**	**8.1**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**3.1**	2.0 U	0.010 U	**0.14**	0.50 U	2.0 U	--
C-19	SCPWD-4	SCPWD-4-20190905	9/5/2019	N	Investigation-PhaseII	2.0 U	**990**	**54**	**1.4**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**2.1**	2.0 U	0.010 U	**0.031**	0.50 U	2.0 U	--
C-19	SU2-NE-W	SU2-NE-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	0 U	**53,000**	**670**	0 U	--	0 U	--	0 U	--	0 U	0 U	--	--	--	--	--	--
C-19	SU-FL-W	SU-FL-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	0 U	**98,000**	**340**	0 U	--	**130**	--	0 U	--	**420**	**70**	--	--	--	--	--	--
C-19	SW-1.0-W	SW-1.0-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	0 U	**39,000**	**360**	0 U	--	**160**	--	0 U	--	**320**	**88**	--	--	--	--	--	--

Table 2
C-19 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs																
					Analyte:	2-Hexanone	4-isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Dibromochloromethane	Ethylbenzene
					CAS RN:	591-78-6	25155-15-1	108-10-1	67-64-1	71-43-2	75-27-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	75-00-3	67-66-3	74-87-3	10061-01-5	124-48-1	100-41-4
					Screening Level:	40	--	640	7,200	0.8	--	--	--	800	0.63	--	--	1.4	--	--	--	700
					Exceedance					Y								Y				
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**																	
C-19	C19-TP1	C19TP1-W-19940214	2/14/1994	N	Historical	5 U	--	**5.8**	**17**	1 U	1 U	1 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U
C-19	DW1	DW1-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--	1 U
C-19	DW1	DW1-WG-20031017	10/17/2003	N	ChlorSolv-Aq	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW-1-181107	11/7/2018	N	Baseline	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	DW1	DW1-190912	9/12/2019	N	Investigation-PhaseII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	GP1	GP1-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP10	GP10-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP11	GP11-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP12	GP12-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP14	GP14-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP15	GP15-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP16	GP16-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP17	GP17-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP18	GP18-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP19	GP19-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP2	GP2-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP20	GP20-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP3	GP3-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP4	GP4-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP5	GP5-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP6	GP6-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP7	GP7-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP8	GP8-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP9	GP9-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RIGW-55	RIGW-55-190415	4/15/2019	N	ShallowInvest-PhaseI	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RIGW-55	RIGW-55-20190905	9/5/2019	N	Investigation-PhaseII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-01	RISB-01-GW	3/27/2019	N	ShallowInvest-PhaseI	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U

Table 2
C-19 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs																
					Analyte:	2-Hexanone	4-isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Dibromochloromethane	Ethylbenzene
					CAS RN:	591-78-6	25155-15-1	108-10-1	67-64-1	71-43-2	75-27-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	75-00-3	67-66-3	74-87-3	10061-01-5	124-48-1	100-41-4
					Screening Level:	40	--	640	7,200	0.8	--	--	--	800	0.63	--	--	1.4	--	--	--	700
					Exceedance					Y								Y				
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**																	
C-19	RISB-03	RISB-03-GW	3/26/2019	N	ShallowInvest-Phasel	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-05	RISB-05-GW	3/18/2019	N	ShallowInvest-Phasel	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-06	RISB-06-GW	3/27/2019	N	ShallowInvest-Phasel	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-07	RISB-07-GW	3/28/2019	N	ShallowInvest-Phasel	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-08	RISB-08-GW	3/26/2019	N	ShallowInvest-Phasel	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-09	RISB-09-GW	3/25/2019	N	ShallowInvest-Phasel	10 U	2.0 U	10 U	25 U	**0.74**	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-10	RISB-10-GW	3/25/2019	N	ShallowInvest-Phasel	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-56	RISB-56-GW	9/3/2019	N	Investigation-PhaseII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-57	RISB-57-GW	9/3/2019	N	Investigation-PhaseII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-58	RISB-58-GW	9/3/2019	N	Investigation-PhaseII	10 U	2.0 U	10 U	25 U	**0.84**	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-69	RISB-69-GW-221201	12/1/2022	N	PhaseIII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-70	RISB-70-GW-221130	11/30/2022	N	PhaseIII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	RISB-71	RISB-71-GW-221201	12/1/2022	N	PhaseIII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	SCPWD-2	SCPWD-2-WG-19990309	3/9/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-181108	11/8/2018	N	Baseline	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	SCPWD-2	SCPWD-2-20190905	9/5/2019	N	Investigation-PhaseII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	SCPWD-3	SCPWD-3-WG-19990309	3/9/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-181108	11/8/2018	N	Baseline	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	SCPWD-3	SCPWD-3-20190905	9/5/2019	N	Investigation-PhaseII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	SCPWD-4	SCPWD-4-WG-19990309	3/9/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-WG-20030321	3/21/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-181108	11/8/2018	N	Baseline	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	SCPWD-4	SCPWD-4-20190905	9/5/2019	N	Investigation-PhaseII	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U
C-19	SU2-NE-W	SU2-NE-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	--	0 U	0 U	--	--	--	--	0 U	--	--	--	--	--	--	--	--
C-19	SU-FL-W	SU-FL-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	--	0 U	0 U	--	--	--	--	0 U	--	--	--	--	--	--	--	--
C-19	SW-1.0-W	SW-1.0-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	--	0 U	0 U	--	--	--	--	0 U	--	--	--	--	--	--	--	--

Table 2
C-19 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs														TPH	
					Analyte:	Isopropylbenzene	Methyl Ethyl Ketone	Methylene Chloride	Methyl-tert-butyl ether	Naphthalene	n-Propylbenzene	sec-Butylbenzene	Styrene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichlorofluoromethane	Vinyl Acetate	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as DRO
					CAS RN:	98-82-8	78-93-3	75-09-2	1634-04-4	91-20-3	103-65-1	135-98-8	100-42-5	108-88-3	156-60-5	10061-02-6	75-69-4	108-05-4	1330-20-7	GRO	DRO
					Screening Level:	800	4,800	5	24	160	800	800	--	640	100	--	--	--	1,600	800	500
					Exceedance										Y					Y	Y
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**																
C-19	C19-TP1	C19TP1-W-19940214	2/14/1994	N	Historical	--	**160**	2 U	--	--	--	--	1 U	**1.6**	**39**	1 U	2 U	1 U	2 U	--	--
C-19	DW1	DW1-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	1 U	--	--	--	--	3 U	50 U	130 U
C-19	DW1	DW1-WG-20031017	10/17/2003	N	ChlorSolv-Aq	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW-1-181107	11/7/2018	N	Baseline	2.0 U	**40**	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	DW1	DW1-190912	9/12/2019	N	Investigation-Phasell	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	**2.3**	--	--	--	2.0 U	--	--
C-19	GP1	GP1-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP10	GP10-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP11	GP11-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP12	GP12-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP14	GP14-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP15	GP15-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP16	GP16-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP17	GP17-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	**3**	--	--	--	--	--	--
C-19	GP18	GP18-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	**10**	--	--	--	--	--	--
C-19	GP19	GP19-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP2	GP2-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP20	GP20-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP3	GP3-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	**20**	--	--	--	--	--	--
C-19	GP4	GP4-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP5	GP5-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP6	GP6-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP7	GP7-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP8	GP8-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	GP9	GP9-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--	--
C-19	RIGW-55	RIGW-55-190415	4/15/2019	N	ShallowInvest-Phasel	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RIGW-55	RIGW-55-20190905	9/5/2019	N	Investigation-Phasell	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-01	RISB-01-GW	3/27/2019	N	ShallowInvest-Phasel	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--

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					Analyte Group:	VOCs														TPH	
					Analyte:	Isopropylbenzene	Methyl Ethyl Ketone	Methylene Chloride	Methyl-tert-butyl ether	Naphthalene	n-Propylbenzene	sec-Butylbenzene	Styrene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichlorofluoromethane	Vinyl Acetate	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as DRO
					CAS RN:	98-82-8	78-93-3	75-09-2	1634-04-4	91-20-3	103-65-1	135-98-8	100-42-5	108-88-3	156-60-5	10061-02-6	75-69-4	108-05-4	1330-20-7	GRO	DRO
					Screening Level:	800	4,800	5	24	160	800	800	--	640	100	--	--	--	1,600	800	500
					Exceedance										Y					Y	Y
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**																
C-19	RISB-03	RISB-03-GW	3/26/2019	N	ShallowInvest-Phasel	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-05	RISB-05-GW	3/18/2019	N	ShallowInvest-Phasel	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-06	RISB-06-GW	3/27/2019	N	ShallowInvest-Phasel	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-07	RISB-07-GW	3/28/2019	N	ShallowInvest-Phasel	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	**280**
C-19	RISB-08	RISB-08-GW	3/26/2019	N	ShallowInvest-Phasel	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-09	RISB-09-GW	3/25/2019	N	ShallowInvest-Phasel	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-10	RISB-10-GW	3/25/2019	N	ShallowInvest-Phasel	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-56	RISB-56-GW	9/3/2019	N	Investigation-Phasell	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	**39**	--	--	--	2.0 U	--	--
C-19	RISB-57	RISB-57-GW	9/3/2019	N	Investigation-Phasell	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-58	RISB-58-GW	9/3/2019	N	Investigation-Phasell	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	**2.9**	--	--	--	2.0 U	--	--
C-19	RISB-69	RISB-69-GW-221201	12/1/2022	N	PhaseIII	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-70	RISB-70-GW-221130	11/30/2022	N	PhaseIII	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	RISB-71	RISB-71-GW-221201	12/1/2022	N	PhaseIII	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	SCPWD-2	SCPWD-2-WG-19990309	3/9/1999	N	Historical	--	--	--	--	--	--	--	--	--	**18**	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	**4**	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-181108	11/8/2018	N	Baseline	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	SCPWD-2	SCPWD-2-20190905	9/5/2019	N	Investigation-Phasell	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U	--	--
C-19	SCPWD-3	SCPWD-3-WG-19990309	3/9/1999	N	Historical	--	--	--	--	--	--	--	--	--	**18**	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	**28**	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-181108	11/8/2018	N	Baseline	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	**54**	--	--	--	2.0 U	--	--
C-19	SCPWD-3	SCPWD-3-20190905	9/5/2019	N	Investigation-Phasell	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	**53**	--	--	--	2.0 U	--	--
C-19	SCPWD-4	SCPWD-4-WG-19990309	3/9/1999	N	Historical	--	--	--	--	--	--	--	--	--	**160**	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-WG-20030321	3/21/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	**6**	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	**37**	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-181108	11/8/2018	N	Baseline	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	**20**	--	--	--	2.0 U	--	--
C-19	SCPWD-4	SCPWD-4-20190905	9/5/2019	N	Investigation-Phasell	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	**7.6**	--	--	--	2.0 U	--	--
C-19	SU2-NE-W	SU2-NE-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	0 U	0 U	--	--	--	--	--	0 U	0 U	--	--	--	--	--	--
C-19	SU-FL-W	SU-FL-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	0 U	0 U	--	--	--	--	--	0 U	0 U	--	--	--	--	--	--
C-19	SW-1.0-W	SW-1.0-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	0 U	0 U	--	--	--	--	--	0 U	0 U	--	--	--	--	--	--

Table 2
C-19 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	TPH	SVOCs	Conventionals							Dissolved Metals					
					Analyte:	Petroleum Hydrocarbons as ORO	1,4-Dioxane	Ethane	Ethene	Methane	Nitrogen, Nitrate (as N)	Nitrogen, Nitrate (As NO3)	Sulfate	Total Organic Carbon	Arsenic	Cadmium	Chromium, Hexavalent	Chromium, Total	Chromium, Trivalent	Lead
					CAS RN:	ORO	123-91-1	74-84-0	74-85-1	74-82-8	14797-55-8	NO3	14808-79-8	TOC	7440-38-2	7440-43-9	18540-29-9	7440-47-3	16065-83-1	7439-92-1
					Screening Level:	500	0.44	--	--	--	10,000	--	--	--	13.6	5	10	100	100	15
					Exceedance	Y	Y								Y					
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**															
C-19	C19-TP1	C19TP1-W-19940214	2/14/1994	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW1-WG-20031017	10/17/2003	N	ChlorSolv-Aq	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	DW1	DW-1-181107	11/7/2018	N	Baseline	--	0.40 U	10 U	10 U	10 U	--	**1,300**	**11,000**	1,000 U	--	--	--	--	--	--
C-19	DW1	DW1-190912	9/12/2019	N	Investigation-PhaseII	--	--	10 U	10 U	10 U	**1,200**	--	**11,000**	1,000 U	--	--	--	--	--	--
C-19	GP1	GP1-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP10	GP10-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP11	GP11-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP12	GP12-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP14	GP14-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP15	GP15-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP16	GP16-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP17	GP17-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP18	GP18-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP19	GP19-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP2	GP2-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP20	GP20-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP3	GP3-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP4	GP4-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP5	GP5-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP6	GP6-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP7	GP7-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP8	GP8-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	GP9	GP9-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RIGW-55	RIGW-55-190415	4/15/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RIGW-55	RIGW-55-20190905	9/5/2019	N	Investigation-PhaseII	--	--	10 U	10 U	10 U	**5,800**	--	**7,400**	--	--	--	--	--	--	--
C-19	RISB-01	RISB-01-GW	3/27/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2
C-19 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	TPH	SVOCs	Conventionals							Dissolved Metals					
					Analyte:	Petroleum Hydrocarbons as ORO	1,4-Dioxane	Ethane	Ethene	Methane	Nitrogen, Nitrate (as N)	Nitrogen, Nitrate (As NO3)	Sulfate	Total Organic Carbon	Arsenic	Cadmium	Chromium, Hexavalent	Chromium, Total	Chromium, Trivalent	Lead
					CAS RN:	ORO	123-91-1	74-84-0	74-85-1	74-82-8	14797-55-8	NO3	14808-79-8	TOC	7440-38-2	7440-43-9	18540-29-9	7440-47-3	16065-83-1	7439-92-1
					Screening Level:	500	0.44	--	--	--	10,000	--	--	--	13.6	5	10	100	100	15
					Exceedance	Y	Y								Y					
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**															
C-19	RISB-03	RISB-03-GW	3/26/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RISB-05	RISB-05-GW	3/18/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	**1.8**	1.0 U	10 U	**2.5**	**2.5**	1.0 U
C-19	RISB-06	RISB-06-GW	3/27/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	**1.3**	1.0 U	--	2.0 U	--	1.0 U
C-19	RISB-07	RISB-07-GW	3/28/2019	N	ShallowInvest-Phasel	**340**	--	--	--	--	--	--	--	--	1.0 U	1.0 U	--	2.0 U	--	1.0 U
C-19	RISB-08	RISB-08-GW	3/26/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RISB-09	RISB-09-GW	3/25/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RISB-10	RISB-10-GW	3/25/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RISB-56	RISB-56-GW	9/3/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RISB-57	RISB-57-GW	9/3/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RISB-58	RISB-58-GW	9/3/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RISB-69	RISB-69-GW-221201	12/1/2022	N	PhaseIII	--	**0.60**	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RISB-70	RISB-70-GW-221130	11/30/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	RISB-71	RISB-71-GW-221201	12/1/2022	N	PhaseIII	--	0.40 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-WG-19990309	3/9/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	10 U	--	--
C-19	SCPWD-2	SCPWD-2-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-181108	11/8/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-2	SCPWD-2-20190905	9/5/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-WG-19990309	3/9/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	10 U	--	--
C-19	SCPWD-3	SCPWD-3-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-181108	11/8/2018	N	Baseline	--	**0.44 J**	10 U	10 U	**30**	--	150 U	**12,000**	**3,600**	--	--	--	--	--	--
C-19	SCPWD-3	SCPWD-3-20190905	9/5/2019	N	Investigation-PhaseII	--	**0.94**	10 U	10 U	**20**	150 U	--	**10,000**	**3,600**	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-WG-19990309	3/9/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	10 U	--	--
C-19	SCPWD-4	SCPWD-4-WG-20030321	3/21/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-181108	11/8/2018	N	Baseline	--	0.40 UJ	10 U	10 U	**20**	--	**440**	**10,000**	**2,600**	--	--	--	--	--	--
C-19	SCPWD-4	SCPWD-4-20190905	9/5/2019	N	Investigation-PhaseII	--	--	10 U	10 U	10 U	**2,100**	--	**7,600**	**1,500**	--	--	--	--	--	--
C-19	SU2-NE-W	SU2-NE-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SU-FL-W	SU-FL-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-19	SW-1.0-W	SW-1.0-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2
C-19 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	Dissolved Metals	Total Metals
					Analyte:	Mercury	Chromium, Total
					CAS RN:	7439-97-6	7440-47-3
					Screening Level:	2	100
					Exceedance		Y
					Units:	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**		
C-19	C19-TP1	C19TP1-W-19940214	2/14/1994	N	Historical	--	--
C-19	DW1	DW1-WG-19991228	12/28/1999	N	Historical	--	--
C-19	DW1	DW1-WG-20000308	3/8/2000	N	Historical	--	--
C-19	DW1	DW1-WG-20011024	10/24/2001	N	Historical	--	--
C-19	DW1	DW1-WG-20031017	10/17/2003	N	ChlorSolv-Aq	--	--
C-19	DW1	DW-1-181107	11/7/2018	N	Baseline	--	--
C-19	DW1	DW1-190912	9/12/2019	N	Investigation-PhaseII	--	--
C-19	GP1	GP1-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP10	GP10-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP11	GP11-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP12	GP12-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP14	GP14-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP15	GP15-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP16	GP16-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP17	GP17-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP18	GP18-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP19	GP19-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP2	GP2-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP20	GP20-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP3	GP3-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP4	GP4-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP5	GP5-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP6	GP6-WG-20030320	3/20/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP7	GP7-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP8	GP8-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--
C-19	GP9	GP9-WG-20030321	3/21/2003	N	ChlorSolv-DrivePoint	--	--
C-19	RIGW-55	RIGW-55-190415	4/15/2019	N	ShallowInvest-PhaseI	--	--
C-19	RIGW-55	RIGW-55-20190905	9/5/2019	N	Investigation-PhaseII	--	--
C-19	RISB-01	RISB-01-GW	3/27/2019	N	ShallowInvest-PhaseI	--	--

Table 2
C-19 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	Dissolved Metals	Total Metals
					Analyte:	Mercury	Chromium, Total
					CAS RN:	7439-97-6	7440-47-3
					Screening Level:	2	100
					Exceedance		Y
					Units:	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**		
C-19	RISB-03	RISB-03-GW	3/26/2019	N	ShallowInvest-PhaseI	--	--
C-19	RISB-05	RISB-05-GW	3/18/2019	N	ShallowInvest-PhaseI	0.20 U	--
C-19	RISB-06	RISB-06-GW	3/27/2019	N	ShallowInvest-PhaseI	0.20 U	--
C-19	RISB-07	RISB-07-GW	3/28/2019	N	ShallowInvest-PhaseI	0.20 U	--
C-19	RISB-08	RISB-08-GW	3/26/2019	N	ShallowInvest-PhaseI	--	--
C-19	RISB-09	RISB-09-GW	3/25/2019	N	ShallowInvest-PhaseI	--	--
C-19	RISB-10	RISB-10-GW	3/25/2019	N	ShallowInvest-PhaseI	--	--
C-19	RISB-56	RISB-56-GW	9/3/2019	N	Investigation-PhaseII	--	--
C-19	RISB-57	RISB-57-GW	9/3/2019	N	Investigation-PhaseII	--	--
C-19	RISB-58	RISB-58-GW	9/3/2019	N	Investigation-PhaseII	--	--
C-19	RISB-69	RISB-69-GW-221201	12/1/2022	N	PhaseIII	--	--
C-19	RISB-70	RISB-70-GW-221130	11/30/2022	N	PhaseIII	--	--
C-19	RISB-71	RISB-71-GW-221201	12/1/2022	N	PhaseIII	--	--
C-19	SCPWD-2	SCPWD-2-WG-19990309	3/9/1999	N	Historical	--	**40**
C-19	SCPWD-2	SCPWD-2-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--
C-19	SCPWD-2	SCPWD-2-181108	11/8/2018	N	Baseline	--	--
C-19	SCPWD-2	SCPWD-2-20190905	9/5/2019	N	Investigation-PhaseII	--	--
C-19	SCPWD-3	SCPWD-3-WG-19990309	3/9/1999	N	Historical	--	10 U
C-19	SCPWD-3	SCPWD-3-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--
C-19	SCPWD-3	SCPWD-3-181108	11/8/2018	N	Baseline	--	--
C-19	SCPWD-3	SCPWD-3-20190905	9/5/2019	N	Investigation-PhaseII	--	--
C-19	SCPWD-4	SCPWD-4-WG-19990309	3/9/1999	N	Historical	--	10 U
C-19	SCPWD-4	SCPWD-4-WG-20030321	3/21/2003	N	ChlorSolv-MW	--	--
C-19	SCPWD-4	SCPWD-4-WG-20031017	10/17/2003	N	ChlorSolv-MW	--	--
C-19	SCPWD-4	SCPWD-4-181108	11/8/2018	N	Baseline	--	--
C-19	SCPWD-4	SCPWD-4-20190905	9/5/2019	N	Investigation-PhaseII	--	--
C-19	SU2-NE-W	SU2-NE-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	--
C-19	SU-FL-W	SU-FL-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	--
C-19	SW-1.0-W	SW-1.0-W-WG-19950807	8/7/1995	N	DgrPitSump-BldgC19	--	--

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Abbreviations and Acronyms:

-- = not analyzed
CAS RN = Chemical Abstracts Service Registry No.
DRO = diesel-range organics
GRO = gasoline-range organics
ID = identification
µg/L = micrograms per liter
N = primary sample
ORO = oil-range organics
SVOC = semivolatile organic compound
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Table 3
C-19 Historical Data – Detected Constituents in Soil Gas
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

			Analyte:	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,4-Dioxane	Benzene	cis-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
			CAS RN:	71-55-6	75-34-3	107-06-2	123-91-1	71-43-2	156-59-2	127-18-4	79-01-6	75-01-4
			Soil Gas Screening Level:	76,000	52			11		321	11	9.5
			Indoor Air Screening Level:	2,290	1.56	0.096	0.5	0.321		9.62	0.334	0.284
			Units:	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Area	**Location**	**Field Sample ID**	**Sampling Date**									
C-19	RISG-04	RISG-04-190325	3/25/2019	2.2 U	2.1 U	--	--	2.1 U	--	2.1 U	2.1 U	2.1 U
C-19	RISG-05	RISG-05-190325	3/25/2019	**2.8**	2.2 U	--	--	2.2 U	--	2.2 U	2.2 U	2.2 U
C-19	RISG-54	RISG-54-190325	3/25/2019	**33**	2.2 U	--	--	**2.5**	--	2.2 U	**310**	2.2 U
C-19	RISG-55	RISG-55-190325	3/25/2019	**89**	**4.5**	--	--	2.2 U	--	2.2 U	**1,400**	2.2 U
C-19	RISG-103	RISG-103-211022	10/22/2021	**150**	**3.9**	0.085 U	**0.96**	**0.47 J**	**0.71 J**	**3.1**	**530**	0.082 U
C-19	IA01-C19	IA01-C19-211022	10/22/2021	0.061 U	0.056 U	0.056 U	0.059 U	**0.57**	0.049 U	0.11 U	**0.060 J**	0.082 U
C-19	IA02-C19	IA02-C19-211022	10/22/2021	**0.019 J**	0.011 U	**0.12**	0.012 U	**1.3**	0.0098 U	**0.073**	**0.038**	0.016 U
C-19	IA03-C19	IA03-C19-211022	10/22/2021	**0.024 J**	0.012 U	**0.069**	0.012 U	**0.69**	0.010 U	**0.049**	**0.043**	0.017 U
C-19	AA-C19	AA-C19-211022	10/22/2021	0.013 U	0.011 U	**0.042**	**0.014 J**	**0.39**	0.010 U	**0.045**	0.011 U	0.017 U

Notes:

Bold text indicates detected analyte**.**

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Abbreviations and Acronyms:

-- = not analyzed

CAS RN = Chemical Abstracts Service Registry No.

ID = identification

µg/m^3 = micrograms per cubic meter

Table 4
C-20, C-21, C1-22 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs							TPH			Conventionals
						Analyte:	Carbon Disulfide	cis-1,2-Dichloroethene	Methylene Chloride	Tetrachloroethene	trans-1,3-Dichloropropene	Vinyl Chloride	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Organic Carbon
						Screening Level:	250	5.2	1.5	2.8	--	0.09	100	2,000	2,000	--
						Exceedance:	N	Y	Y	Y	--	Y	N	N	Y	--
						Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	%
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task										
Building C-20, C-21, C-22 Complex	LAI-10	LAI-10 (1)_20170502	1	1	5/2/2017	PhaseII	--	--	--	--	--	--	--	120 U	**4,200**	--
Building C-20, C-21, C-22 Complex	LAI-12	LAI-12 (3)_20170502	3	3	5/2/2017	PhaseII	--	--	--	--	--	--	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	LAI-17	LAI-17 (1.7)_20171005	1.7	1.7	10/5/2017	PhaseII	10 U	10 U	20 U	10 U	10 U	10 U	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	LAI-18	LAI-18 (1.8)_20171005	1.8	1.8	10/5/2017	PhaseII	10 U	10 U	20 U	10 U	10 U	10 U	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	LAI-19	LAI-19 (2.4)_20171005	2.4	2.4	10/5/2017	PhaseII	10 U	10 U	20 U	10 U	10 U	10 U	--	**47**	50 U	--
Building C-20, C-21, C-22 Complex	LAI-20	LAI-20 (1.2)_20171005	1.2	1.2	10/5/2017	PhaseII	10 U	10 U	20 U	10 U	10 U	10 U	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	LAI-21	LAI-21 (1.5)_20171005	1.5	1.5	10/5/2017	PhaseII	10 U	10 U	20 U	10 U	10 U	10 U	--	25 U	**52**	--
Building C-20, C-21, C-22 Complex	LAI-22	LAI-22 (1.5)_20171005	1.5	1.5	10/5/2017	PhaseII	10 U	10 U	20 U	10 U	10 U	10 U	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	LAI-24	LAI-24 (10.75)_20171009	10.75	10.75	10/9/2017	PhaseII	10 U	10 U	20 U	10 U	10 U	10 U	--	25 U	**320**	--
Building C-20, C-21, C-22 Complex	LAI-25	LAI-25 (15.0)_20171005	15	15	10/5/2017	PhaseII	10 U	**320**	20 U	10 U	10 U	10 U	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	LAI-26	LAI-26 (6.5)_20171005	6.5	6.5	10/5/2017	PhaseII	10 U	10 U	20 U	10 U	10 U	10 U	--	25 U	**80**	--
Building C-20, C-21, C-22 Complex	LAI-26	LAI-26 (9.5)_20171005	9.5	9.5	10/5/2017	PhaseII	10 U	**21**	20 U	10 U	10 U	10 U	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-27	LAI-27 (8)_20171006	8	8	10/6/2017	PhaseII	10 U	**19**	20 U	10 U	10 U	10 U	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-07	DUP-SOIL-190328	14.5	15.5	3/28/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.6 U	1.5 U	--	**0.081**	--	25 U	50 U	**0.11**
Building C-20, C-21, C-22 Complex	RISB-07	RISB-07-(14.5-15.5')	14.5	15.5	3/28/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.7 U	1.5 U	--	**0.11**	--	25 U	50 U	**0.12**
Building C-20, C-21, C-22 Complex	RISB-07	RISB-07-(29-30')	29	30	3/28/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.6 U	1.5 U	--	0.050 U	--	--	--	**0.16**
Building C-20, C-21, C-22 Complex	RISB-12	RISB-12-(10-10.5')	10	10.5	3/29/2019	ShallowInvest-PhaseI	--	--	--	--	--	--	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-12	RISB-12-(19-20')	19	20	3/29/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.6 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-12	RISB-12-(24-25')	24	25	3/29/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-12	RISB-12-(41.5-42.5')	41.5	42.5	4/1/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-13	RISB-13-(10-11')	10	11	3/19/2019	ShallowInvest-PhaseI	10 U	**700**	1.5 U	**4.2**	--	**6.9**	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-13	RISB-13-(12.5-13')	12.5	13	3/20/2019	ShallowInvest-PhaseI	**16**	**420**	1.7 U	1.5 U	--	**1.4**	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-14	DUP-SOIL-190401	4	5	4/1/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.6 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-(9-10')	9	10	4/1/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-(19-20')	19	20	4/1/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.8 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-(44-45')	44	45	4/1/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-(9-10')	9	10	3/21/2019	ShallowInvest-PhaseI	10 U	**2.7**	1.6 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-(13-14')	13	14	3/21/2019	ShallowInvest-PhaseI	--	--	--	--	--	--	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-(17-18')	17	18	3/21/2019	ShallowInvest-PhaseI	10 U	**3.3**	1.6 U	1.5 U	--	**0.056**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-(34-35')	34	35	3/21/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-16	RISB-16-(4-5')	4	5	4/1/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.6 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-16	RISB-16-(19-20')	19	20	4/1/2019	ShallowInvest-PhaseI	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--

Table 4
C-20, C-21, C1-22 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs							TPH			Conventionals
						Analyte:	Carbon Disulfide	cis-1,2-Dichloroethene	Methylene Chloride	Tetrachloroethene	trans-1,3-Dichloropropene	Vinyl Chloride	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Organic Carbon
						Screening Level:	250	5.2	1.5	2.8	--	0.09	100	2,000	2,000	--
						Exceedance:	N	Y	Y	Y	--	Y	N	N	Y	--
						Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	%
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task										
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-(18-19')	18	19	3/29/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-(34-35')	34	35	3/29/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-(44-45')	44	45	3/29/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-(2.5-3.5')	2.5	3.5	3/29/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-(9-10')	9	10	3/29/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	**0.26**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-(19-20')	19	20	3/29/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-19	RISB-19-(1.5-2')	1.5	2	3/29/2019	ShallowInvest-Phasel	88 U	**660**	180 U	6.0 U	--	**8.6**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-19	RISB-19-(8.5-9.5')	8.5	9.5	3/29/2019	ShallowInvest-Phasel	10 U	**2.9**	1.5 U	1.5 U	--	**0.10**	--	--	--	**0.13**
Building C-20, C-21, C-22 Complex	RISB-19	RISB-19-(14-15')	14	15	3/29/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	**0.12**	--	--	--	**0.096**
Building C-20, C-21, C-22 Complex	RISB-20	RISB-20-(6.5-7.5')	6.5	7.5	3/27/2019	ShallowInvest-Phasel	10 U	1.5 U	1.6 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-21	RISB-21-(12.5-13.5')	12.5	13.5	3/28/2019	ShallowInvest-Phasel	10 U	**630**	1.5 U	1.5 U	--	**0.81**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-21	RISB-21-(19-20')	19	20	3/28/2019	ShallowInvest-Phasel	10 U	**560**	1.6 U	1.5 U	--	**0.76**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-(1-2')	1	2	3/28/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	**1,400**	**1,900**	--
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-(6.5-7.5')	6.5	7.5	3/28/2019	ShallowInvest-Phasel	10 U	**9.1**	1.5 U	1.5 U	--	**1.4**	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-(19-20')	19	20	3/28/2019	ShallowInvest-Phasel	10 U	1.5 U	1.6 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-23	RISB-23-(14-15')	14	15	3/28/2019	ShallowInvest-Phasel	10 U	**4.8**	1.6 U	1.5 U	--	**0.071**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-23	RISB-23-(19-20')	19	20	3/28/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-24	RISB-24-(2-3')	2	3	3/20/2019	ShallowInvest-Phasel	10 U	**1.5**	1.5 U	1.5 U	--	**0.090**	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-25	RISB-25-(2-3')	2	3	3/20/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-(2-3')	2	3	4/2/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-(6-7')	6	7	4/2/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-(24-25')	24	25	4/2/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	**0.094**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-(2-3')	2	3	4/2/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	25 U	**100**	--
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-(39-40')	39	40	4/2/2019	ShallowInvest-Phasel	10 U	1.5 U	1.6 U	1.5 U	--	0.050 U	--	--	--	**0.11**
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-(44-45')	44	45	4/2/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	**0.11**
Building C-20, C-21, C-22 Complex	RISB-28	RISB-28-(0.7-1.7')	0.7	1.7	3/19/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	**4.2**	250 U	**7,300**	--
Building C-20, C-21, C-22 Complex	RISB-28	RISB-28-(11-12')	11	12	3/19/2019	ShallowInvest-Phasel	10 U	**23**	1.6 U	1.5 U	--	**0.13**	3.0 U	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-49	RISB-49-(6-7')	6	7	3/20/2019	ShallowInvest-Phasel	10 U	**2.6**	1.6 U	1.5 U	--	**0.39**	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-49	RISB-49-(24-25')	24	25	3/20/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-50	RISB-50-(13.5-14.5')	13.5	14.5	3/18/2019	ShallowInvest-Phasel	10 U	**370**	1.5 U	1.5 U	--	**1.1**	--	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-50	RISB-50-(24-25')	24	25	3/18/2019	ShallowInvest-Phasel	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	25 U	50 U	--

Table 4
C-20, C-21, C1-22 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs						TPH			Conventionals
Analyte:							Carbon Disulfide	cis-1,2-Dichloroethene	Methylene Chloride	Tetrachloroethene	trans-1,3-Dichloropropene	Vinyl Chloride	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Organic Carbon
Screening Level:							250	5.2	1.5	2.8	--	0.09	100	2,000	2,000	--
Exceedance:							N	Y	Y	Y	--	Y	N	N	Y	--
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	%
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task										
Building C-20, C-21, C-22 Complex	RISB-59	RISB-59-(12.5-13.5')	12.5	13.5	8/27/2019	Investigation-PhaseII	10 U	1.5 U	1.7 U	1.5 U	--	0.050 U	3.0 U	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-59	RISB-59-(19-20')	19	20	8/27/2019	Investigation-PhaseII	10 U	1.5 U	1.7 U	1.5 U	--	0.050 U	3.0 U	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-60	RISB-60-(6.5-7.5')	6.5	7.5	8/26/2019	Investigation-PhaseII	10 U	1.5 U	1.5 U	1.5 U	--	**0.17**	3.0 U	25 U	50 U	--
Building C-20, C-21, C-22 Complex	RISB-60	RISB-60-(24-25')	24	25	8/26/2019	Investigation-PhaseII	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-(9-10')	9	10	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-(19-20')	19	20	12/1/2022	PhaseIII	10 U	1.5 U	**2.5**	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-(29-30')	29	30	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-(9-10')	9	10	11/30/2022	PhaseIII	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-(19-20')	19	20	11/30/2022	PhaseIII	10 U	1.5 U	1.7 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-(29-30')	29	30	11/30/2022	PhaseIII	10 U	1.5 U	1.5 U	1.5 U	--	0.050 U	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	DUP-SOIL-221201	9	10	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	1.5 U	--	**0.11**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-(9-10')	9	10	12/1/2022	PhaseIII	10 U	1.5 U	1.5 U	1.5 U	--	**0.079**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-(19-20')	19	20	12/1/2022	PhaseIII	10 U	1.5 U	**3.4**	1.5 U	--	**0.068**	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-(29-30')	29	30	12/2/2022	PhaseIII	10 U	1.5 U	**2.9**	1.5 U	--	0.050 U	--	--	--	--

Table 4
C-20, C-21, C1-22 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	Metals			
						Analyte:	Arsenic	Chromium, Total	Lead	Mercury
						Screening Level:	7	42	150	0.1
						Exceedance:	N	Y	N	N
						Units:	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task				
Building C-20, C-21, C-22 Complex	LAI-10	LAI-10 (1)_20170502	1	1	5/2/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-12	LAI-12 (3)_20170502	3	3	5/2/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-17	LAI-17 (1.7)_20171005	1.7	1.7	10/5/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-18	LAI-18 (1.8)_20171005	1.8	1.8	10/5/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-19	LAI-19 (2.4)_20171005	2.4	2.4	10/5/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-20	LAI-20 (1.2)_20171005	1.2	1.2	10/5/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-21	LAI-21 (1.5)_20171005	1.5	1.5	10/5/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-22	LAI-22 (1.5)_20171005	1.5	1.5	10/5/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-24	LAI-24 (10.75)_20171009	10.75	10.75	10/9/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-25	LAI-25 (15.0)_20171005	15	15	10/5/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-26	LAI-26 (6.5)_20171005	6.5	6.5	10/5/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-26	LAI-26 (9.5)_20171005	9.5	9.5	10/5/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	LAI-27	LAI-27 (8)_20171006	8	8	10/6/2017	PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-07	DUP-SOIL-190328	14.5	15.5	3/28/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-07	RISB-07-(14.5-15.5')	14.5	15.5	3/28/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-07	RISB-07-(29-30')	29	30	3/28/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-12	RISB-12-(10-10.5')	10	10.5	3/29/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-12	RISB-12-(19-20')	19	20	3/29/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-12	RISB-12-(24-25')	24	25	3/29/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-12	RISB-12-(41.5-42.5')	41.5	42.5	4/1/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-13	RISB-13-(10-11')	10	11	3/19/2019	ShallowInvest-Phasel	**2.8**	**34**	**2.6**	**0.026**
Building C-20, C-21, C-22 Complex	RISB-13	RISB-13-(12.5-13')	12.5	13	3/20/2019	ShallowInvest-Phasel	**2.2**	**43**	**1.9**	0.020 U
Building C-20, C-21, C-22 Complex	RISB-14	DUP-SOIL-190401	4	5	4/1/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-(9-10')	9	10	4/1/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-(19-20')	19	20	4/1/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-(44-45')	44	45	4/1/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-(9-10')	9	10	3/21/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-(13-14')	13	14	3/21/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-(17-18')	17	18	3/21/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-(34-35')	34	35	3/21/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-16	RISB-16-(4-5')	4	5	4/1/2019	ShallowInvest-Phasel	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-16	RISB-16-(19-20')	19	20	4/1/2019	ShallowInvest-Phasel	--	--	--	--

Table 4
C-20, C-21, C1-22 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	Metals			
						Analyte:	Arsenic	Chromium, Total	Lead	Mercury
						Screening Level:	7	42	150	0.1
						Exceedance:	N	Y	N	N
						Units:	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task				
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-(18-19')	18	19	3/29/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-(34-35')	34	35	3/29/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-(44-45')	44	45	3/29/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-(2.5-3.5')	2.5	3.5	3/29/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-(9-10')	9	10	3/29/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-(19-20')	19	20	3/29/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-19	RISB-19-(1.5-2')	1.5	2	3/29/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-19	RISB-19-(8.5-9.5')	8.5	9.5	3/29/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-19	RISB-19-(14-15')	14	15	3/29/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-20	RISB-20-(6.5-7.5')	6.5	7.5	3/27/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-21	RISB-21-(12.5-13.5')	12.5	13.5	3/28/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-21	RISB-21-(19-20')	19	20	3/28/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-(1-2')	1	2	3/28/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-(6.5-7.5')	6.5	7.5	3/28/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-(19-20')	19	20	3/28/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-23	RISB-23-(14-15')	14	15	3/28/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-23	RISB-23-(19-20')	19	20	3/28/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-24	RISB-24-(2-3')	2	3	3/20/2019	ShallowInvest-Phase1	**3.2**	**28**	**2.2**	**0.026**
Building C-20, C-21, C-22 Complex	RISB-25	RISB-25-(2-3')	2	3	3/20/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-(2-3')	2	3	4/2/2019	ShallowInvest-Phase1	**3.2**	**31**	**2.1**	**0.021**
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-(6-7')	6	7	4/2/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-(24-25')	24	25	4/2/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-(2-3')	2	3	4/2/2019	ShallowInvest-Phase1	**3.2**	**39**	**3.8**	**0.027**
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-(39-40')	39	40	4/2/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-(44-45')	44	45	4/2/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-28	RISB-28-(0.7-1.7')	0.7	1.7	3/19/2019	ShallowInvest-Phase1	**2.7**	**32**	**3.5**	**0.021**
Building C-20, C-21, C-22 Complex	RISB-28	RISB-28-(11-12')	11	12	3/19/2019	ShallowInvest-Phase1	**2.8**	**37**	**2.9**	**0.021**
Building C-20, C-21, C-22 Complex	RISB-49	RISB-49-(6-7')	6	7	3/20/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-49	RISB-49-(24-25')	24	25	3/20/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-50	RISB-50-(13.5-14.5')	13.5	14.5	3/18/2019	ShallowInvest-Phase1	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-50	RISB-50-(24-25')	24	25	3/18/2019	ShallowInvest-Phase1	--	--	--	--

Table 4
C-20, C-21, C1-22 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	Metals			
						Analyte:	Arsenic	Chromium, Total	Lead	Mercury
						Screening Level:	7	42	150	0.1
						Exceedance:	N	Y	N	N
						Units:	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task				
Building C-20, C-21, C-22 Complex	RISB-59	RISB-59-(12.5-13.5')	12.5	13.5	8/27/2019	Investigation-PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-59	RISB-59-(19-20')	19	20	8/27/2019	Investigation-PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-60	RISB-60-(6.5-7.5')	6.5	7.5	8/26/2019	Investigation-PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-60	RISB-60-(24-25')	24	25	8/26/2019	Investigation-PhaseII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-(9-10')	9	10	12/1/2022	PhaseIII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-(19-20')	19	20	12/1/2022	PhaseIII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-(29-30')	29	30	12/1/2022	PhaseIII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-(9-10')	9	10	11/30/2022	PhaseIII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-(19-20')	19	20	11/30/2022	PhaseIII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-(29-30')	29	30	11/30/2022	PhaseIII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	DUP-SOIL-221201	9	10	12/1/2022	PhaseIII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-(9-10')	9	10	12/1/2022	PhaseIII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-(19-20')	19	20	12/1/2022	PhaseIII	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-(29-30')	29	30	12/2/2022	PhaseIII	--	--	--	--

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Abbreviations and Acronyms:

-- = not analyzed
ID = identification
DRO = diesel-range organics
GRO = gasoline-range organics
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ORO = oil-range organics
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Table 5
C-20, C-21, C-22 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						VOCs															
Analyte:						Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	2-Hexanone
CAS RN:						127-18-4	79-01-6	156-59-2	75-01-4	630-20-6	71-55-6	79-34-5	79-00-5	75-34-3	75-35-4	95-63-6	106-93-4	107-06-2	78-87-5	108-67-8	591-78-6
SL:						5	0.54	16	0.029	1.7	200	0.5	0.77	7.7	7	80	0.022	0.48	1.2	80	40
Exceedance						Y	Y	Y	Y		Y		Y	Y	Y			Y	Y		
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sample Date**	**Sample Type**	**Task**																
Building C-20, C-21, C-22 Complex	RISB-13	RISB-13-GW	3/19/2019	N	ShallowInvest-Phasel	2.0 U	**2,100**	**780**	**240**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	**2.7**	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-16	RISB-16-GW	4/1/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	**0.81**	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-GW	3/29/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-GW	3/29/2019	N	ShallowInvest-Phasel	2.0 U	**1.3**	2.0 U	**1.3**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	**0.086**	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-20	DUP-GW-190327	3/27/2019	FD	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	**0.073**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-20	RISB-20-GW	3/27/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	**0.071**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-21	RISB-21-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	**190**	**45**	**0.54**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	**3.9**	**24**	**90**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-23	RISB-23-GW	3/28/2019	N	ShallowInvest-Phasel	2.0 U	**63**	**15**	**0.62**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-24	RISB-24-GW	3/20/2019	N	ShallowInvest-Phasel	2.0 U	**330**	**13**	**1.2**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-25	RISB-25-GW	3/20/2019	N	ShallowInvest-Phasel	2.0 U	**12**	**5.9**	**0.22**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	**24**	**18**	**0.60**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	**220**	**77**	**2.7**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-28	RISB-28-GW	3/19/2019	N	ShallowInvest-Phasel	2.0 U	**310**	**68**	**2.0**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	**2.9**	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-49	RISB-49-GW	3/20/2019	N	ShallowInvest-Phasel	2.0 U	**430**	**150**	**7.4**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-14	DUP-GW-190401	4/1/2019	FD	ShallowInvest-Phasel	2.0 U	**2.7**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-GW	4/1/2019	N	ShallowInvest-Phasel	2.0 U	**2.6**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-GW	3/21/2019	N	ShallowInvest-Phasel	2.0 U	**2,000**	**71**	**0.79**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	**2.2**	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-60	RISB-60-GW	8/27/2019	N	Investigation-Phasell	2.0 U	**14**	**4.5**	**1.6**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	**0.018**	**0.27**	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-07	RISB-07-GW	3/28/2019	N	ShallowInvest-Phasel	2.0 U	**110**	**23**	**0.46**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-GW-221201	12/1/2022	N	PhaseIII	2.0 U	**0.68**	**7.8**	**0.13**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-GW-221130	11/30/2022	N	PhaseIII	2.0 U	0.50 U	2.0 U	**0.027**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-GW-221201	12/1/2022	N	PhaseIII	2.0 U	**22**	**10**	**0.78**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U

Table 5
C-20, C-21, C-22 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						VOCs																
Analyte:						4-isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chloroethane	Chloroform	Ethylbenzene	Isopropylbenzene	Methyl Ethyl Ketone	Methylene Chloride	Methyl-tert-butyl ether	Naphthalene	n-Propylbenzene	sec-Butylbenzene
CAS RN:						25155-15-1	108-10-1	67-64-1	71-43-2	75-15-0	56-23-5	75-00-3	67-66-3	100-41-4	98-82-8	78-93-3	75-09-2	1634-04-4	91-20-3	103-65-1	135-98-8
SL:						--	640	7,200	0.8	800	0.63	--	1.4	700	800	4,800	5	24	160	800	800
Exceedance									Y				Y								
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sample Date**	**Sample Type**	**Task**																
Building C-20, C-21, C-22 Complex	RISB-13	RISB-13-GW	3/19/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	**15**	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-16	RISB-16-GW	4/1/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	**21**	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-GW	3/29/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	**2.9**	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-GW	3/29/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-20	DUP-GW-190327	3/27/2019	FD	ShallowInvest-Phasel	2.0 U	10 U	25 U	**0.71**	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-20	RISB-20-GW	3/27/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	**0.68**	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-21	RISB-21-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	10 U	**23**	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-23	RISB-23-GW	3/28/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-24	RISB-24-GW	3/20/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-25	RISB-25-GW	3/20/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-28	RISB-28-GW	3/19/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-49	RISB-49-GW	3/20/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-14	DUP-GW-190401	4/1/2019	FD	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-GW	4/1/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-GW	3/21/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-60	RISB-60-GW	8/27/2019	N	Investigation-PhaseII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-07	RISB-07-GW	3/28/2019	N	ShallowInvest-Phasel	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-GW-221201	12/1/2022	N	PhaseIII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-GW-221130	11/30/2022	N	PhaseIII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-GW-221201	12/1/2022	N	PhaseIII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 5
C-20, C-21, C-22 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs			TPH			SVOCs	Conventionals					
					Analyte:	Toluene	trans-1,2-Dichloroethene	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	1,4-Dioxane	Ethane	Ethene	Methane	Nitrogen, Nitrate (as N)	Sulfate	Total Organic Carbon
					CAS RN:	108-88-3	156-60-5	1330-20-7	PHC_C5-C12	PHC_C12-C24	PHC_C24-C40	123-91-1	74-84-0	74-85-1	74-82-8	14797-55-8	14808-79-8	TOC
					SL:	640	100	1,600	800	500	500	0.44	--	--	--	10,000	--	--
					Exceedance		Y		Y	Y	Y	Y						
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	Location	Field Sample ID	Sample Date	Sample Type	Task													
Building C-20, C-21, C-22 Complex	RISB-13	RISB-13-GW	3/19/2019	N	ShallowInvest-Phasel	2.0 U	**45**	2.0 U	--	130 U	**850**	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-16	RISB-16-GW	4/1/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-GW	3/29/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-GW	3/29/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-20	DUP-GW-190327	3/27/2019	FD	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-20	RISB-20-GW	3/27/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-21	RISB-21-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	**4.0**	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-23	RISB-23-GW	3/28/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	**270**	**430**	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-24	RISB-24-GW	3/20/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	130 U	**860**	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-25	RISB-25-GW	3/20/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	**210 J**	**410**	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-GW	4/2/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-28	RISB-28-GW	3/19/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	50 U	650 U	**6,000**	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-49	RISB-49-GW	3/20/2019	N	ShallowInvest-Phasel	2.0 U	**3.4**	2.0 U	--	130 U	**1,300**	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-14	DUP-GW-190401	4/1/2019	FD	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-GW	4/1/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-GW	3/21/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	**250 J**	**410 J**	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-60	RISB-60-GW	8/27/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	--	--	--	10 U	10 U	**30**	150 U	**7,600**	**2,400**
Building C-20, C-21, C-22 Complex	RISB-07	RISB-07-GW	3/28/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	**280**	**340**	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-GW-221201	12/1/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	--	--	**0.60**	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-GW-221130	11/30/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-GW-221201	12/1/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	--	--	0.40 U	--	--	--	--	--	--

Table 5
C-20, C-21, C-22 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	Dissolved Metals				
					Analyte:	Arsenic	Cadmium	Chromium, Total	Lead	Mercury
					CAS RN:	7440-38-2	7440-43-9	7440-47-3	7439-92-1	7439-97-6
					SL:	13.6	5	100	15	2
					Exceedance	Y				
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L
Area	Location	Field Sample ID	Sample Date	Sample Type	Task					
Building C-20, C-21, C-22 Complex	RISB-13	RISB-13-GW	3/19/2019	N	ShallowInvest-Phase1	**2.1**	1.0 U	**18**	1.0 U	0.20 U
Building C-20, C-21, C-22 Complex	RISB-16	RISB-16-GW	4/1/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-17	RISB-17-GW	3/29/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-18	RISB-18-GW	3/29/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-20	DUP-GW-190327	3/27/2019	FD	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-20	RISB-20-GW	3/27/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-21	RISB-21-GW	4/2/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-22	RISB-22-GW	4/2/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-23	RISB-23-GW	3/28/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-24	RISB-24-GW	3/20/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-25	RISB-25-GW	3/20/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-26	RISB-26-GW	4/2/2019	N	ShallowInvest-Phase1	**2.3**	1.0 U	2.0 U	1.0 U	0.20 U
Building C-20, C-21, C-22 Complex	RISB-27	RISB-27-GW	4/2/2019	N	ShallowInvest-Phase1	**3.5**	1.0 U	2.0 U	1.0 U	0.20 U
Building C-20, C-21, C-22 Complex	RISB-28	RISB-28-GW	3/19/2019	N	ShallowInvest-Phase1	**1.0**	1.0 U	2.0 U	1.0 U	0.20 U
Building C-20, C-21, C-22 Complex	RISB-49	RISB-49-GW	3/20/2019	N	ShallowInvest-Phase1	**14**	1.0 U	**2.4**	1.0 U	0.20 U
Building C-20, C-21, C-22 Complex	RISB-14	DUP-GW-190401	4/1/2019	FD	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-14	RISB-14-GW	4/1/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-15	RISB-15-GW	3/21/2019	N	ShallowInvest-Phase1	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-60	RISB-60-GW	8/27/2019	N	Investigation-PhaseII	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-07	RISB-07-GW	3/28/2019	N	ShallowInvest-Phase1	1.0 U	1.0 U	2.0 U	1.0 U	0.20 U
Building C-20, C-21, C-22 Complex	RISB-69	RISB-69-GW-221201	12/1/2022	N	PhaseIII	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-70	RISB-70-GW-221130	11/30/2022	N	PhaseIII	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISB-71	RISB-71-GW-221201	12/1/2022	N	PhaseIII	--	--	--	--	--

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Abbreviations and Acronyms:

-- = not analyzed
CAS RN = Chemical Abstracts Service Registry No.
DRO = diesel-range organics
FD = field duplicate
GRO = gasoline-range organics
ID = identification
µg/L = micrograms per liter
N = primary sample
ORO = oil-range organics
SVOC = semivolatile organic compound
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Table 6
C-20, C-21, C1-22 Historical Data – Detected Constituents in Soil Gas and Indoor Air
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte:				1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	2,2,4-Trimethylpentane	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Chloroform	cis-1,2-Dichloroethene	Cyclohexane	Ethanol	Ethylbenzene	Helium	Isopropanol	m-&p-Xylenes	Methyl Ethyl Ketone	n-Heptane
CAS RN:				75-35-4	95-63-6	108-67-8	106-99-0	540-84-1	622-96-8	108-10-1	67-64-1	71-43-2	75-15-0	67-66-3	156-59-2	110-82-7	64-17-5	100-41-4	7440-59-7	67-63-0	179601-23-1	78-93-3	142-82-5
Detect:				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Screening Level:												11											
Units:				µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	%	µg/m³	µg/m³	µg/m³	µg/m³
Area	**Location**	**Field Sample ID**	**Sampling Date**																				
Building C-20, C-21, C-22 Complex	LAI-08	LAI-8_20170502	5/2/2017	4.4 U	5.4 U	5.4 U	2.4 U	**11**	5.4 U	4.5 U	**59**	**15**	**17**	5.4 U	4.4 U	**200**	**27**	**5.4**	0.11 U	11 U	**20**	13 U	**140**
Building C-20, C-21, C-22 Complex	LAI-09	LAI-9_20170503	5/3/2017	4.1 U	5.0 U	5.0 U	2.3 U	4.8 U	5.0 U	4.2 U	24 U	3.3 U	13 U	5.0 U	4.1 U	3.5 U	7.7 U	4.4 U	**0.42**	10 U	4.4 U	12 U	4.2 U
Building C-20, C-21, C-22 Complex	LAI-10	LAI-10_20170502	5/2/2017	4.1 U	5.1 U	5.1 U	2.3 U	4.8 U	5.1 U	4.2 U	**33**	3.3 U	13 U	5.0 U	4.1 U	3.5 U	**34**	4.5 U	**0.17**	10 U	4.5 U	12 U	4.2 U
Building C-20, C-21, C-22 Complex	LAI-11	LAI-11_20170502	5/2/2017	39 U	49 U	49 U	22 U	46 U	49 U	41 U	240 U	32 U	**160**	48 U	**440**	34 U	75 U	43 U	0.10 U	98 U	43 U	120 U	**42**
Building C-20, C-21, C-22 Complex	LAI-12	LAI-12_20170502	5/2/2017	4.2 U	5.2 U	5.2 U	**120**	**6.2**	5.2 U	4.3 U	**66**	**16**	13 U	5.1 U	4.2 U	**22**	**33**	4.6 U	0.10 U	10 U	**5.3**	**17**	**21**
Building C-20, C-21, C-22 Complex	LAI-17	LAI-17_20171004	10/4/2017	12 U	15 U	15 U	6.7 U	14 U	15 U	12 U	36 U	9.7 U	47 U	15 U	**300**	10 U	**710**	13 U	0.11 U	37 U	13 U	45 U	12 U
Building C-20, C-21, C-22 Complex	LAI-18	LAI-18_20171004	10/4/2017	12 U	15 U	15 U	6.7 U	14 U	15 U	12 U	36 U	9.7 U	47 U	15 U	**1,600**	10 U	**1,800**	13 U	0.11 U	**120**	13 U	45 U	12 U
Building C-20, C-21, C-22 Complex	LAI-19	LAI-19_20171004	10/4/2017	1.8 U	**30**	**8.2**	1.0 U	2.2 U	**21**	**9.2**	**170**	**5.9**	7.2 U	**25**	1.8 U	1.6 U	**430**	**6.6**	**1.2**	**33**	**25**	**120**	1.9 U
Building C-20, C-21, C-22 Complex	LAI-20	LAI-20_20171004	10/4/2017	1.9 U	**30**	**8.4**	1.0 U	**15**	**25**	**9.0**	**3,500**	**7.7**	7.4 U	**17**	**120**	**5.1**	**300**	**7.2**	0.12 U	**32**	**29**	**62**	2.0 U
Building C-20, C-21, C-22 Complex	LAI-21	LAI-21_20171004	10/4/2017	3.6 U	**52**	**17**	2.0 U	4.3 U	**37**	3.7 U	**850**	**9.6**	14 U	4.5 U	3.6 U	**12**	**290**	4.0 U	0.11 U	**26**	**17**	**52**	**37**
Building C-20, C-21, C-22 Complex	LAI-22	LAI-22_20171004	10/4/2017	3.5 U	**72**	**19**	2.0 U	4.1 U	**38**	3.6 U	**2,300**	2.8 U	14 U	**11**	3.5 U	3.0 U	**790**	3.8 U	0.11 U	**63**	**12**	**36**	**13**
Building C-20, C-21, C-22 Complex	LAI-24	LAI-24_20171006	10/6/2017	4.2 U	5.2 U	5.2 U	2.3 U	4.9 U	5.2 U	**17**	12 U	3.3 U	16 U	**64**	4.2 U	**15**	**290**	4.6 U	0.26 U	13 U	**15**	15 U	4.3 U
Building C-20, C-21, C-22 Complex	LAI-25	LAI-25_20171006	10/6/2017	**130**	30 U	30 U	**71**	29 U	30 U	25 U	74 U	20 U	97 U	30 U	**1,500**	21 U	**1,300**	27 U	0.12 U	76 U	27 U	92 U	25 U
Building C-20, C-21, C-22 Complex	LAI-26	LAI-26_20171006	10/6/2017	**480**	47 U	47 U	**51**	**57**	47 U	39 U	85 U	30 U	110 U	46 U	**13,000**	**52**	**480**	41 U	0.12 U	88 U	41 U	100 U	39 U
Building C-20, C-21, C-22 Complex	LAI-27	LAI-27_20171006	10/6/2017	1.8 U	**10**	2.2 U	**28**	**9.8**	**11**	**11**	**94**	**17**	6.9 U	2.2 U	**170**	**59**	**630**	**16**	0.11 U	**92**	**58**	**29**	**60**
Building C-20, C-21, C-22 Complex	RISG-19	RISG-19-190402	4/2/2019	--	--	--	--	--	--	--	--	**46**	--	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISG-22	RISG-22-190402	4/2/2019	--	--	--	--	--	--	--	--	20 U	--	--	--	--	--	--	--	--	--	--	--
Building C-20, C-21, C-22 Complex	RISG-50	RISG-50-190409	4/9/2019	--	--	--	--	--	--	--	--	2.2 U	--	--	--	--	--	--	--	--	--	--	--

Table 6
C-20, C-21, C1-22 Historical Data – Detected Constituents in Soil Gas and Indoor Air
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

			Analyte:	n-Hexane	o-Xylene	Tetrachloroethene	Tetrahydrofuran	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride
			CAS RN:	110-54-3	95-47-6	127-18-4	109-99-9	108-88-3	156-60-5	79-01-6	75-01-4
			Detect:	Y	Y	Y	Y	Y	Y	Y	Y
			Screening Level:			321				11	9.5
			Units:	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Area	Location	Field Sample ID	Sampling Date								
Building C-20, C-21, C-22 Complex	LAI-08	LAI-8_20170502	5/2/2017	**350**	**6.7**	7.5 U	3.2 U	**55**	4.4 U	5.9 U	2.8 U
Building C-20, C-21, C-22 Complex	LAI-09	LAI-9_20170503	5/3/2017	3.6 U	4.4 U	7.0 U	3.0 U	3.9 U	4.1 U	5.5 U	2.6 U
Building C-20, C-21, C-22 Complex	LAI-10	LAI-10_20170502	5/2/2017	3.6 U	4.5 U	7.0 U	3.0 U	**9.1**	4.1 U	5.5 U	2.6 U
Building C-20, C-21, C-22 Complex	LAI-11	LAI-11_20170502	5/2/2017	**60**	43 U	67 U	29 U	**150**	39 U	53 U	**5,400**
Building C-20, C-21, C-22 Complex	LAI-12	LAI-12_20170502	5/2/2017	**85**	4.6 U	7.1 U	3.1 U	**24**	4.2 U	5.6 U	2.7 U
Building C-20, C-21, C-22 Complex	LAI-17	LAI-17_20171004	10/4/2017	11 U	13 U	21 U	9.0 U	11 U	12 U	**12,000**	7.8 U
Building C-20, C-21, C-22 Complex	LAI-18	LAI-18_20171004	10/4/2017	11 U	13 U	21 U	9.0 U	11 U	**51**	**16,000**	7.8 U
Building C-20, C-21, C-22 Complex	LAI-19	LAI-19_20171004	10/4/2017	**11**	**9.6**	3.2 U	**13**	**25**	1.8 U	**29**	1.2 U
Building C-20, C-21, C-22 Complex	LAI-20	LAI-20_20171004	10/4/2017	**23**	**11**	**8.2**	**7.6**	**23**	**5.8**	**1,300**	1.2 U
Building C-20, C-21, C-22 Complex	LAI-21	LAI-21_20171004	10/4/2017	**38**	4.0 U	6.2 U	**8.1**	**19**	3.6 U	**410**	2.3 U
Building C-20, C-21, C-22 Complex	LAI-22	LAI-22_20171004	10/4/2017	**21**	3.8 U	**42**	2.6 U	**13**	3.5 U	**29**	2.2 U
Building C-20, C-21, C-22 Complex	LAI-24	LAI-24_20171006	10/6/2017	**12**	4.6 U	7.1 U	3.1 U	**26**	4.2 U	5.6 U	2.7 U
Building C-20, C-21, C-22 Complex	LAI-25	LAI-25_20171006	10/6/2017	22 U	27 U	42 U	18 U	23 U	**170**	**29,000**	16 U
Building C-20, C-21, C-22 Complex	LAI-26	LAI-26_20171006	10/6/2017	**110**	41 U	**130**	28 U	36 U	**140**	**74,000**	**31**
Building C-20, C-21, C-22 Complex	LAI-27	LAI-27_20171006	10/6/2017	**73**	**16**	3.0 U	1.3 U	**170**	1.8 U	**34**	**59**
Building C-20, C-21, C-22 Complex	RISG-19	RISG-19-190402	4/2/2019	--	--	**6.9**	--	--	--	**690**	**25,000**
Building C-20, C-21, C-22 Complex	RISG-22	RISG-22-190402	4/2/2019	--	--	21 U	--	--	--	**36**	**2,600**
Building C-20, C-21, C-22 Complex	RISG-50	RISG-50-190409	4/9/2019	--	--	**18**	--	--	--	**1,700**	2.3 U

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Abbreviations and Acronyms:

-- = not analyzed

CAS RN = Chemical Abstracts Service Registry No.

ID = identification

µg/m³ = micrograms per cubic meter

Table 7
C-23 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs						TPH		Conventionals	Metals				
Analyte:							1,2-Dichloroethane	cis-1,2-Dichloroethene	Methylene Chloride	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Organic Carbon	Arsenic	Chromium, Total	Chromium, Trivalent	Lead	Mercury
Screening Level:							1.6	5.2	1.5	32	1.5	0.09	2,000	2,000	--	7	42	24,000	150	0.1
Exceedance:							Y	Y	Y	Y	Y	Y	N	Y	--	N	Y	N	N	N
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**														
Building C-23 and C-23 Annex	DW3	DW3-SO-7-20001212	7	7	12/12/2000	Historical	--	10 U	--	10 U	10 U	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	DW3	DW3-SO-36-20001212	36	36	12/12/2000	Historical	--	10 U	--	10 U	10 U	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	DW3	DW3-SO-66-20001212	66	66	12/12/2000	Historical	--	10 U	--	10 U	10 U	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	DW3	DW3-SO-76-20001212	76	76	12/12/2000	Historical	--	10 U	--	10 U	10 U	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	DW3	DW3-SO-136-20001212	136	136	12/12/2000	Historical	--	10 U	--	10 U	10 U	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	DW3	DW3-SO-151-20001212	151	151	12/12/2000	Historical	--	10 U	--	10 U	10 U	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	LAI-03a	LAI-3A (3)_20170502	3	3	5/2/2017	Phasell	--	--	--	--	--	--	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	LAI-05	LAI-5 (9)_20170502	9	9	5/2/2017	Phasell	--	--	--	--	--	--	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	LAI-07	LAI-7 (1)_20170503	1	1	5/3/2017	Phasell	--	--	--	--	--	--	25 U	**76**	--	--	--	--	--	--
Building C-23 and C-23 Annex	LAI-13	LAI-13 (1.2)_20171005	1.2	1.2	10/5/2017	Phasell	10 U	10 U	20 U	10 U	10 U	10 U	25 U	**460**	--	--	--	--	--	--
Building C-23 and C-23 Annex	LAI-14	LAI-14 (1.2)_20171005	1.2	1.2	10/5/2017	Phasell	10 U	10 U	20 U	10 U	10 U	10 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	LAI-15	LAI-15 (1.7)_20171005	1.7	1.7	10/5/2017	Phasell	10 U	10 U	20 U	10 U	10 U	10 U	**27**	**70**	--	--	--	--	--	--
Building C-23 and C-23 Annex	LAI-16	LAI-16 (2.1)_20171005	2.1	2.1	10/5/2017	Phasell	10 U	10 U	20 U	10 U	10 U	10 U	250 U	**6,900**	--	--	--	--	--	--
Building C-23 and C-23 Annex	LAI-23	LAI-23 (16.5)_20171005	16.5	16.5	10/5/2017	Phasell	10 U	**36**	20 U	10 U	10 U	10 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	LAI-28	LAI-28 (17.75)_20171006	17.75	17.75	10/9/2017	Phasell	10 U	10 U	20 U	10 U	10 U	10 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-14	DUP-SOIL-190401	4	5	4/1/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.6 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-14	RISB-14-(9-10')	9	10	4/1/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	**4.2**	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-14	RISB-14-(19-20')	19	20	4/1/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.8 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-14	RISB-14-(44-45')	44	45	4/1/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-15	RISB-15-(9-10')	9	10	3/21/2019	ShallowInvest-Phasel	1.5 U	**2.7**	1.6 U	10 U	**4,400**	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-15	RISB-15-(13-14')	13	14	3/21/2019	ShallowInvest-Phasel	--	--	--	--	--	--	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-15	RISB-15-(17-18')	17	18	3/21/2019	ShallowInvest-Phasel	1.5 U	**3.3**	1.6 U	10 U	**4,200**	**0.056**	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-15	RISB-15-(34-35')	34	35	3/21/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	**1.6**	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-29	DUP-SOIL-190319	11	12	3/19/2019	ShallowInvest-Phasel	1.5 U	**430**	1.5 U	**370**	**3,100**	**0.24**	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-29	RISB-29-(11-12')	11	12	3/19/2019	ShallowInvest-Phasel	1.5 U	**500**	1.5 U	**24**	**3,600**	**0.18**	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-29	RISB-29-(24-25')	24	25	3/19/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.9 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-30	RISB-30-(9-10')	9	10	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-30	RISB-30-(19-20')	19	20	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.8 U	10 U	1.5 U	**0.061**	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-31	RISB-31-(2-3')	2	3	3/22/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	**3.6**	**29**	--	**3.2**	**0.024**
Building C-23 and C-23 Annex	RISB-31	DUP-SOIL-190322	6.5	7.5	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.6 U	10 U	1.5 U	0.050 U	25 U	50 U	**0.12**	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-31	RISB-31-(6.5-7.5')	6.5	7.5	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.7 U	10 U	1.5 U	0.050 U	25 U	50 U	**0.17**	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-31	RISB-31-(14-15')	14	15	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.6 U	10 U	1.5 U	0.050 U	25 U	50 U	**0.14**	--	--	--	--	--

Table 7
C-23 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs						TPH		Conventionals	Metals				
Analyte:							1,2-Dichloroethane	cis-1,2-Dichloroethene	Methylene Chloride	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Organic Carbon	Arsenic	Chromium, Total	Chromium, Trivalent	Lead	Mercury
Screening Level:							1.6	5.2	1.5	32	1.5	0.09	2,000	2,000	--	7	42	24,000	150	0.1
Exceedance:							Y	Y	Y	Y	Y	Y	N	Y	--	N	Y	N	N	N
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**														
Building C-23 and C-23 Annex	RISB-32	RISB-32-(4-5')	4	5	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-32	RISB-32-(6-7')	6	7	3/22/2019	ShallowInvest-Phasel	--	--	--	--	--	--	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-32	RISB-32-(14-15')	14	15	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-33	RISB-33-(2.5-3.5')	2.5	3.5	3/15/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.7 U	10 U	1.5 U	0.050 U	25 U	50 U	--	**2.5**	**29**	--	**2.8**	0.020 U
Building C-23 and C-23 Annex	RISB-33	RISB-33-(9-10')	9	10	3/15/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.7 U	10 U	1.5 U	0.050 U	25 U	50 U	--	**3.2**	**32**	--	**2.6**	**0.020**
Building C-23 and C-23 Annex	RISB-34	RISB-34-(2-3')	2	3	3/15/2019	ShallowInvest-Phasel	--	--	--	--	--	--	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-34	RISB-34-(5-6')	5	6	3/15/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-35	RISB-35-(3.5-4.5')	3.5	4.5	3/14/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-36	RISB-36-(6-7')	6	7	3/21/2019	ShallowInvest-Phasel	--	--	--	--	--	--	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-36	RISB-36-(9-10')	9	10	3/21/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-36	RISB-36-(19-20')	19	20	3/21/2019	ShallowInvest-Phasel	1.5 U	1.5 U	2.0 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-37	RISB-37-(0.5-1.5')	0.5	1.5	3/15/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-37	RISB-37-(9-10')	9	10	3/15/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.6 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-38	RISB-38-(9-10')	9	10	3/13/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-39	RISB-39-(11-12')	11	12	3/20/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-39	RISB-39-(24-25')	24	25	3/20/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-40	RISB-40-(2-3')	2	3	3/21/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	**2.6**	**31**	--	**2.9**	**0.024**
Building C-23 and C-23 Annex	RISB-40	RISB-40-(9-10')	9	10	3/21/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-40	RISB-40-(19-20')	19	20	3/21/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-47	RISB-47-(6.5-7.5')	6.5	7.5	4/5/2019	ShallowInvest-Phasel	1.5 U	**630**	1.5 U	**10**	**9,600**	**0.55**	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-47	RISB-47-(27-28')	27	28	4/5/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-48	RISB-48-(5.5-6.5')	5.5	6.5	4/5/2019	ShallowInvest-Phasel	1.5 U	**1,000**	2.2 U	10 U	**810**	**6.7**	25 U	50 U	**0.064**	**2.1**	**31**	--	**1.7**	0.020 U
Building C-23 and C-23 Annex	RISB-48	RISB-48-(9-10')	9	10	4/5/2019	ShallowInvest-Phasel	**10**	**690**	1.5 U	**27**	**2,700**	**6.1**	25 U	50 U	--	**2.5**	**450**	--	**1.8**	0.020 U
Building C-23 and C-23 Annex	RISB-48	RISB-48-(14-15')	14	15	4/5/2019	ShallowInvest-Phasel	1.5 U	1.5 U	**4.3**	10 U	**1.5**	0.050 U	25 U	50 U	**0.092**	**2.8**	**36**	--	**2.2**	0.020 U
Building C-23 and C-23 Annex	RISB-51	RISB-51-(7.5-8.5')	7.5	8.5	3/19/2019	ShallowInvest-Phasel	1.5 U	**1,100**	1.5 U	**11**	**33**	**1.3**	25 U	50 U	**0.11**	**3.2**	**29**	--	**2.3**	0.020 U
Building C-23 and C-23 Annex	RISB-51	RISB-51-(24-25')	24	25	3/19/2019	ShallowInvest-Phasel	1.5 U	**9.7**	1.5 U	10 U	1.5 U	**0.38**	25 U	50 U	**0.11**	**2.7**	**24**	--	**1.7**	0.020 U
Building C-23 and C-23 Annex	RISB-52	RISB-52-(1.5-2.5')	1.5	2.5	3/22/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	**3.4**	**36**	--	**3.4**	0.020 U
Building C-23 and C-23 Annex	RISB-52	RISB-52-(10.5-11.5')	10.5	11.5	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.7 U	10 U	1.5 U	**0.10**	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-52	RISB-52-(19-20')	19	20	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-53	RISB-53-(2-3')	2	3	3/14/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	120 U	**2,100**	--	**2.7**	**34**	--	**2.5**	0.020 U
Building C-23 and C-23 Annex	RISB-53	RISB-53-(9-10')	9	10	3/14/2019	ShallowInvest-Phasel	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	25 U	50 U	--	**3.1**	**29**	--	**2.3**	0.020 U

Table 7
C-23 Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs						TPH		Conventionals	Metals				
Analyte:							1,2-Dichloroethane	cis-1,2-Dichloroethene	Methylene Chloride	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Organic Carbon	Arsenic	Chromium, Total	Chromium, Trivalent	Lead	Mercury
Screening Level:							1.6	5.2	1.5	32	1.5	0.09	2,000	2,000	--	7	42	24,000	150	0.1
Exceedance:							Y	Y	Y	Y	Y	Y	N	Y	--	N	Y	N	N	N
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**														
Building C-23 and C-23 Annex	RISB-59	RISB-59-(12.5-13.5')	12.5	13.5	8/27/2019	Investigation-PhaseII	1.5 U	1.5 U	1.7 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-59	RISB-59-(19-20')	19	20	8/27/2019	Investigation-PhaseII	1.5 U	1.5 U	1.7 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-60	RISB-60-(6.5-7.5')	6.5	7.5	8/26/2019	Investigation-PhaseII	1.5 U	1.5 U	1.5 U	10 U	**6.3**	**0.17**	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-60	RISB-60-(24-25')	24	25	8/26/2019	Investigation-PhaseII	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-61	RISB-61-(6.5-7.5')	6.5	7.5	8/27/2019	Investigation-PhaseII	1.5 U	**6.1**	1.8 U	10 U	1.5 U	**0.31**	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-61	RISB-61-(29-30')	29	30	8/27/2019	Investigation-PhaseII	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-62	RISB-62-(14-15')	14	15	8/27/2019	Investigation-PhaseII	1.5 U	1.5 U	1.6 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-62	RISB-62-(24-25')	24	25	8/27/2019	Investigation-PhaseII	1.5 U	1.5 U	1.6 U	10 U	1.5 U	0.050 U	25 U	50 U	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-63	RISB-63-(19-20')	19	20	8/27/2019	Investigation-PhaseII	1.5 U	1.5 U	1.8 U	10 U	1.5 U	0.050 U	25 U	50 U	--	**3.2**	**31**	**31**	**2.7**	**0.025**
Building C-23 and C-23 Annex	RISB-63	RISB-63-(29-30')	29	30	8/27/2019	Investigation-PhaseII	1.5 U	1.5 U	1.6 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-78	RISB-78-(9-10')	9	10	11/29/2022	PhaseIII	1.5 U	1.5 U	1.6 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-78	RISB-78-(19-20')	19	20	11/29/2022	PhaseIII	1.5 U	1.5 U	1.5 U	10 U	1.5 U	0.050 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-78	RISB-78-(29-30')	29	30	11/29/2022	PhaseIII	1.5 UJ	1.5 UJ	1.6 UJ	10 UJ	1.5 UJ	0.050 UJ	--	--	--	--	--	--	--	--

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Abbreviations and Acronyms:

-- = not analyzed
ID = identification
DRO = diesel-range organics
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ORO = oil-range organics
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Table 8
C-23 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						VOCs															
Analyte:						Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	2-Hexanone
CAS RN:						127-18-4	79-01-6	156-59-2	75-01-4	630-20-6	71-55-6	79-34-5	79-00-5	75-34-3	75-35-4	95-63-6	106-93-4	107-06-2	78-87-5	108-67-8	591-78-6
Screening Level:						5	0.54	16	0.029	1.7	200	0.5	0.77	7.7	7	80	0.022	0.48	1.2	80	40
Exceedance						Y	Y	Y	Y		Y		Y	Y	Y			Y	Y		
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	Location	Field Sample ID	Sample Date	Sample Type	Task																
Building C-23 and C-23 Annex	DW3	DW3-WG-20000519	5/19/2000	N	Historical	--	5 U	5 U	--	--	5 U	--	--	--	--	--	--	5 U	5 U	--	--
Building C-23 and C-23 Annex	DW3	DW-3-181107	11/7/2018	N	Baseline	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	DW3	DW3-190912	9/12/2019	N	Investigation-PhaseII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-14	RISB-14-GW	4/1/2019	N	ShallowInvest-PhaseI	2.0 U	**2.6**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-14	DUP-GW-190401	4/1/2019	FD	ShallowInvest-PhaseI	2.0 U	**2.7**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-15	RISB-15-GW	3/21/2019	N	ShallowInvest-PhaseI	2.0 U	**2,000**	**71**	**0.79**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	**2.2**	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-29	RISB-29-GW	3/19/2019	N	ShallowInvest-PhaseI	2.0 U	**110**	**140**	**1.6**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-PhaseI	2.0 U	0.50 U	**2.7**	**0.19**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-PhaseI	2.0 U	0.50 U	2.0 U	**0.089**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-32	RISB-32-GW	3/22/2019	N	ShallowInvest-PhaseI	2.0 U	**0.87**	2.0 U	**0.099**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	**0.070**	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-32	DUP-GW-190322	3/22/2019	FD	ShallowInvest-PhaseI	2.0 U	0.50 U	2.0 U	**0.095**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	**0.068**	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-38	RISB-38-GW	3/13/2019	N	ShallowInvest-PhaseI	2.0 U	**0.79**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-39	RISB-39-GW	4/9/2019	N	ShallowInvest-PhaseI	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-40	RISB-40-GW	4/1/2019	N	ShallowInvest-PhaseI	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	**5.5**	**24,000**	**2,200**	**52**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	**67**	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	2.0 U	**2,300**	**3,600**	**480**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	**23**	2.0 U	0.010 U	**130**	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-51	RISB-51-GW	3/19/2019	N	ShallowInvest-PhaseI	2.0 U	**20**	**390**	**8.4**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-PhaseI	2.0 U	**85**	**81**	**4.4**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-60	RISB-60-GW	8/27/2019	N	Investigation-PhaseII	2.0 U	**14**	**4.5**	**1.6**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	**0.018**	**0.27**	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-61	RISB-61-GW	8/28/2019	N	Investigation-PhaseII	2.0 U	0.50 U	2.0 U	**0.31**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-61	DUP-GW-190828	8/28/2019	FD	Investigation-PhaseII	2.0 U	0.50 U	2.0 U	**0.29**	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-62	RISB-62-GW	8/28/2019	N	Investigation-PhaseII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-63	RISB-63-GW	8/28/2019	N	Investigation-PhaseII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	**0.022**	0.020 U	0.50 U	2.0 U	10 U
Building C-23 and C-23 Annex	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U

Table 8
C-23 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						VOCs																
Analyte:						4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chloroethane	Chloroform	Ethylbenzene	Isopropylbenzene	Methyl Ethyl Ketone	Methylene Chloride	Methyl-tert-butyl ether	Naphthalene	n-Propylbenzene	sec-Butylbenzene
CAS RN:						25155-15-1	108-10-1	67-64-1	71-43-2	75-15-0	56-23-5	75-00-3	67-66-3	100-41-4	98-82-8	78-93-3	75-09-2	1634-04-4	91-20-3	103-65-1	135-98-8
Screening Level:						--	640	7200	0.8	800	0.63	--	1.4	700	800	4800	5	24	160	800	800
Exceedance									Y				Y								
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	Location	Field Sample ID	Sample Date	Sample Type	Task																
Building C-23 and C-23 Annex	DW3	DW3-WG-20000519	5/19/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	DW3	DW-3-181107	11/7/2018	N	Baseline	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	DW3	DW3-190912	9/12/2019	N	Investigation-PhaseII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-14	RISB-14-GW	4/1/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-14	DUP-GW-190401	4/1/2019	FD	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-15	RISB-15-GW	3/21/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-29	RISB-29-GW	3/19/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-32	RISB-32-GW	3/22/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-32	DUP-GW-190322	3/22/2019	FD	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-38	RISB-38-GW	3/13/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-39	RISB-39-GW	4/9/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-40	RISB-40-GW	4/1/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	**200**	0.50 U	2.0 U	0.50 U	2.0 U	**0.64**	2.0 U	2.0 U	**28**	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	**2.0**	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	**4.0**	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-51	RISB-51-GW	3/19/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-PhaseI	2.0 U	10 U	25 U	**0.66**	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-60	RISB-60-GW	8/27/2019	N	Investigation-PhaseII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-61	RISB-61-GW	8/28/2019	N	Investigation-PhaseII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-61	DUP-GW-190828	8/28/2019	FD	Investigation-PhaseII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-62	RISB-62-GW	8/28/2019	N	Investigation-PhaseII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-63	RISB-63-GW	8/28/2019	N	Investigation-PhaseII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Building C-23 and C-23 Annex	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	2.0 U	10 U	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 8
C-23 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs			TPH			SVOCs	Conventionals						
					Analyte:	Toluene	trans-1,2-Dichloroethene	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	1,4-Dioxane	Ethane	Ethene	Methane	Nitrogen, Nitrate (as N)	Nitrogen, Nitrate (As NO3)	Sulfate	Total Organic Carbon
					CAS RN:	108-88-3	156-60-5	1330-20-7	PHC_C5-C12	PHC_C12-C24	PHC_C24-C40	123-91-1	74-84-0	74-85-1	74-82-8	14797-55-8	NO3	14808-79-8	TOC
					Screening Level:	640	100	1600	800	500	500	0.44	--	--	--	10000	--	--	--
					Exceedance		Y		Y	Y	Y	Y							
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	Location	Field Sample ID	Sample Date	Sample Type	Task														
Building C-23 and C-23 Annex	DW3	DW3-WG-20000519	5/19/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	DW3	DW-3-181107	11/7/2018	N	Baseline	2.0 U	2.0 U	2.0 U	--	--	--	--	10 U	10 U	10 U	--	**3,100**	**10,000**	1,000 U
Building C-23 and C-23 Annex	DW3	DW3-190912	9/12/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	--	--	--	10 U	10 U	10 U	**4,800**	--	**13,000**	1,000 U
Building C-23 and C-23 Annex	RISB-14	RISB-14-GW	4/1/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-14	DUP-GW-190401	4/1/2019	FD	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-15	RISB-15-GW	3/21/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	**250 J**	**410 J**	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-29	RISB-29-GW	3/19/2019	N	ShallowInvest-PhaseI	2.0 U	**39**	2.0 U	--	130 U	**2,100**	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	**270**	250 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-32	RISB-32-GW	3/22/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	**130**	250 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-32	DUP-GW-190322	3/22/2019	FD	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	130 U	250 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-38	RISB-38-GW	3/13/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-39	RISB-39-GW	4/9/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-40	RISB-40-GW	4/1/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	**12**	**320**	2.0 U	**69**	**460**	**380**	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	2.0 U	**560**	2.0 U	50 U	**3,400**	**6,500**	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-51	RISB-51-GW	3/19/2019	N	ShallowInvest-PhaseI	2.0 U	**55**	2.0 U	--	**1,100**	**910**	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-PhaseI	2.0 U	**28**	2.0 U	--	**220**	**350**	--	10 U	10 U	**20**	**300**	--	**21,000**	**3,200**
Building C-23 and C-23 Annex	RISB-60	RISB-60-GW	8/27/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	--	--	--	10 U	10 U	**30**	150 U	--	**7,600**	**2,400**
Building C-23 and C-23 Annex	RISB-61	RISB-61-GW	8/28/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	50 U	**430**	250 U	--	10 U	10 U	**30**	150 U	--	**10,000**	**8,400**
Building C-23 and C-23 Annex	RISB-61	DUP-GW-190828	8/28/2019	FD	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	50 U	**440**	250 U	--	10 U	10 U	**30**	150 U	--	**10,000**	**8,600**
Building C-23 and C-23 Annex	RISB-62	RISB-62-GW	8/28/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	130 U	250 U	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-63	RISB-63-GW	8/28/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	--	--	0.40 U	--	--	--	--	--	--	--

Table 8
C-23 Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	Dissolved Metals						
					Analyte:	Arsenic	Cadmium	Chromium, Hexavalent	Chromium, Total	Chromium, Trivalent	Lead	Mercury
					CAS RN:	7440-38-2	7440-43-9	18540-29-9	7440-47-3	16065-83-1	7439-92-1	7439-97-6
					Screening Level:	13.6	5	10	100	100	15	2
					Exceedance	Y						
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	Location	Field Sample ID	Sample Date	Sample Type	Task							
Building C-23 and C-23 Annex	DW3	DW3-WG-20000519	5/19/2000	N	Historical	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	DW3	DW-3-181107	11/7/2018	N	Baseline	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	DW3	DW3-190912	9/12/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-14	RISB-14-GW	4/1/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-14	DUP-GW-190401	4/1/2019	FD	ShallowInvest-PhaseI	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-15	RISB-15-GW	3/21/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-29	RISB-29-GW	3/19/2019	N	ShallowInvest-PhaseI	**3.7**	1.0 U	--	2.0 U	--	1.0 U	0.20 U
Building C-23 and C-23 Annex	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-PhaseI	**5.8**	1.0 U	--	2.0 U	--	1.0 U	0.20 U
Building C-23 and C-23 Annex	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-32	RISB-32-GW	3/22/2019	N	ShallowInvest-PhaseI	**7.3**	1.0 U	--	2.0 U	--	1.0 U	0.20 U
Building C-23 and C-23 Annex	RISB-32	DUP-GW-190322	3/22/2019	FD	ShallowInvest-PhaseI	**7.5**	1.0 U	--	2.0 U	--	1.0 U	0.20 U
Building C-23 and C-23 Annex	RISB-38	RISB-38-GW	3/13/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-39	RISB-39-GW	4/9/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-40	RISB-40-GW	4/1/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	**2.9**	1.0 U	10 U	2.0 U	2.0 U	1.0 U	0.20 U
Building C-23 and C-23 Annex	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	**1.9**	1.0 U	10 U	**2.6**	**2.6**	1.0 U	0.20 U
Building C-23 and C-23 Annex	RISB-51	RISB-51-GW	3/19/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-60	RISB-60-GW	8/27/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-61	RISB-61-GW	8/28/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-61	DUP-GW-190828	8/28/2019	FD	Investigation-PhaseII	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-62	RISB-62-GW	8/28/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-63	RISB-63-GW	8/28/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--	--	--	--

Abbreviations and Acronyms:
-- = not analyzed
CAS RN = Chemical Abstracts Service Registry No.
ID = identification
DRO = diesel-range organics
FD = field duplicate
GRO = gasoline-range organics
µg/L = micrograms per liter
N = primary sample
ORO = oil-range organics
SVOC = semivolatile organic compound
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Notes:
Bold text indicates detected analyte.
Blue shading indicates detected analyte exceeds applicable cleanup level.
U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Table 9
C-23 Historical Data – Detected Constituents in Soil Gas and Indoor Air
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte:				1,1,1-Trichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Butadiene	2,2,4-Trimethylpentane	2-Hexanone	4-Ethyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Cyclohexane	Ethanol	Ethylbenzene	Helium
CAS RN:				71-55-6	75-34-3	95-63-6	108-67-8	106-99-0	540-84-1	591-78-6	622-96-8	108-10-1	67-64-1	71-43-2	75-15-0	56-23-5	67-66-3	74-87-3	156-59-2	110-82-7	64-17-5	100-41-4	7440-59-7
Soil Gas Screening Level:				76,000	52									11									
Indoor Air Screening Level:																							
Units:				µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	%
Area	**Location**	**Field Sample ID**	**Sampling Date**																				
Building C-23 and C-23 Annex	LAI-01	LAI-1_20170503	5/3/2017	5.6 U	4.1 U	5.0 U	5.0 U	2.2 U	4.8 U	17 U	5.0 U	4.2 U	**27**	3.2 U	13 U	6.4 U	5.0 U	21 U	4.0 U	3.5 U	**7.9**	4.4 U	**0.35**
Building C-23 and C-23 Annex	LAI-03a	LAI-3_20170502	5/2/2017	5.6 U	4.1 U	5.0 U	5.0 U	2.2 U	4.8 U	17 U	5.0 U	4.2 U	**26**	3.2 U	13 U	6.4 U	5.0 U	21 U	4.0 U	3.5 U	**26**	4.4 U	**0.26**
Building C-23 and C-23 Annex	LAI-05	LAI-5_20170502	5/2/2017	5.8 U	4.3 U	5.2 U	5.2 U	**150**	**5.1**	17 U	5.2 U	4.3 U	**57**	**30**	**13**	6.7 U	5.2 U	22 U	4.2 U	**16**	8.0 U	4.6 U	0.11 U
Building C-23 and C-23 Annex	LAI-07	LAI-7_20170503	5/3/2017	7.0 U	5.2 U	6.3 U	6.3 U	2.8 U	**7.6**	21 U	6.3 U	5.2 U	**180**	**14**	**17**	8.0 U	6.2 U	26 U	**16**	**28**	**25**	5.6 U	0.13 U
Building C-23 and C-23 Annex	LAI-13	LAI-13_20171004	10/4/2017	26 U	20 U	24 U	24 U	11 U	23 U	99 U	24 U	20 U	57 U	15 U	75 U	30 U	24 U	50 U	**59**	17 U	**200**	21 U	0.12 U
Building C-23 and C-23 Annex	LAI-14	LAI-14_20171004	10/4/2017	2.6 U	2.0 U	**33**	**10**	**3.2**	2.3 U	9.9 U	**22**	**28**	**200**	**7.0**	7.5 U	**7.8**	**16**	5.0 U	1.9 U	**12**	**340**	2.1 U	0.12 U
Building C-23 and C-23 Annex	LAI-15	LAI-15_20171004	10/4/2017	2.5 U	1.9 U	**7.0**	2.3 U	1.0 U	2.2 U	9.5 U	**5.8**	**5.5**	**140**	**11**	7.2 U	2.9 U	**23**	4.8 U	1.8 U	**8.8**	**480**	2.0 U	0.12 U
Building C-23 and C-23 Annex	LAI-16	LAI-16_20171004	10/4/2017	2.4 U	1.8 U	**5.6**	2.2 U	**70**	2.1 U	**70**	**5.7**	**880**	**730**	**73**	**170**	2.8 U	**34**	4.6 U	1.8 U	**34**	**360**	**5.9**	0.11 U
Building C-23 and C-23 Annex	LAI-23	LAI-23_20171006	10/6/2017	10 U	**64**	9.3 U	9.3 U	**31**	8.9 U	39 U	9.3 U	7.8 U	**150**	**46**	30 U	12 U	9.3 U	20 U	**85**	**200**	**530**	8.2 U	0.12 U
Building C-23 and C-23 Annex	LAI-28	LAI-28_20171006	10/6/2017	2.6 U	1.9 U	2.3 U	2.3 U	**6.1**	**29**	9.7 U	2.3 U	**6.8**	**540**	**12**	**53**	3.0 U	**7.2**	4.9 U	**9.3**	**120**	**530**	2.1 U	0.12 U
Building C-23 and C-23 Annex	RISG-35	RISG-35-190409	4/9/2019	2.2 U	2.1 U	--	--	--	--	--	--	--	--	2.1 U	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISG-36	RISG-36-190409	4/9/2019	2.1 U	2.0 U	--	--	--	--	--	--	--	--	2.0 U	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	RISG-37	RISG-37-190409	4/9/2019	**3.4**	2.2 U	--	--	--	--	--	--	--	--	2.2 U	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA01-C23/IAR01C-23	IA01-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA01-C23/IAR01C-23	IAR01-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA02-C23/IAR02C-23	IA02-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA02-C23/IAR02C-23	IAR02-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA03-C23/IAR03-C23	IA03-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA03-C23/IAR03-C23	IAR03-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA04-C23	IA04-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA05-C23/IAR05C-23	IA05-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA05-C23/IAR05C-23	IAR05-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA06-C23/IAR06-C23	IA06-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IA06-C23/IAR06-C23	IAR06-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	IAR04-C23	IAR04-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Building C-23 and C-23 Annex	AA01	AA01-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 9
C-23 Historical Data – Detected Constituents in Soil Gas and Indoor Air
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte:				Isopropanol	m-&p-Xylenes	Methyl Ethyl Ketone	n-Heptane	n-Hexane	o-Xylene	Tetrachloroethene	Tetrahydrofuran	Toluene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride
CAS RN:				67-63-0	179601-23-1	78-93-3	142-82-5	110-54-3	95-47-6	127-18-4	109-99-9	108-88-3	79-01-6	75-69-4	75-01-4
Soil Gas Screening Level:										321			11		9.5
Indoor Air Screening Level:										9.62			0.334		0.284
Units:				µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Area	**Location**	**Field Sample ID**	**Sampling Date**												
Building C-23 and C-23 Annex	LAI-01	LAI-1_20170503	5/3/2017	10 U	4.4 U	12 U	4.2 U	3.6 U	4.4 U	6.9 U	3.0 U	3.8 U	5.5 U	5.7 U	2.6 U
Building C-23 and C-23 Annex	LAI-03a	LAI-3_20170502	5/2/2017	10 U	4.4 U	12 U	4.2 U	3.6 U	4.4 U	6.9 U	3.0 U	**8.0**	5.5 U	5.7 U	2.6 U
Building C-23 and C-23 Annex	LAI-05	LAI-5_20170502	5/2/2017	10 U	**7.0**	**13**	**20**	**47**	4.6 U	7.2 U	3.1 U	**30**	5.7 U	6.0 U	2.7 U
Building C-23 and C-23 Annex	LAI-07	LAI-7_20170503	5/3/2017	12 U	5.6 U	**45**	**28**	**57**	5.6 U	8.7 U	3.8 U	**21**	6.9 U	7.2 U	**240**
Building C-23 and C-23 Annex	LAI-13	LAI-13_20171004	10/4/2017	59 U	21 U	71 U	20 U	17 U	21 U	33 U	14 U	18 U	**15,000**	27 U	12 U
Building C-23 and C-23 Annex	LAI-14	LAI-14_20171004	10/4/2017	**62**	**21**	**110**	**13**	**15**	**8.0**	3.3 U	**16**	**18**	**1,200**	2.7 U	1.2 U
Building C-23 and C-23 Annex	LAI-15	LAI-15_20171004	10/4/2017	**41**	**9.4**	**71**	**10**	**16**	2.0 U	**18**	**13**	**16**	**9.0**	2.6 U	1.2 U
Building C-23 and C-23 Annex	LAI-16	LAI-16_20171004	10/4/2017	**180**	**16**	**520**	**62**	**92**	**5.4**	**36**	**17**	**60**	**41**	2.5 U	1.1 U
Building C-23 and C-23 Annex	LAI-23	LAI-23_20171006	10/6/2017	23 U	8.2 U	28 U	**110**	**250**	8.2 U	13 U	5.6 U	**18**	**30**	11 U	**4,200**
Building C-23 and C-23 Annex	LAI-28	LAI-28_20171006	10/6/2017	**43**	**7.7**	**150**	**80**	**160**	2.1 U	3.2 U	1.4 U	**35**	2.6 U	2.7 U	**69**
Building C-23 and C-23 Annex	RISG-35	RISG-35-190409	4/9/2019	--	--	--	--	--	--	**3.8**	--	--	**2.2**	--	2.2 U
Building C-23 and C-23 Annex	RISG-36	RISG-36-190409	4/9/2019	--	--	--	--	--	--	2.1 U	--	--	**2.8**	--	**23**
Building C-23 and C-23 Annex	RISG-37	RISG-37-190409	4/9/2019	--	--	--	--	--	--	2.2 U	--	--	**360**	--	2.2 U
Building C-23 and C-23 Annex	IA01-C23/IAR01C-23	IA01-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	**2.9**	--	**1.4**
Building C-23 and C-23 Annex	IA01-C23/IAR01C-23	IAR01-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	**0.50**	--	--
Building C-23 and C-23 Annex	IA02-C23/IAR02C-23	IA02-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	**2.2**	--	**1.0**
Building C-23 and C-23 Annex	IA02-C23/IAR02C-23	IAR02-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	**0.40**	--	--
Building C-23 and C-23 Annex	IA03-C23/IAR03-C23	IA03-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	**1.8**	--	**0.85**
Building C-23 and C-23 Annex	IA03-C23/IAR03-C23	IAR03-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	**0.55**	--	--
Building C-23 and C-23 Annex	IA04-C23	IA04-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	**1.5**	--	**0.73**
Building C-23 and C-23 Annex	IA05-C23/IAR05C-23	IA05-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	**0.89**	--	**0.42**
Building C-23 and C-23 Annex	IA05-C23/IAR05C-23	IAR05-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	**0.96**	--	--
Building C-23 and C-23 Annex	IA06-C23/IAR06-C23	IA06-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	**1.9**	--	**0.90**
Building C-23 and C-23 Annex	IA06-C23/IAR06-C23	IAR06-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	**0.42**	--	--
Building C-23 and C-23 Annex	IAR04-C23	IAR04-C23-171211	12/11/2017	--	--	--	--	--	--	--	--	--	**1.7**	--	--
Building C-23 and C-23 Annex	AA01	AA01-C23-171120	11/20/2017	--	--	--	--	--	--	--	--	--	**0.80**	--	**0.38**

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Abbreviations and Acronyms:

-- = not analyzed

CAS RN = Chemical Abstracts Service Registry No.

ID = identification

µg/m^3 = micrograms per cubic meter

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs																		
						Analyte:	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	4-isopropyltoluene	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	m-&p-Xylenes	Methylene Chloride	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene
						Screening Level:	2.6	2.5	72	1.6	1.7	71	--	1.7	5.2	340	790	--	1.5	880	--	1,300	2.8	270	32
						Exceedance:	Y	Y	Y	Y	Y	Y	--	Y	Y	Y	N	--	Y	N	--	N	Y	Y	Y
						Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																			
C-29/Former East Fuel Farm	B14	B14-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-6-19940415	6	6	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-SO-6-20001017	6	6	10/17/2000	Historical	--	--	--	--	--	--	--	25	--	580	--	--	--	--	--	--	--	25 U	--
C-29/Former East Fuel Farm	B14	B14-SO-6-20001017-SP	6	6	10/17/2000	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-15.25-19940415	15.25	15.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-22.75-19940415	22.75	22.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-3.25-19940415	3.25	3.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-5.25-19940415	5.25	5.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-10.5-19940415	10.5	10.5	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-12.75-19940415	12.75	12.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-15-19940415	15	15	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-20.25-19940415	20.25	20.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-6.5-19940415	6.5	6.5	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-11.5-19940415	11.5	11.5	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-13.25-19940415	13.25	13.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-15.75-19940415	15.75	15.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-20.25-19940415	20.25	20.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-27.75-19940415	27.75	27.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-37.75-19940415	37.75	37.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-8-19940415	8	8	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-8.75-19940415	8.75	8.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-11.25-19940415	11.25	11.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-13.25-19940415	13.25	13.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs																
Analyte:							1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	4-isopropyltoluene	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	m-&p-Xylenes	Methylene Chloride	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene
Screening Level:							2.6	2.5	72	1.6	1.7	71	--	1.7	5.2	340	790	--	1.5	880	--	1,300	2.8	270	32
Exceedance:							Y	Y	Y	Y	Y	Y	--	Y	Y	Y	N	--	Y	N	--	N	Y	Y	Y
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																			
C-29/Former East Fuel Farm	B18	B18-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-22.75-19940415	22.75	22.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-27.75-19940415	27.75	27.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-8.25-19940415	8.25	8.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-11.25-19940415	11.25	11.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-13.75-19940415	13.75	13.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-16.25-19940415	16.25	16.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-20.25-19940415	20.25	20.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-22.75-19940415	22.75	22.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-25.25-19940415	25.25	25.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-SO-6.25-20001017	6.25	6.25	10/17/2000	Historical	--	--	--	--	--	--	--	25	--	780	--	--	--	--	--	--	--	25 U	--
C-29/Former East Fuel Farm	B22	B22-SO-6.25-20001017_FD-SP	6.25	6.25	10/17/2000	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-SO-6.25-20001017-SP	6.25	6.25	10/17/2000	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-7.75-19940415	7.75	7.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-10.25-19940415	10.25	10.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-B3	C29-B3-SO-1-19960423	1	1	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-B3	C29-B3-SO-7.5-19960423	7.5	7.5	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-B3	C29-B3-SO-10-19960423	10	10	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-B3	C29-B3-SO-15-19960423	15	15	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-B4	C29-B4-SO-1-19960423	1	1	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-B4	C29-B4-SO-2.5-19960423	2.5	2.5	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-B4	C29-B4-SO-7.5-19960423	7.5	7.5	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-B4	C29-B4-SO-15-19960423	15	15	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs																
Analyte:							1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	4-isopropyltoluene	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	m-&p-Xylenes	Methylene Chloride	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene
Screening Level:							2.6	2.5	72	1.6	1.7	71	--	1.7	5.2	340	790	--	1.5	880	--	1,300	2.8	270	32
Exceedance:							Y	Y	Y	Y	Y	Y	--	Y	Y	Y	N	--	Y	N	--	N	Y	Y	Y
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																			
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-SO-2.5-19960419	2.5	2.5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-SO-5-19960419	5	5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-SO-12.5-19960419	12.5	12.5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-SO-15-19960419	15	15	4/19/1996	Historical	--	--	400 U	--	--	400 U	400 U	--	400 U	400 U	400 U	400 U	--	400 U	400 U	400 U	--	400 U	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-SO-2.5-19960419	2.5	2.5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-SO-5-19960419	5	5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-SO-10-19960419	10	10	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-SO-15-19960419	15	15	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP1	C29TP1-SO-1.2-19960411	1.2	1.2	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP1	C29TP1-SO-2-19960411	2	2	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP2	C29TP2-SO-1.6-19960411	1.6	1.6	4/11/1996	Historical	--	--	**14**	--	--	**6**	**0.84**	--	**0.3**	**0.47**	**0.69**	**4.3**	--	**0.91**	**1.7**	**0.26**	--	**0.45**	--
C-29/Former East Fuel Farm	C29-TP2	C29TP2-SO-3.5-19960411	3.5	3.5	4/11/1996	Historical	--	--	**0.40**	--	--	0.20 U	0.20 U	--	**3.9**	0.20 U	0.20 U	**0.48**	--	0.20 U	0.20 U	0.20 U	--	**0.32**	--
C-29/Former East Fuel Farm	C29-TP3	C29TP3-SO-0.4-19960411	0.4	0.4	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP3	C29TP3-SO-2-19960411	2	2	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP4	C29TP4-SO-0.8-19960411	0.8	0.8	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP4	C29TP4-SO-1.8-19960411	1.8	1.8	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP5A	C29TP5A-SO-0.5-19960411	0.5	0.5	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP5A	C29TP5A-SO-2.6-19960411	2.6	2.6	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP6	C29TP6-SO-1.2-19960411	1.2	1.2	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP7	C29TP7-SO-1.4-19960411	1.4	1.4	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-TP8	C29TP8-SO-1-19960411	1	1	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-SO-7-20001212	7	7	12/12/2000	Historical	--	--	--	--	--	--	--	--	**46**	--	--	--	--	--	--	--	--	--	**12**
C-29/Former East Fuel Farm	DW2	DW2-SO-17-20001212	17	17	12/12/2000	Historical	--	--	--	--	--	--	--	--	**87**	--	--	--	--	--	--	--	--	--	10 U
C-29/Former East Fuel Farm	DW2	DW2-SO-27-20001212	27	27	12/12/2000	Historical	--	--	--	--	--	--	--	--	**200**	--	--	--	--	--	--	--	--	--	10 U
C-29/Former East Fuel Farm	DW2	DW2-SO-37-20001212	37	37	12/12/2000	Historical	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--	--	--	--	--	10 U
C-29/Former East Fuel Farm	DW2	DW2-SO-47-20001212	47	47	12/12/2000	Historical	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--	--	--	--	--	10 U
C-29/Former East Fuel Farm	DW2	DW2-SO-57-20001212	57	57	12/12/2000	Historical	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--	--	--	--	--	10 U
C-29/Former East Fuel Farm	DW2	DW2-SO-98.5-20001212	98.5	98.5	12/12/2000	Historical	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--	--	--	--	--	10 U
C-29/Former East Fuel Farm	DW2	DW2-SO-117-20001212	117	117	12/12/2000	Historical	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--	--	--	--	--	10 U

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Screening Level:							2.6	2.5	72	1.6	1.7	71	--	1.7	5.2	340	790	--	1.5	880	--	1,300	2.8	270	32
Exceedance:							Y	Y	Y	Y	Y	Y	--	Y	Y	Y	N	--	Y	N	--	N	Y	Y	Y
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																			
C-29/Former East Fuel Farm	MW1	B16-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	B16-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	B16-10-19940415	10	10	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	B16-12.75-19940415	12.75	12.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	B16-23.75-19940415	23.75	23.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-3.5-19940415	3.5	3.5	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-5.25-19940415	5.25	5.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-7.75-19940415	7.75	7.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-10.25-19940415	10.25	10.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-12.5-19940415	12.5	12.5	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-16.25-19940415	16.25	16.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-22.75-19940415	22.75	22.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-3.25-19940415	3.25	3.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-5.25-19940415	5.25	5.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-7.25-19940415	7.25	7.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-13.25-19940415	13.25	13.25	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-30	RISB-30-(9-10')	9	10	3/22/2019	ShallowInvest-Phase1	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-30	RISB-30-(19-20')	19	20	3/22/2019	ShallowInvest-Phase1	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.8 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-31	RISB-31-(2-3')	2	3	3/22/2019	ShallowInvest-Phase1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-31	DUP-SOIL-190322	6.5	7.5	3/22/2019	ShallowInvest-Phase1	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.6 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-31	RISB-31-(6.5-7.5')	6.5	7.5	3/22/2019	ShallowInvest-Phase1	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.7 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-31	RISB-31-(14-15')	14	15	3/22/2019	ShallowInvest-Phase1	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.6 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-41	RISB-41-(1-2')	1	2	4/4/2019	ShallowInvest-Phase1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-41	RISB-41-(5.5-6.5')	5.5	6.5	4/4/2019	ShallowInvest-Phase1	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.8 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-41	RISB-41-(19-20')	19	20	4/4/2019	ShallowInvest-Phase1	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs																
Analyte:							1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	4-isopropyltoluene	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	m-&p-Xylenes	Methylene Chloride	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene
Screening Level:							2.6	2.5	72	1.6	1.7	71	--	1.7	5.2	340	790	--	1.5	880	--	1,300	2.8	270	32
Exceedance:							Y	Y	Y	Y	Y	Y	--	Y	Y	Y	N	--	Y	N	--	N	Y	Y	Y
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																			
C-29/Former East Fuel Farm	RISB-42	RISB-42-(6.5-7.5')	6.5	7.5	4/3/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**34**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-42	RISB-42-(11.5-12.5')	11.5	12.5	4/3/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	**2.0**	**820**	10 U	10 U	--	1.7 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-42	RISB-42-(19-20')	19	20	4/3/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-43	RISB-43-(3-4')	3	4	4/4/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-43	RISB-43-(6-7')	6	7	4/4/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.9 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-43	RISB-43-(14-15')	14	15	4/4/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-44	RISB-44-(5-6')	5	6	4/5/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-44	DUP-SOIL-190405	10.5	11.5	4/5/2019	ShallowInvest-Phasel	1.5 U	**3.1**	10 U	**120**	1.5 U	10 U	10 U	1.5 U	**1,000**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	**300**
C-29/Former East Fuel Farm	RISB-44	RISB-44-(10.5-11.5')	10.5	11.5	4/5/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	**20**	1.5 U	10 U	10 U	1.5 U	**1,400**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	**37**
C-29/Former East Fuel Farm	RISB-44	RISB-44-(19-20')	19	20	4/5/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**13**	10 U	10 U	--	1.8 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-45	RISB-45-(1.5-2')	1.5	2	4/4/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	RISB-45-(14-15')	14	15	4/4/2019	ShallowInvest-Phasel	**1.5**	1.5 U	10 U	**6.4**	**1.5**	10 U	10 U	1.5 U	**26**	10 U	10 U	--	1.7 U	10 U	--	10 U	**54,000**	10 U	10 U
C-29/Former East Fuel Farm	RISB-45	RISB-45-(34-35')	34	35	4/4/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.6 U	10 U	--	10 U	**2.1**	10 U	10 U
C-29/Former East Fuel Farm	RISB-46	RISB-46-(3-4')	3	4	4/3/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-(7.5-8.5')	7.5	8.5	4/3/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**460**	10 U	10 U	--	1.5 U	10 U	--	10 U	**10**	10 U	10 U
C-29/Former East Fuel Farm	RISB-46	RISB-46-(29.5-30.5')	29.5	30.5	4/3/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	**1.8**	1.5 U	10 U	10 U	1.5 U	**22**	10 U	10 U	--	1.7 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-46	RISB-46-(39-40')	39	40	4/3/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-47	RISB-47-(6.5-7.5')	6.5	7.5	4/5/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**630**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	**10**
C-29/Former East Fuel Farm	RISB-47	RISB-47-(27-28')	27	28	4/5/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-48	RISB-48-(5.5-6.5')	5.5	6.5	4/5/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**1,000**	10 U	10 U	--	2.2 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-48	RISB-48-(9-10')	9	10	4/5/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	**10**	1.5 U	10 U	10 U	1.5 U	**690**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	**27**
C-29/Former East Fuel Farm	RISB-48	RISB-48-(14-15')	14	15	4/5/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	**4.3**	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-52	RISB-52-(1.5-2.5')	1.5	2.5	3/22/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-52	RISB-52-(10.5-11.5')	10.5	11.5	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.7 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-52	RISB-52-(19-20')	19	20	3/22/2019	ShallowInvest-Phasel	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-64	RISB-64-(10-11')	10	11	8/30/2019	Investigation-Phasell	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-64	RISB-64-(24-25')	24	25	8/30/2019	Investigation-Phasell	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-65	RISB-65-(5-6')	5	6	8/29/2019	Investigation-Phasell	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	2.0 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-65	RISB-65-(19-20')	19	20	8/29/2019	Investigation-Phasell	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs																
Analyte:							1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	4-isopropyltoluene	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	m-&p-Xylenes	Methylene Chloride	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene
Screening Level:							2.6	2.5	72	1.6	1.7	71	--	1.7	5.2	340	790	--	1.5	880	--	1,300	2.8	270	32
Exceedance:							Y	Y	Y	Y	Y	Y	--	Y	Y	Y	N	--	Y	N	--	N	Y	Y	Y
Units:							µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																			
C-29/Former East Fuel Farm	RISB-66	DUP-SOIL-190829	9	10	8/29/2019	Investigation-PhaseII	**2.1**	**2.3**	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**820 J**	10 U	10 U	--	1.5 U	10 U	--	10 U	**2.7**	10 U	10 U
C-29/Former East Fuel Farm	RISB-66	RISB-66-(9-10')	9	10	8/29/2019	Investigation-PhaseII	**2.8**	**2.8**	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**480 J**	10 U	10 U	--	1.5 U	10 U	--	10 U	**3.0**	10 U	10 U
C-29/Former East Fuel Farm	RISB-66	RISB-66-(44-45')	44	45	8/29/2019	Investigation-PhaseII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-67	RISB-67-(14-15')	14	15	8/30/2019	Investigation-PhaseII	**1.7**	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**160**	10 U	10 U	--	1.5 U	10 U	--	10 U	**1.7**	10 U	10 U
C-29/Former East Fuel Farm	RISB-67	RISB-67-(54-55')	54	55	8/30/2019	Investigation-PhaseII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**2.7**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-68	RISB-68-(26.5-27.5')	26.5	27.5	8/28/2019	Investigation-PhaseII	1.5 U	1.5 U	10 U	**2.8**	1.5 U	10 U	10 U	1.5 U	**34 J**	10 U	10 U	--	1.5 U	10 U	--	10 U	**4.3**	10 U	10 U
C-29/Former East Fuel Farm	RISB-68	RISB-68-(49-50')	49	50	8/28/2019	Investigation-PhaseII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-74	RISB-74-(7-8')	7	8	11/21/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.6 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-74	RISB-74-(19-20')	19	20	11/21/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-74	RISB-74-(29-30')	29	30	11/21/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-75	RISB-75-(7-8')	7	8	11/22/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-75	RISB-75-(17-18')	17	18	11/22/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-75	RISB-75-(29-30')	29	30	11/22/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-76	RISB-76-(9-10')	9	10	11/22/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**2.2**	10 U	10 U	--	1.5 U	10 U	--	10 U	**1.5**	10 U	10 U
C-29/Former East Fuel Farm	RISB-76	RISB-76-(19-20')	19	20	11/22/2022	PhaseIII	1.5 U	1.5 U	10 U	**5.9**	1.5 U	10 U	10 U	1.5 U	**30**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-76	RISB-76-(29-30')	29	30	11/22/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-77	RISB-77-(9-10')	9	10	11/23/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.7 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-77	RISB-77-(19-20')	19	20	11/23/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**12**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-77	RISB-77-(29-30')	29	30	11/23/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-78	RISB-78-(9-10')	9	10	11/29/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.6 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-78	RISB-78-(19-20')	19	20	11/29/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-78	RISB-78-(29-30')	29	30	11/29/2022	PhaseIII	1.5 UJ	1.5 UJ	10 UJ	1.5 UJ	1.5 UJ	10 UJ	10 UJ	1.5 UJ	1.5 UJ	10 UJ	10 UJ	--	1.6 UJ	10 UJ	--	10 UJ	1.5 UJ	10 UJ	10 UJ
C-29/Former East Fuel Farm	RISB-79	RISB-79-(9-10')	9	10	11/29/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-79	RISB-79-(19-20')	19	20	11/29/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-79	RISB-79-(29-30')	29	30	11/29/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-80	DUP-SOIL-221108	9	10	11/8/2022	PhaseIII	1.5 U	1.5 U	10 U	**4.0 J**	1.5 U	10 U	10 U	1.5 U	**6.9 J**	10 U	10 U	--	1.9 U	10 U	--	10 U	**4.9**	10 U	10 U
C-29/Former East Fuel Farm	RISB-80	RISB-80-(9-10')	9	10	11/8/2022	PhaseIII	1.5 U	1.5 U	10 U	**7.1 J**	1.5 U	10 U	10 U	1.5 U	**19 J**	10 U	10 U	--	1.5 U	10 U	--	10 U	**6.4**	10 U	10 U
C-29/Former East Fuel Farm	RISB-80	RISB-80-(11-12')	11	12	11/8/2022	PhaseIII	1.5 U	**6.5**	10 U	**150**	1.5 U	10 U	10 U	1.5 U	**1,200**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	**270**
C-29/Former East Fuel Farm	RISB-80	RISB-80-(24-25')	24	25	11/9/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	**5.5**	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs																			
						Analyte:	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	4-isopropyltoluene	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	m-&p-Xylenes	Methylene Chloride	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene
						Screening Level:	2.6	2.5	72	1.6	1.7	71	--	1.7	5.2	340	790	--	1.5	880	--	1,300	2.8	270	32
						Exceedance:	Y	Y	Y	Y	Y	Y	--	Y	Y	Y	N	--	Y	N	--	N	Y	Y	Y
						Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																				
C-29/Former East Fuel Farm	RISB-80	RISB-80-(34-35')	34	35	11/9/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	RISB-80	RISB-80-(39-40')	39	40	11/9/2022	PhaseIII	1.5 U	1.5 U	10 U	1.5 U	1.5 U	10 U	10 U	1.5 U	1.5 U	10 U	10 U	--	1.5 U	10 U	--	10 U	1.5 U	10 U	10 U
C-29/Former East Fuel Farm	TC-2	TC-2-SO-8.5-19961220	8.5	8.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-11.5-19961220	11.5	11.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-13.5-19961220	13.5	13.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	64.5	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-16.5-19961220	16.5	16.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-18.5-19961220	18.5	18.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-23.5-19961220	23.5	23.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-3	TC-3-SO-8.5-19961220	8.5	8.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	55.0	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-3	TC-3-SO-18.5-19961220	18.5	18.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-3	TC-3-SO-23.5-19961220	23.5	23.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-3	TC-3-SO-28.5-19961220	28.5	28.5	12/20/1996	Historical	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--	--	--	--	--	--

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs			TPH					Conventionals	Metals						
						Analyte:	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as JP-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Petroleum Hydrocarbons	Total Organic Carbon	Arsenic	Barium	Chromium, Total	Lead	Mercury	Nickel	Zinc
						Screening Level:	1.5	0.09	830	100	2,000	2,000	2,000	2,000	--	7	--	42	150	0.1	--	--
						Exceedance:	Y	Y	Y	Y	N	N	Y	N	--	N	--	Y	N	N	--	--
						Units:	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**																
C-29/Former East Fuel Farm	B14	B14-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-6-19940415	6	6	4/15/1994	Historical	--	--	--	--	--	--	--	**61**	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-SO-6-20001017	6	6	10/17/2000	Historical	--	--	**1,400**	**810**	**530**	25 U	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-SO-6-20001017-SP	6	6	10/17/2000	Historical	--	--	--	**113**	**210**	**29**	--	**61**	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-15.25-19940415	15.25	15.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B14	B14-22.75-19940415	22.75	22.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-3.25-19940415	3.25	3.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-5.25-19940415	5.25	5.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-10.5-19940415	10.5	10.5	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-12.75-19940415	12.75	12.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-15-19940415	15	15	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B15	B15-20.25-19940415	20.25	20.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-6.5-19940415	6.5	6.5	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-11.5-19940415	11.5	11.5	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-13.25-19940415	13.25	13.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-15.75-19940415	15.75	15.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-20.25-19940415	20.25	20.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-27.75-19940415	27.75	27.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B17	B17-37.75-19940415	37.75	37.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-8-19940415	8	8	4/15/1994	Historical	--	--	--	25 U	25 U	**33**	--	**137**	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-8.75-19940415	8.75	8.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-11.25-19940415	11.25	11.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-13.25-19940415	13.25	13.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs			TPH					Conventionals	Metals						
						Analyte:	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as JP-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Petroleum Hydrocarbons	Total Organic Carbon	Arsenic	Barium	Chromium, Total	Lead	Mercury	Nickel	Zinc
						Screening Level:	1.5	0.09	830	100	2,000	2,000	2,000	2,000	--	7	--	42	150	0.1	--	--
						Exceedance:	Y	Y	Y	Y	N	N	Y	N	--	N	--	Y	N	N	--	--
						Units:	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																
C-29/Former East Fuel Farm	B18	B18-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-22.75-19940415	22.75	22.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B18	B18-27.75-19940415	27.75	27.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-8.25-19940415	8.25	8.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-11.25-19940415	11.25	11.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-13.75-19940415	13.75	13.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-16.25-19940415	16.25	16.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-20.25-19940415	20.25	20.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-22.75-19940415	22.75	22.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B19	B19-25.25-19940415	25.25	25.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	**101**	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-SO-6.25-20001017	6.25	6.25	10/17/2000	Historical	--	--	**1,700**	**1,300**	**880**	25 U	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-SO-6.25-20001017_FD-SP	6.25	6.25	10/17/2000	Historical	--	--	--	**376**	--	**18**	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-SO-6.25-20001017-SP	6.25	6.25	10/17/2000	Historical	--	--	--	**470**	**460**	**54**	--	**101**	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-7.75-19940415	7.75	7.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	B22	B22-10.25-19940415	10.25	10.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-B3	C29-B3-SO-1-19960423	1	1	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**25**	--	--	--	--
C-29/Former East Fuel Farm	C29-B3	C29-B3-SO-7.5-19960423	7.5	7.5	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**23**	--	--	--	--
C-29/Former East Fuel Farm	C29-B3	C29-B3-SO-10-19960423	10	10	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**23**	--	--	--	--
C-29/Former East Fuel Farm	C29-B3	C29-B3-SO-15-19960423	15	15	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**18**	--	--	--	--
C-29/Former East Fuel Farm	C29-B4	C29-B4-SO-1-19960423	1	1	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**19**	--	--	--	--
C-29/Former East Fuel Farm	C29-B4	C29-B4-SO-2.5-19960423	2.5	2.5	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**18**	--	--	--	--
C-29/Former East Fuel Farm	C29-B4	C29-B4-SO-7.5-19960423	7.5	7.5	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**18**	--	--	--	--
C-29/Former East Fuel Farm	C29-B4	C29-B4-SO-15-19960423	15	15	4/23/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**19**	--	--	--	--

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs			TPH					Conventionals	Metals						
						Analyte:	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as JP-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Petroleum Hydrocarbons	Total Organic Carbon	Arsenic	Barium	Chromium, Total	Lead	Mercury	Nickel	Zinc
						Screening Level:	1.5	0.09	830	100	2,000	2,000	2,000	2,000	--	7	--	42	150	0.1	--	--
						Exceedance:	Y	Y	Y	Y	N	N	Y	N	--	N	--	Y	N	N	--	--
						Units:	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-SO-2.5-19960419	2.5	2.5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**21**	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-SO-5-19960419	5	5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**15**	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-SO-12.5-19960419	12.5	12.5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**19**	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-SO-15-19960419	15	15	4/19/1996	Historical	**17,000**	400 U	--	--	--	--	--	--	--	--	--	**19**	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-SO-2.5-19960419	2.5	2.5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**20**	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-SO-5-19960419	5	5	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**19**	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-SO-10-19960419	10	10	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**17**	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-SO-15-19960419	15	15	4/19/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**18**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP1	C29TP1-SO-1.2-19960411	1.2	1.2	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**24**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP1	C29TP1-SO-2-19960411	2	2	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**23**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP2	C29TP2-SO-1.6-19960411	1.6	1.6	4/11/1996	Historical	0.20 U	0.20 U	--	--	--	--	--	--	--	--	--	**19**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP2	C29TP2-SO-3.5-19960411	3.5	3.5	4/11/1996	Historical	**0.85**	**0.33**	--	--	--	--	--	--	--	--	--	**14**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP3	C29TP3-SO-0.4-19960411	0.4	0.4	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**16**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP3	C29TP3-SO-2-19960411	2	2	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**15**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP4	C29TP4-SO-0.8-19960411	0.8	0.8	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**18**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP4	C29TP4-SO-1.8-19960411	1.8	1.8	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**13**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP5A	C29TP5A-SO-0.5-19960411	0.5	0.5	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**760**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP5A	C29TP5A-SO-2.6-19960411	2.6	2.6	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**16**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP6	C29TP6-SO-1.2-19960411	1.2	1.2	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**20**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP7	C29TP7-SO-1.4-19960411	1.4	1.4	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**15**	--	--	--	--
C-29/Former East Fuel Farm	C29-TP8	C29TP8-SO-1-19960411	1	1	4/11/1996	Historical	--	--	--	--	--	--	--	--	--	--	--	**25**	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-SO-7-20001212	7	7	12/12/2000	Historical	**380**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-SO-17-20001212	17	17	12/12/2000	Historical	120 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-SO-27-20001212	27	27	12/12/2000	Historical	**480**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-SO-37-20001212	37	37	12/12/2000	Historical	10 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-SO-47-20001212	47	47	12/12/2000	Historical	10 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-SO-57-20001212	57	57	12/12/2000	Historical	10 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-SO-98.5-20001212	98.5	98.5	12/12/2000	Historical	10 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-SO-117-20001212	117	117	12/12/2000	Historical	10 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Paine Field – Everett, Washington

						Analyte Group:	VOCs			TPH					Conventionals	Metals						
						Analyte:	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as JP-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Petroleum Hydrocarbons	Total Organic Carbon	Arsenic	Barium	Chromium, Total	Lead	Mercury	Nickel	Zinc
						Screening Level:	1.5	0.09	830	100	2,000	2,000	2,000	2,000	--	7	--	42	150	0.1	--	--
						Exceedance:	Y	Y	Y	Y	N	N	Y	N	--	N	--	Y	N	N	--	--
						Units:	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**																
C-29/Former East Fuel Farm	MW1	B16-3.75-19940415	3.75	3.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	B16-6.25-19940415	6.25	6.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	B16-10-19940415	10	10	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	B16-12.75-19940415	12.75	12.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	B16-23.75-19940415	23.75	23.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-3.5-19940415	3.5	3.5	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-5.25-19940415	5.25	5.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-7.75-19940415	7.75	7.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-10.25-19940415	10.25	10.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-12.5-19940415	12.5	12.5	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-16.25-19940415	16.25	16.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	B20-22.75-19940415	22.75	22.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-3.25-19940415	3.25	3.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-5.25-19940415	5.25	5.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-7.25-19940415	7.25	7.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-13.25-19940415	13.25	13.25	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	B21-17.75-19940415	17.75	17.75	4/15/1994	Historical	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-30	RISB-30-(9-10')	9	10	3/22/2019	ShallowInvest-Phasel	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-30	RISB-30-(19-20')	19	20	3/22/2019	ShallowInvest-Phasel	1.5 U	**0.061**	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-31	RISB-31-(2-3')	2	3	3/22/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	**3.6**	--	**29**	**3.2**	**0.024**	--	--
C-29/Former East Fuel Farm	RISB-31	DUP-SOIL-190322	6.5	7.5	3/22/2019	ShallowInvest-Phasel	1.5 U	0.050 U	20 U	--	--	25 U	50 U	--	**0.12**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-31	RISB-31-(6.5-7.5')	6.5	7.5	3/22/2019	ShallowInvest-Phasel	1.5 U	0.050 U	20 U	--	--	25 U	50 U	--	**0.17**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-31	RISB-31-(14-15')	14	15	3/22/2019	ShallowInvest-Phasel	1.5 U	0.050 U	20 U	--	--	25 U	50 U	--	**0.14**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-41	RISB-41-(1-2')	1	2	4/4/2019	ShallowInvest-Phasel	--	--	--	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-41	RISB-41-(5.5-6.5')	5.5	6.5	4/4/2019	ShallowInvest-Phasel	**4.2**	0.050 U	20 U	--	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-41	RISB-41-(19-20')	19	20	4/4/2019	ShallowInvest-Phasel	**2.4**	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
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TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:							VOCs			TPH					Conventionals	Metals						
Analyte:							Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as JP-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Petroleum Hydrocarbons	Total Organic Carbon	Arsenic	Barium	Chromium, Total	Lead	Mercury	Nickel	Zinc
Screening Level:							1.5	0.09	830	100	2,000	2,000	2,000	2,000	--	7	--	42	150	0.1	--	--
Exceedance:							Y	Y	Y	Y	N	N	Y	N	--	N	--	Y	N	N	--	--
Units:							µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																
C-29/Former East Fuel Farm	RISB-42	RISB-42-(6.5-7.5')	6.5	7.5	4/3/2019	ShallowInvest-Phasel	1.5 U	**13**	20 U	--	--	--	--	--	**0.16**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-42	RISB-42-(11.5-12.5')	11.5	12.5	4/3/2019	ShallowInvest-Phasel	**9.8**	**10**	20 U	3.0 U	--	25 U	50 U	--	**0.23**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-42	RISB-42-(19-20')	19	20	4/3/2019	ShallowInvest-Phasel	1.5 U	**0.13**	20 U	--	--	--	--	--	**0.15**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-43	RISB-43-(3-4')	3	4	4/4/2019	ShallowInvest-Phasel	--	--	--	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-43	RISB-43-(6-7')	6	7	4/4/2019	ShallowInvest-Phasel	**3.4**	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-43	RISB-43-(14-15')	14	15	4/4/2019	ShallowInvest-Phasel	**1.8**	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-44	RISB-44-(5-6')	5	6	4/5/2019	ShallowInvest-Phasel	--	--	--	3.0 U	--	25 U	**71**	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-44	DUP-SOIL-190405	10.5	11.5	4/5/2019	ShallowInvest-Phasel	**5,200**	**11**	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-44	RISB-44-(10.5-11.5')	10.5	11.5	4/5/2019	ShallowInvest-Phasel	**7,000**	**4.0**	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-44	RISB-44-(19-20')	19	20	4/5/2019	ShallowInvest-Phasel	**11**	**0.50**	20 U	--	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	RISB-45-(1.5-2')	1.5	2	4/4/2019	ShallowInvest-Phasel	--	--	--	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	RISB-45-(14-15')	14	15	4/4/2019	ShallowInvest-Phasel	**230,000**	**0.25**	20 U	**32**	--	**120**	**290**	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	RISB-45-(34-35')	34	35	4/4/2019	ShallowInvest-Phasel	**17**	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-(3-4')	3	4	4/3/2019	ShallowInvest-Phasel	--	--	--	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-(7.5-8.5')	7.5	8.5	4/3/2019	ShallowInvest-Phasel	**3,500**	**0.75**	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-(29.5-30.5')	29.5	30.5	4/3/2019	ShallowInvest-Phasel	**20**	**0.52**	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-(39-40')	39	40	4/3/2019	ShallowInvest-Phasel	1.5 U	**0.12**	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-47	RISB-47-(6.5-7.5')	6.5	7.5	4/5/2019	ShallowInvest-Phasel	**9,600**	**0.55**	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-47	RISB-47-(27-28')	27	28	4/5/2019	ShallowInvest-Phasel	1.5 U	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-48	RISB-48-(5.5-6.5')	5.5	6.5	4/5/2019	ShallowInvest-Phasel	**810**	**6.7**	20 U	3.0 U	--	25 U	50 U	--	**0.064**	**2.1**	--	**31**	**1.7**	0.020 U	--	--
C-29/Former East Fuel Farm	RISB-48	RISB-48-(9-10')	9	10	4/5/2019	ShallowInvest-Phasel	**2,700**	**6.1**	20 U	3.0 U	--	25 U	50 U	--	--	**2.5**	--	**450**	**1.8**	0.020 U	--	--
C-29/Former East Fuel Farm	RISB-48	RISB-48-(14-15')	14	15	4/5/2019	ShallowInvest-Phasel	**1.5**	0.050 U	20 U	--	--	25 U	50 U	--	**0.092**	**2.8**	--	**36**	**2.2**	0.020 U	--	--
C-29/Former East Fuel Farm	RISB-52	RISB-52-(1.5-2.5')	1.5	2.5	3/22/2019	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	**3.4**	--	**36**	**3.4**	0.020 U	--	--
C-29/Former East Fuel Farm	RISB-52	RISB-52-(10.5-11.5')	10.5	11.5	3/22/2019	ShallowInvest-Phasel	1.5 U	**0.10**	20 U	--	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-52	RISB-52-(19-20')	19	20	3/22/2019	ShallowInvest-Phasel	1.5 U	0.050 U	20 U	--	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-64	RISB-64-(10-11')	10	11	8/30/2019	Investigation-Phasell	1.5 U	0.050 U	20 U	3.0 U	--	25 U	**180**	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-64	RISB-64-(24-25')	24	25	8/30/2019	Investigation-Phasell	1.5 U	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-65	RISB-65-(5-6')	5	6	8/29/2019	Investigation-Phasell	**1.7**	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-65	RISB-65-(19-20')	19	20	8/29/2019	Investigation-Phasell	1.5 U	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--

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							VOCs			TPH					Conventionals	Metals						
						Analyte:	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as JP-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Petroleum Hydrocarbons	Total Organic Carbon	Arsenic	Barium	Chromium, Total	Lead	Mercury	Nickel	Zinc
						Screening Level:	1.5	0.09	830	100	2,000	2,000	2,000	2,000	--	7	--	42	150	0.1	--	--
						Exceedance:	Y	Y	Y	Y	N	N	Y	N	--	N	--	Y	N	N	--	--
						Units:	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task																
C-29/Former East Fuel Farm	RISB-66	DUP-SOIL-190829	9	10	8/29/2019	Investigation-Phasell	**20,000 J**	**0.50**	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-66	RISB-66-(9-10')	9	10	8/29/2019	Investigation-Phasell	**3,900 J**	**0.58**	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-66	RISB-66-(44-45')	44	45	8/29/2019	Investigation-Phasell	**6.8**	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-67	RISB-67-(14-15')	14	15	8/30/2019	Investigation-Phasell	**7,900**	**1.2**	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-67	RISB-67-(54-55')	54	55	8/30/2019	Investigation-Phasell	**9.8**	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-68	RISB-68-(26.5-27.5')	26.5	27.5	8/28/2019	Investigation-Phasell	**7,900**	**0.10**	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-68	RISB-68-(49-50')	49	50	8/28/2019	Investigation-Phasell	1.5 U	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-74	RISB-74-(7-8')	7	8	11/21/2022	PhaseIII	1.5 U	**0.069**	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-74	RISB-74-(19-20')	19	20	11/21/2022	PhaseIII	1.5 U	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-74	RISB-74-(29-30')	29	30	11/21/2022	PhaseIII	1.5 U	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-75	RISB-75-(7-8')	7	8	11/22/2022	PhaseIII	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-75	RISB-75-(17-18')	17	18	11/22/2022	PhaseIII	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-75	RISB-75-(29-30')	29	30	11/22/2022	PhaseIII	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	RISB-76-(9-10')	9	10	11/22/2022	PhaseIII	**1,000**	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	RISB-76-(19-20')	19	20	11/22/2022	PhaseIII	**6,400**	**0.35**	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	RISB-76-(29-30')	29	30	11/22/2022	PhaseIII	**3.2**	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-77	RISB-77-(9-10')	9	10	11/23/2022	PhaseIII	1.5 U	**0.11**	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-77	RISB-77-(19-20')	19	20	11/23/2022	PhaseIII	**13**	**0.23**	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-77	RISB-77-(29-30')	29	30	11/23/2022	PhaseIII	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-78	RISB-78-(9-10')	9	10	11/29/2022	PhaseIII	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-78	RISB-78-(19-20')	19	20	11/29/2022	PhaseIII	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-78	RISB-78-(29-30')	29	30	11/29/2022	PhaseIII	1.5 UJ	0.050 UJ	20 UJ	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-79	RISB-79-(9-10')	9	10	11/29/2022	PhaseIII	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-79	RISB-79-(19-20')	19	20	11/29/2022	PhaseIII	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-79	RISB-79-(29-30')	29	30	11/29/2022	PhaseIII	1.5 U	0.050 U	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-80	DUP-SOIL-221108	9	10	11/8/2022	PhaseIII	**940 J**	**0.17**	20 U	3.0 U	--	25 U	50 U	--	--	**1.7**	--	**29**	**1.8**	0.020 U	--	--
C-29/Former East Fuel Farm	RISB-80	RISB-80-(9-10')	9	10	11/8/2022	PhaseIII	**3,500 J**	**0.23**	20 U	3.0 U	--	25 U	50 U	--	--	**1.7**	--	**34**	**2.0**	**0.022**	--	--
C-29/Former East Fuel Farm	RISB-80	RISB-80-(11-12')	11	12	11/8/2022	PhaseIII	**15,000**	**6.4**	20 U	3.0 U	--	25 U	50 U	--	--	**2.8**	**68**	**31**	**2.3**	**0.023**	**47**	**44**
C-29/Former East Fuel Farm	RISB-80	RISB-80-(24-25')	24	25	11/9/2022	PhaseIII	**2,900**	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	**3.9**	--	**34**	**2.6**	**0.021**	--	--

Table 10
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs			TPH					Conventionals	Metals						
						Analyte:	Trichloroethene	Vinyl Chloride	Xylenes, Total	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as JP-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	Total Petroleum Hydrocarbons	Total Organic Carbon	Arsenic	Barium	Chromium, Total	Lead	Mercury	Nickel	Zinc
						Screening Level:	1.5	0.09	830	100	2,000	2,000	2,000	2,000	--	7	--	42	150	0.1	--	--
						Exceedance:	Y	Y	Y	Y	N	N	Y	N	--	N	--	Y	N	N	--	--
						Units:	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Area(s)	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**																
C-29/Former East Fuel Farm	RISB-80	RISB-80-(34-35')	34	35	11/9/2022	PhaseIII	1.5 U	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	**3.3**	--	**39**	**3.2**	**0.027**	--	--
C-29/Former East Fuel Farm	RISB-80	RISB-80-(39-40')	39	40	11/9/2022	PhaseIII	1.5 U	0.050 U	20 U	3.0 U	--	25 U	50 U	--	--	**2.9**	--	**35**	**2.4**	**0.022**	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-8.5-19961220	8.5	8.5	12/20/1996	Historical	**972**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-11.5-19961220	11.5	11.5	12/20/1996	Historical	**705**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-13.5-19961220	13.5	13.5	12/20/1996	Historical	**3,360**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-16.5-19961220	16.5	16.5	12/20/1996	Historical	**1,940**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-18.5-19961220	18.5	18.5	12/20/1996	Historical	**1,430**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-2	TC-2-SO-23.5-19961220	23.5	23.5	12/20/1996	Historical	**173**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-3	TC-3-SO-8.5-19961220	8.5	8.5	12/20/1996	Historical	**1,430**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-3	TC-3-SO-18.5-19961220	18.5	18.5	12/20/1996	Historical	50 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-3	TC-3-SO-23.5-19961220	23.5	23.5	12/20/1996	Historical	50 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	TC-3	TC-3-SO-28.5-19961220	28.5	28.5	12/20/1996	Historical	50 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Abbreviations and Acronyms:

-- = not analyzed
ID = identification
DRO = diesel-range organics
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ND = not detected
ORO = oil-range organics
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						VOCs												
Analyte:						Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)
CAS RN:						127-18-4	79-01-6	156-59-2	75-01-4	630-20-6	71-55-6	79-34-5	76-13-1	79-00-5	75-34-3	75-35-4	95-63-6	106-93-4
Screening Level:						5	0.54	16	0.029	1.7	200	0.5	--	0.77	7.7	7	80	0.022
Exceedance						Y	Y	Y	Y		Y			Y	Y	Y		
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**													
C-29/Former East Fuel Farm	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	**2.7**	**0.19**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	**0.089**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-Phasel	2.0 U	**85**	**81**	**4.4**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-76	DUP-GW-221122	11/22/2022	N	PhaseIII	**7.0**	**1,700 J**	**290**	**19**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**19**	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	AF-1	AF-1-WG-19960105	1/5/1996	N	Historical	--	**31**	**13**	**4.8**	--	--	--	--	--	--	--	**2.6**	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19960507	5/7/1996	N	Historical	--	**74,700**	**21,000**	800 U	--	--	--	--	--	--	5 U	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19990224	2/24/1999	N	Historical	4 U	**18,000**	**26,000**	**80**	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-181108	11/8/2018	N	Baseline	2.0 U	**12,000**	**8,300**	**1,300**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**71**	2.0 U	0.010 U
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-20190829	8/29/2019	N	Investigation-PhaseII	2.0 U	**15,000**	**11,000**	**940**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**95**	2.0 U	0.010 U
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-WG-19990507	5/7/1999	N	Historical	--	**10,400**	**956**	80 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-181108	11/8/2018	N	Baseline	2.0 U	**85**	**99**	**0.24**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-20190905	9/5/2019	N	Investigation-PhaseII	2.0 U	**250**	**230**	**0.27**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	HMB1	HMB1-WG-19990224	2/24/1999	N	Historical	4 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	--	--
C-29/Former East Fuel Farm	HMB1	HMB-1-181108	11/8/2018	N	Baseline	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	HMB1	HMB1-20190829	8/29/2019	N	Investigation-PhaseII	2.0 U	**0.72**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	MW1	MW1-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19960507	5/7/1996	N	Historical	--	**1,490**	**3,730**	80 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19990224	2/24/1999	N	Historical	4 U	**4,400**	**6,700**	**85**	--	--	--	--	--	--	**34**	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-181105	11/5/2018	N	Baseline	2.0 U	**3,000**	**5,500**	**160**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**24**	2.0 U	0.010 U
C-29/Former East Fuel Farm	MW1	MW-1-20190830	8/30/2019	N	Investigation-PhaseII	2.0 U	**3,900**	**5,300**	**120**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**24**	2.0 U	0.010 U
C-29/Former East Fuel Farm	MW2	MW2-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19960507	5/7/1996	N	Historical	--	**33.9**	**301**	**131**	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19990224	2/24/1999	N	Historical	4 U	**79**	**2,600**	**920**	--	--	--	--	--	--	**9**	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-181105	11/5/2018	N	Baseline	2.0 U	**36**	**330**	**66**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**2.0**	2.0 U	0.010 U
C-29/Former East Fuel Farm	MW2	MW-2-20190830	8/30/2019	N	Investigation-PhaseII	2.0 U	**22**	**230**	**53**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs												
					Analyte:	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)
					CAS RN:	127-18-4	79-01-6	156-59-2	75-01-4	630-20-6	71-55-6	79-34-5	76-13-1	79-00-5	75-34-3	75-35-4	95-63-6	106-93-4
					Screening Level:	5	0.54	16	0.029	1.7	200	0.5	--	0.77	7.7	7	80	0.022
					Exceedance	Y	Y	Y	Y		Y			Y	Y	Y		
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**													
C-29/Former East Fuel Farm	MW3	MW3-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19990224	2/24/1999	N	Historical	4 U	**7,900**	**9,400**	**440**	--	--	--	--	--	--	**120**	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-181105	11/5/2018	N	Baseline	2.0 U	**150**	**1,300**	**1,400**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**11 J**	**13 J**	0.010 U
C-29/Former East Fuel Farm	MW3	MW-3-20190830	8/30/2019	N	Investigation-PhaseII	2.0 U	**890**	**2,300**	**1,500**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**19 J**	**6.1 J**	0.010 U
C-29/Former East Fuel Farm	MW4	MW4-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19990224	2/24/1999	N	Historical	4 U	**19**	**83**	**1,100**	--	--	--	--	--	--	5 U	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-181107	11/7/2018	N	Baseline	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	MW4	DUP-GW-190830	8/30/2019	FD	Investigation-PhaseII	2.0 U	**3.7 J**	2.0 U	**0.54 J**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	MW4	MW-4-20190830	8/30/2019	N	Investigation-PhaseII	2.0 U	**2.6 J**	2.0 U	**0.50 J**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RIGW-2	RIGW-2-230926	9/26/2023	N	PhaseIII	2.0 U	**1.2**	2.0 U	**30**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RIGW-3	RIGW-3-230926	9/26/2023	N	PhaseIII	2.0 U	**1,700**	**1,900**	**260**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**28**	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-41	RISB-41-GW	4/4/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	**0.11**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-42	RISB-42-GW	4/3/2019	N	ShallowInvest-Phasel	2.0 U	**19**	**1,100**	**590**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**3.5**	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-43	RISB-43-GW	4/4/2019	N	ShallowInvest-Phasel	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-44	RISB-44-GW	4/5/2019	N	ShallowInvest-Phasel	2.0 U	**1,100**	**1,700**	**73**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**6.2**	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-45	RISB-45-GW	4/4/2019	N	ShallowInvest-Phasel	**9,700**	**340,000**	**2,600**	**110**	0.50 U	**28**	0.50 U	--	0.50 U	**71**	**190**	**2.2**	0.010 U
C-29/Former East Fuel Farm	RISB-45	DUP-GW-190404	4/4/2019	FD	ShallowInvest-Phasel	**9,400**	**340,000**	**2,800**	**110**	0.50 U	**30**	0.50 U	--	0.50 U	**72**	**200**	**2.2**	0.010 U
C-29/Former East Fuel Farm	RISB-46	RISB-46-GW	4/3/2019	N	ShallowInvest-Phasel	**250**	**17,000**	**5,100**	**85**	0.50 U	**15**	0.50 U	--	0.50 U	**11**	**30**	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-64	RISB-64-GW	8/30/2019	N	Investigation-PhaseII	2.0 U	**18**	2.0 U	**0.058**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-65	RISB-65-GW	8/29/2019	N	Investigation-PhaseII	2.0 U	**160**	**26**	**1.8**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-66	RISB-66-GW	8/29/2019	N	Investigation-PhaseII	**210**	**71,000**	**13,000**	**270**	5.0 U	**150**	5.0 U	--	5.0 U	**200**	**190**	20 U	0.10 U
C-29/Former East Fuel Farm	RISB-67	RISB-67-GW	8/30/2019	N	Investigation-PhaseII	**36**	**49,000**	**4,300**	**200**	0.50 U	**3.7**	0.50 U	--	0.50 U	**190**	**97**	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-76	RISB-76-GW-221122	11/22/2022	N	PhaseIII	**7.1**	**1,200 J**	**280**	**19**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**19**	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-77	RISB-77-GW-221123	11/23/2022	N	PhaseIII	2.0 U	**20**	**72**	**10**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs												
					Analyte:	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)
					CAS RN:	127-18-4	79-01-6	156-59-2	75-01-4	630-20-6	71-55-6	79-34-5	76-13-1	79-00-5	75-34-3	75-35-4	95-63-6	106-93-4
					Screening Level:	5	0.54	16	0.029	1.7	200	0.5	--	0.77	7.7	7	80	0.022
					Exceedance	Y	Y	Y	Y		Y			Y	Y	Y		
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**													
C-29/Former East Fuel Farm	RISB-79	RISB-79-GW-221129	11/29/2022	N	PhaseIII	2.0 U	**9.0**	**4.6**	**0.16**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-80	RISB-80-GW-221108	11/8/2022	N	PhaseIII	2.0 U	**1,200 J**	**650 J**	**9.8**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**3.9**	2.0 U	0.010 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-WG-19990224	2/24/1999	N	Historical	4 U	**17,000**	**7,400**	**880**	--	--	--	--	--	--	**45**	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-181108 [a]	11/8/2018	N	Baseline	2.0 U	**6,600**	**7,300**	**1,500**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**58**	2.0 U	0.010 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-20190829	8/29/2019	N	Investigation-PhaseII	2.0 U	**10,000**	**9,600**	**1,600**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**66**	2.0 U	0.010 U
C-29/Former East Fuel Farm	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	5 U	5 U	--	--	**49**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	5 U	5 U	--	--	**45**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-181107	11/7/2018	FD	Baseline	2.0 U	**2.4**	**3.1**	0.020 U	0.50 U	2.0 U	0.50 U	--	**15**	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	DW2	DW-2-181107	11/7/2018	N	Baseline	2.0 U	**2.4**	**3.0**	0.020 U	0.50 U	2.0 U	0.50 U	--	**15**	2.0 U	**2.0**	2.0 U	0.010 U
C-29/Former East Fuel Farm	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	2.0 U	**100**	**66 J**	**0.41 J**	0.50 U	2.0 U	0.50 U	--	**3.7 J**	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	2.0 U	**120**	**190 J**	**0.92 J**	0.50 U	2.0 U	0.50 U	--	**6.8 J**	2.0 U	2.0 U	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	**5.5**	**24,000**	**2,200**	**52**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**67**	2.0 U	0.010 U
C-29/Former East Fuel Farm	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	2.0 U	**2,300**	**3,600**	**480**	0.50 U	2.0 U	0.50 U	--	0.50 U	2.0 U	**23**	2.0 U	0.010 U

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
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TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs												
					Analyte:	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	2-Chloroethyl vinyl ether	2-Hexanone	4-isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide
					CAS RN:	107-06-2	78-87-5	108-67-8	110-75-8	591-78-6	25155-15-1	108-10-1	67-64-1	71-43-2	75-27-4	75-25-2	74-83-9	75-15-0
					Screening Level:	0.48	1.2	80	--	40	--	640	7,200	0.8	--	--	--	800
					Exceedance	Y	Y							Y				
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**													
C-29/Former East Fuel Farm	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-Phasel	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-Phasel	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-Phasel	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**0.66**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-76	DUP-GW-221122	11/22/2022	N	PhaseIII	**28**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**2.1**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	AF-1	AF-1-WG-19960105	1/5/1996	N	Historical	--	--	**2.5**	--	--	**2.0**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19990224	2/24/1999	N	Historical	**13**	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-181108	11/8/2018	N	Baseline	**1.5**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**3.4**	--	--	--	2.0 U
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-20190829	8/29/2019	N	Investigation-PhaseII	**2.3**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**9.1**	--	--	--	2.0 U
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-WG-19990507	5/7/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-181108	11/8/2018	N	Baseline	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-20190905	9/5/2019	N	Investigation-PhaseII	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	HMB1	HMB1-WG-19990224	2/24/1999	N	Historical	5 U	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB-1-181108	11/8/2018	N	Baseline	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	HMB1	HMB1-20190829	8/29/2019	N	Investigation-PhaseII	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW1	MW1-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	**7.8**	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19990224	2/24/1999	N	Historical	5 U	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	**33**	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-181105	11/5/2018	N	Baseline	**8.4**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**42**	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW1	MW-1-20190830	8/30/2019	N	Investigation-PhaseII	**6.8**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**36**	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW2	MW2-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	**13**	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19990224	2/24/1999	N	Historical	**8**	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	**12**	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-181105	11/5/2018	N	Baseline	**2.1**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**2.8**	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW2	MW-2-20190830	8/30/2019	N	Investigation-PhaseII	**1.1**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**3.2**	--	--	--	2.0 U

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C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
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TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs												
					Analyte:	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	2-Chloroethyl vinyl ether	2-Hexanone	4-isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide
					CAS RN:	107-06-2	78-87-5	108-67-8	110-75-8	591-78-6	25155-15-1	108-10-1	67-64-1	71-43-2	75-27-4	75-25-2	74-83-9	75-15-0
					Screening Level:	0.48	1.2	80	--	40	--	640	7,200	0.8	--	--	--	800
					Exceedance	Y	Y							Y				
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**													
C-29/Former East Fuel Farm	MW3	MW3-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	**65**	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19990224	2/24/1999	N	Historical	**180**	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	**42**	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-181105	11/5/2018	N	Baseline	**7.8 J**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**21 J**	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW3	MW-3-20190830	8/30/2019	N	Investigation-PhaseII	**7.7 J**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**16 J**	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW4	MW4-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	**130**	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19990224	2/24/1999	N	Historical	5 U	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	**160**	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-181107	11/7/2018	N	Baseline	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**3.3 J**	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW4	DUP-GW-190830	8/30/2019	FD	Investigation-PhaseII	**0.26 J**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**8.5 J**	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW4	MW-4-20190830	8/30/2019	N	Investigation-PhaseII	**0.26 J**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**8.5 J**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RIGW-2	RIGW-2-230926	9/26/2023	N	PhaseIII	**0.12**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**0.76**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RIGW-3	RIGW-3-230926	9/26/2023	N	PhaseIII	**160**	**1.5**	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-41	RISB-41-GW	4/4/2019	N	ShallowInvest-Phasel	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-42	RISB-42-GW	4/3/2019	N	ShallowInvest-Phasel	**5.2**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**15**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-43	RISB-43-GW	4/4/2019	N	ShallowInvest-Phasel	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-44	RISB-44-GW	4/5/2019	N	ShallowInvest-Phasel	**40**	**0.53**	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-45	RISB-45-GW	4/4/2019	N	ShallowInvest-Phasel	**290**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**1.1**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-45	DUP-GW-190404	4/4/2019	FD	ShallowInvest-Phasel	**290**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-46	RISB-46-GW	4/3/2019	N	ShallowInvest-Phasel	**14**	**0.78**	2.0 U	--	10 U	2.0 U	10 U	25 U	**0.51**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-64	RISB-64-GW	8/30/2019	N	Investigation-PhaseII	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-65	RISB-65-GW	8/29/2019	N	Investigation-PhaseII	**8.3**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-66	RISB-66-GW	8/29/2019	N	Investigation-PhaseII	**1.7**	5.0 U	20 U	--	100 U	20 U	100 U	250 U	5.0 U	--	--	--	20 U
C-29/Former East Fuel Farm	RISB-67	RISB-67-GW	8/30/2019	N	Investigation-PhaseII	**0.69**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**0.65**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-76	RISB-76-GW-221122	11/22/2022	N	PhaseIII	**28**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**2.1**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-77	RISB-77-GW-221123	11/23/2022	N	PhaseIII	**0.076**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs												
					Analyte:	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	2-Chloroethyl vinyl ether	2-Hexanone	4-isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide
					CAS RN:	107-06-2	78-87-5	108-67-8	110-75-8	591-78-6	25155-15-1	108-10-1	67-64-1	71-43-2	75-27-4	75-25-2	74-83-9	75-15-0
					Screening Level:	0.48	1.2	80	--	40	--	640	7,200	0.8	--	--	--	800
					Exceedance	Y	Y							Y				
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**													
C-29/Former East Fuel Farm	RISB-79	RISB-79-GW-221129	11/29/2022	N	PhaseIII	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-80	RISB-80-GW-221108	11/8/2022	N	PhaseIII	**270 J**	**1.0**	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-WG-19990224	2/24/1999	N	Historical	5 U	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-181108 [a]	11/8/2018	N	Baseline	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**3.7**	--	--	--	2.0 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-20190829	8/29/2019	N	Investigation-PhaseII	**0.17**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**4.7**	--	--	--	2.0 U
C-29/Former East Fuel Farm	DW2	DW2-WG-19991228	12/28/1999	N	Historical	**26**	**10**	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-20000308	3/8/2000	N	Historical	**15**	**13**	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-181107	11/7/2018	FD	Baseline	**6.0**	**4.5**	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	DW2	DW-2-181107	11/7/2018	N	Baseline	**6.1**	**4.6**	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	**2.1 J**	**1.6 J**	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	**4.2 J**	**3.0 J**	2.0 U	--	10 U	2.0 U	10 U	25 U	0.50 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-Phasel	0.020 U	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**2.0**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-Phasel	**130**	0.50 U	2.0 U	--	10 U	2.0 U	10 U	25 U	**4.0**	--	--	--	2.0 U

Table 11
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Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						VOCs											
Analyte:						Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Dibromochloromethane	Ethylbenzene	Isopropylbenzene	m-&p-Xylenes	Methyl Ethyl Ketone	Methylene Chloride
CAS RN:						56-23-5	108-90-7	75-00-3	67-66-3	74-87-3	10061-01-5	124-48-1	100-41-4	98-82-8	179601-23-1	78-93-3	75-09-2
Screening Level:						0.63	--	--	1.4	--	--	--	700	800	--	4,800	5
Exceedance									Y								
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**												
C-29/Former East Fuel Farm	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-76	DUP-GW-221122	11/22/2022	N	PhaseIII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	AF-1	AF-1-WG-19960105	1/5/1996	N	Historical	--	--	--	--	--	--	--	--	--	**1.1**	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19990224	2/24/1999	N	Historical	--	--	**27**	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-181108	11/8/2018	N	Baseline	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-20190829	8/29/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 UJ	5.0 U
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-WG-19990507	5/7/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-181108	11/8/2018	N	Baseline	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-20190905	9/5/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	HMB1	HMB1-WG-19990224	2/24/1999	N	Historical	--	--	5 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB-1-181108	11/8/2018	N	Baseline	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	HMB1	HMB1-20190829	8/29/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	MW1	MW1-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	**2**	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19990224	2/24/1999	N	Historical	--	--	5 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	10 U	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-181105	11/5/2018	N	Baseline	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	MW1	MW-1-20190830	8/30/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	MW2	MW2-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	**88**	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19990224	2/24/1999	N	Historical	--	--	5 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	**5**	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-181105	11/5/2018	N	Baseline	0.50 U	--	2.0 U	0.50 U	--	--	--	**4.7**	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	MW2	MW-2-20190830	8/30/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	**3.9**	2.0 U	--	10 U	5.0 U

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TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs											
					Analyte:	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Dibromochloromethane	Ethylbenzene	Isopropylbenzene	m-&p-Xylenes	Methyl Ethyl Ketone	Methylene Chloride
					CAS RN:	56-23-5	108-90-7	75-00-3	67-66-3	74-87-3	10061-01-5	124-48-1	100-41-4	98-82-8	179601-23-1	78-93-3	75-09-2
					Screening Level:	0.63	--	--	1.4	--	--	--	700	800	--	4,800	5
					Exceedance				Y								
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**												
C-29/Former East Fuel Farm	MW3	MW3-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	**0.6**	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19990224	2/24/1999	N	Historical	--	--	5 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	10 U	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-181105	11/5/2018	N	Baseline	0.50 U	--	2.0 U	0.50 U	--	--	--	**110**	**25 J**	--	10 U	5.0 U
C-29/Former East Fuel Farm	MW3	MW-3-20190830	8/30/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	**100**	**28 J**	--	10 U	5.0 U
C-29/Former East Fuel Farm	MW4	MW4-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	**75**	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19990224	2/24/1999	N	Historical	--	--	5 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	**96**	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-181107	11/7/2018	N	Baseline	0.50 U	--	2.0 U	0.50 U	--	--	--	**11 J**	**13 J**	--	10 U	5.0 U
C-29/Former East Fuel Farm	MW4	DUP-GW-190830	8/30/2019	FD	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	**27 J**	**24 J**	--	10 U	5.0 U
C-29/Former East Fuel Farm	MW4	MW-4-20190830	8/30/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	**39 J**	**23 J**	--	10 U	5.0 U
C-29/Former East Fuel Farm	RIGW-2	RIGW-2-230926	9/26/2023	N	PhaseIII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RIGW-3	RIGW-3-230926	9/26/2023	N	PhaseIII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-41	RISB-41-GW	4/4/2019	N	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-42	RISB-42-GW	4/3/2019	N	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	**18**	**3.2**	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-43	RISB-43-GW	4/4/2019	N	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-44	RISB-44-GW	4/5/2019	N	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-45	RISB-45-GW	4/4/2019	N	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	**4.9**	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-45	DUP-GW-190404	4/4/2019	FD	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	**5.1**	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-46	RISB-46-GW	4/3/2019	N	ShallowInvest-Phasel	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-64	RISB-64-GW	8/30/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-65	RISB-65-GW	8/29/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-66	RISB-66-GW	8/29/2019	N	Investigation-PhaseII	5.0 U	--	20 U	5.0 U	--	--	--	20 U	20 U	--	100 U	50 U
C-29/Former East Fuel Farm	RISB-67	RISB-67-GW	8/30/2019	N	Investigation-PhaseII	0.50 U	--	**3.7**	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-76	RISB-76-GW-221122	11/22/2022	N	PhaseIII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-77	RISB-77-GW-221123	11/23/2022	N	PhaseIII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U

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Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs											
					Analyte:	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Dibromochloromethane	Ethylbenzene	Isopropylbenzene	m-&p-Xylenes	Methyl Ethyl Ketone	Methylene Chloride
					CAS RN:	56-23-5	108-90-7	75-00-3	67-66-3	74-87-3	10061-01-5	124-48-1	100-41-4	98-82-8	179601-23-1	78-93-3	75-09-2
					Screening Level:	0.63	--	--	1.4	--	--	--	700	800	--	4,800	5
					Exceedance				Y								
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**												
C-29/Former East Fuel Farm	RISB-79	RISB-79-GW-221129	11/29/2022	N	PhaseIII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-80	RISB-80-GW-221108	11/8/2022	N	PhaseIII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-WG-19990224	2/24/1999	N	Historical	--	--	5 U	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-181108 [a]	11/8/2018	N	Baseline	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-20190829	8/29/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-181107	11/7/2018	FD	Baseline	0.50 U	--	2.0 U	**0.65**	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	DW2	DW-2-181107	11/7/2018	N	Baseline	0.50 U	--	2.0 U	**0.67**	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 UJ
C-29/Former East Fuel Farm	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 UJ
C-29/Former East Fuel Farm	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U
C-29/Former East Fuel Farm	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	0.50 U	--	2.0 U	0.50 U	--	--	--	2.0 U	2.0 U	--	10 U	5.0 U

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						VOCs											
Analyte:						Methyl-tert-butyl ether	Naphthalene	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Styrene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichlorofluoromethane	Vinyl Acetate	Xylenes, Total
CAS RN:						1634-04-4	91-20-3	103-65-1	95-47-6	135-98-8	100-42-5	108-88-3	156-60-5	10061-02-6	75-69-4	108-05-4	1330-20-7
Screening Level:						24	160	800	--	800	--	640	100	--	--	--	1,600
Exceedance													Y				
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**												
C-29/Former East Fuel Farm	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**28**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-76	DUP-GW-221122	11/22/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	**2.8**	**12**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	AF-1	AF-1-WG-19960105	1/5/1996	N	Historical	--	**2.4**	--	**1.1**	--	--	**4.8**	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	800 U	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	**490**	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-181108	11/8/2018	N	Baseline	2.0 U	2.0 U	2.0 U	--	2.0 U	--	**3.9**	**220**	--	--	--	**2.8**
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-20190829	8/29/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	**5.8**	**350**	--	--	--	2.0 U
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-WG-19990507	5/7/1999	N	Historical	--	--	--	--	--	--	--	80 U	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-181108	11/8/2018	N	Baseline	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**4.9**	--	--	--	2.0 U
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-20190905	9/5/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**3.3**	--	--	--	2.0 U
C-29/Former East Fuel Farm	HMB1	HMB1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	5 U	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB-1-181108	11/8/2018	N	Baseline	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	HMB1	HMB1-20190829	8/29/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW1	MW1-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	**3.7**	--	--	--	--	**1.8**
C-29/Former East Fuel Farm	MW1	MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	**189**	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	**460**	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	10 U	--	--	--	--	30 U
C-29/Former East Fuel Farm	MW1	MW-1-181105	11/5/2018	N	Baseline	2.0 U	2.0 U	2.0 U	--	2.0 U	--	**2.8**	**520**	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW1	MW-1-20190830	8/30/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	**2.8**	**430**	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW2	MW2-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	**47**	--	--	--	--	**470**
C-29/Former East Fuel Farm	MW2	MW2-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	8 U	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	**50**	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	**2**	--	--	--	--	**4**
C-29/Former East Fuel Farm	MW2	MW-2-181105	11/5/2018	N	Baseline	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**68**	--	--	--	**2.3**
C-29/Former East Fuel Farm	MW2	MW-2-20190830	8/30/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**24**	--	--	--	2.0 U

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	VOCs											
					Analyte:	Methyl-tert-butyl ether	Naphthalene	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Styrene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichlorofluoromethane	Vinyl Acetate	Xylenes, Total
					CAS RN:	1634-04-4	91-20-3	103-65-1	95-47-6	135-98-8	100-42-5	108-88-3	156-60-5	10061-02-6	75-69-4	108-05-4	1330-20-7
					Screening Level:	24	160	800	--	800	--	640	100	--	--	--	1,600
					Exceedance								Y				
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**												
C-29/Former East Fuel Farm	MW3	MW3-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	**3.2**	--	--	--	--	**1.8**
C-29/Former East Fuel Farm	MW3	MW3-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	**530**	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	10 U	--	--	--	--	30 U
C-29/Former East Fuel Farm	MW3	MW-3-181105	11/5/2018	N	Baseline	2.0 U	2.0 U	**5.0 J**	--	2.0 U	--	**24 J**	**220**	--	--	--	**11 J**
C-29/Former East Fuel Farm	MW3	MW-3-20190830	8/30/2019	N	Investigation-PhaseII	2.0 U	2.0 U	**8.0 J**	--	2.0 U	--	**19 J**	**230**	--	--	--	**8.4 J**
C-29/Former East Fuel Farm	MW4	MW4-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	**8.7**	--	--	--	--	**80**
C-29/Former East Fuel Farm	MW4	MW4-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	**58**	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	10 U	--	--	--	--	130 U
C-29/Former East Fuel Farm	MW4	MW-4-181107	11/7/2018	N	Baseline	2.0 U	**2.8 J**	**3.8 J**	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	MW4	DUP-GW-190830	8/30/2019	FD	Investigation-PhaseII	2.0 U	**3.1 J**	**8.4 J**	--	2.0 U	--	2.0 U	2.0 U	--	--	--	**3.3 J**
C-29/Former East Fuel Farm	MW4	MW-4-20190830	8/30/2019	N	Investigation-PhaseII	2.0 U	**2.9 J**	**8.1 J**	--	2.0 U	--	2.0 U	2.0 U	--	--	--	**3.1 J**
C-29/Former East Fuel Farm	RIGW-2	RIGW-2-230926	9/26/2023	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RIGW-3	RIGW-3-230926	9/26/2023	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**470**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-41	RISB-41-GW	4/4/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-42	RISB-42-GW	4/3/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	2.0 U	--	**12**	**110**	--	--	--	**3.1**
C-29/Former East Fuel Farm	RISB-43	RISB-43-GW	4/4/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-44	RISB-44-GW	4/5/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**120**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-45	RISB-45-GW	4/4/2019	N	ShallowInvest-Phasel	2.0 U	**2.3**	2.0 U	--	2.0 U	--	**38**	**82**	--	--	--	**29**
C-29/Former East Fuel Farm	RISB-45	DUP-GW-190404	4/4/2019	FD	ShallowInvest-Phasel	2.0 U	**2.3**	2.0 U	--	2.0 U	--	**40**	**72**	--	--	--	**30**
C-29/Former East Fuel Farm	RISB-46	RISB-46-GW	4/3/2019	N	ShallowInvest-Phasel	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**46**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-64	RISB-64-GW	8/30/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-65	RISB-65-GW	8/29/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-66	RISB-66-GW	8/29/2019	N	Investigation-PhaseII	20 U	20 U	20 U	--	20 U	--	20 U	**78**	--	--	--	20 U
C-29/Former East Fuel Farm	RISB-67	RISB-67-GW	8/30/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	**2.3**	**41**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-76	RISB-76-GW-221122	11/22/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	**2.9**	**11**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-77	RISB-77-GW-221123	11/23/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U

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Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
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Analyte Group:						VOCs											
Analyte:						Methyl-tert-butyl ether	Naphthalene	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Styrene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichlorofluoromethane	Vinyl Acetate	Xylenes, Total
CAS RN:						1634-04-4	91-20-3	103-65-1	95-47-6	135-98-8	100-42-5	108-88-3	156-60-5	10061-02-6	75-69-4	108-05-4	1330-20-7
Screening Level:						24	160	800	--	800	--	640	100	--	--	--	1,600
Exceedance													Y				
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**												
C-29/Former East Fuel Farm	RISB-79	RISB-79-GW-221129	11/29/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-80	RISB-80-GW-221108	11/8/2022	N	PhaseIII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**37**	--	--	--	2.0 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	**79**	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-181108 [a]	11/8/2018	N	Baseline	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**180**	--	--	--	2.0 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-20190829	8/29/2019	N	Investigation-PhaseII	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**180**	--	--	--	2.0 U
C-29/Former East Fuel Farm	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-181107	11/7/2018	FD	Baseline	**2.8**	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	DW2	DW-2-181107	11/7/2018	N	Baseline	**2.9**	2.0 U	2.0 U	--	2.0 U	--	2.0 U	2.0 U	--	--	--	2.0 U
C-29/Former East Fuel Farm	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	**15**	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**5.3 J**	--	--	--	2.0 U
C-29/Former East Fuel Farm	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	**16**	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**16 J**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	2.0 U	--	**12**	**320**	--	--	--	2.0 U
C-29/Former East Fuel Farm	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	2.0 U	2.0 U	2.0 U	--	2.0 U	--	2.0 U	**560**	--	--	--	2.0 U

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Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	TPH				SVOCs					
					Analyte:	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as Jet-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	1,4-Dioxane	4-Nitrophenol	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene
					CAS RN:	PHC_C5-C12	PHC_JETA	PHC_C12-C24	PHC_C24-C40	123-91-1	100-02-7	56-55-3	50-32-8	205-99-2	207-08-9
					Screening Level:	800	500	500	500	0.44	--	--	--	--	--
					Exceedance	Y	Y	Y	Y	Y					
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
C-29/Former East Fuel Farm	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-Phasel	--	--	**270**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-Phasel	--	--	**220**	**350**	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	DUP-GW-221122	11/22/2022	N	PhaseIII	50 UJ	--	**280 J**	**390**	**1.6**	--	**0.020 R**	**0.020 R**	**0.025 J-**	**0.020 R**
C-29/Former East Fuel Farm	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--	0.40 U	--	--	--	--	--
C-29/Former East Fuel Farm	AF-1	AF-1-WG-19960105	1/5/1996	N	Historical	--	--	--	--	--	**16**	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-181108	11/8/2018	N	Baseline	**160**	--	**1,400**	**450 J**	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-20190829	8/29/2019	N	Investigation-PhaseII	**170 J**	--	**720**	**600**	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-WG-19990507	5/7/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-181108	11/8/2018	N	Baseline	50 U	--	**160**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-20190905	9/5/2019	N	Investigation-PhaseII	50 U	--	130 U	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB-1-181108	11/8/2018	N	Baseline	50 U	--	**230**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-20190829	8/29/2019	N	Investigation-PhaseII	50 U	--	**150**	**390**	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19940427	4/27/1994	N	Historical	**1,000**	1,000 U	1,000 U	20,000 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-20011024	10/24/2001	N	Historical	**50**	--	**320**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-181105	11/5/2018	N	Baseline	50 U	--	**270**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-20190830	8/30/2019	N	Investigation-PhaseII	50 U	--	130 U	**360**	**190**	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19940427	4/27/1994	N	Historical	**2,000**	**1,000**	1,000 U	20,000 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-20011024	10/24/2001	N	Historical	**55**	--	**150**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-181105	11/5/2018	N	Baseline	50 U	--	130 U	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-20190830	8/30/2019	N	Investigation-PhaseII	50 U	--	130 U	250 U	--	--	--	--	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	TPH				SVOCs					
					Analyte:	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as Jet-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	1,4-Dioxane	4-Nitrophenol	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene
					CAS RN:	PHC_C5-C12	PHC_JETA	PHC_C12-C24	PHC_C24-C40	123-91-1	100-02-7	56-55-3	50-32-8	205-99-2	207-08-9
					Screening Level:	800	500	500	500	0.44	--	--	--	--	--
					Exceedance	Y	Y	Y	Y	Y					
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
C-29/Former East Fuel Farm	MW3	MW3-WG-19940427	4/27/1994	N	Historical	1,000 U	**1,300**	1,000 U	20,000 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-20011024	10/24/2001	N	Historical	50 U	--	**380**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-181105	11/5/2018	N	Baseline	**820**	--	**270**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-20190830	8/30/2019	N	Investigation-PhaseII	**950**	--	**140**	**300**	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19940427	4/27/1994	N	Historical	**2,000**	**1,100**	1,000 U	20,000 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-20011024	10/24/2001	N	Historical	**1,100**	--	**990**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-181107	11/7/2018	N	Baseline	**270**	--	**490**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	DUP-GW-190830	8/30/2019	FD	Investigation-PhaseII	**700**	--	**860**	**610 J**	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-20190830	8/30/2019	N	Investigation-PhaseII	**690**	--	**800**	**350 J**	--	--	--	--	--	--
C-29/Former East Fuel Farm	RIGW-2	RIGW-2-230926	9/26/2023	N	PhaseIII	50 U	--	**300**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	RIGW-3	RIGW-3-230926	9/26/2023	N	PhaseIII	50 U	--	130 U	250 U	**6.3**	--	0.020 U	0.020 U	0.020 U	0.020 U
C-29/Former East Fuel Farm	RISB-41	RISB-41-GW	4/4/2019	N	ShallowInvest-Phasel	50 U	--	**150**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-42	RISB-42-GW	4/3/2019	N	ShallowInvest-Phasel	**110**	--	260 U	**1900**	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-43	RISB-43-GW	4/4/2019	N	ShallowInvest-Phasel	50 U	--	130 U	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-44	RISB-44-GW	4/5/2019	N	ShallowInvest-Phasel	50 U	--	**260**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	RISB-45-GW	4/4/2019	N	ShallowInvest-Phasel	**6,800**	--	**2,200**	**5,000**	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	DUP-GW-190404	4/4/2019	FD	ShallowInvest-Phasel	**6,600**	--	**1,700**	**4,100**	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-GW	4/3/2019	N	ShallowInvest-Phasel	**140**	--	**690**	**1,500**	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-64	RISB-64-GW	8/30/2019	N	Investigation-PhaseII	50 U	--	**240**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-65	RISB-65-GW	8/29/2019	N	Investigation-PhaseII	50 U	--	**140**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-66	RISB-66-GW	8/29/2019	N	Investigation-PhaseII	**500 J**	--	**600**	**530**	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-67	RISB-67-GW	8/30/2019	N	Investigation-PhaseII	**96 J**	--	**250**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	RISB-76-GW-221122	11/22/2022	N	PhaseIII	**55 J-**	--	**230 J**	**300**	**1.6**	--	**0.020 R**	**0.020 R**	**0.031 J-**	**0.020 R**
C-29/Former East Fuel Farm	RISB-77	RISB-77-GW-221123	11/23/2022	N	PhaseIII	--	--	--	--	**0.71**	--	--	--	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	TPH				SVOCs					
					Analyte:	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as Jet-A	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	1,4-Dioxane	4-Nitrophenol	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene
					CAS RN:	PHC_C5-C12	PHC_JETA	PHC_C12-C24	PHC_C24-C40	123-91-1	100-02-7	56-55-3	50-32-8	205-99-2	207-08-9
					Screening Level:	800	500	500	500	0.44	--	--	--	--	--
					Exceedance	Y	Y	Y	Y	Y					
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
C-29/Former East Fuel Farm	RISB-79	RISB-79-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-80	RISB-80-GW-221108	11/8/2022	N	PhaseIII	50 U	--	**350**	250 U	**9.7 J-**	--	**0.026 J-**	**0.020 R**	**0.041 J-**	**0.020 R**
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-181108 [a]	11/8/2018	N	Baseline	50 U	--	**390 J**	**510**	--	--	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-20190829	8/29/2019	N	Investigation-PhaseII	50 U	--	**260**	250 U	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-181107	11/7/2018	FD	Baseline	--	--	--	--	**1.6**	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW-2-181107	11/7/2018	N	Baseline	--	--	--	--	**1.8**	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	--	--	--	--	0.40 U	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	--	--	--	--	0.40 U	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	**69**	--	**460**	**380**	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	50 U	--	**3,400**	**6,500**	--	--	--	--	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
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TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	SVOCs				Conventionals						
					Analyte:	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Phenol	Ethane	Ethene	Methane	Nitrogen, Nitrate (as N)	Nitrogen, Nitrate (As NO3)	Sulfate	Total Organic Carbon
					CAS RN:	218-01-9	53-70-3	193-39-5	108-95-2	74-84-0	74-85-1	74-82-8	14797-55-8	NO3	14808-79-8	TOC
					Screening Level:	--	--	--	--	--	--	--	10,000	--	--	--
					Exceedance											
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**											
C-29/Former East Fuel Farm	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-Phasel	--	--	--	--	10 U	10 U	**20**	**300**	--	**21,000**	**3,200**
C-29/Former East Fuel Farm	RISB-76	DUP-GW-221122	11/22/2022	N	PhaseIII	**0.020 R**	**0.020 R**	**0.020 R**	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	AF-1	AF-1-WG-19960105	1/5/1996	N	Historical	--	--	--	**56**	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-181108	11/8/2018	N	Baseline	--	--	--	--	10 U	**50**	**110**	--	150 U	**33,000**	**7,700**
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-20190829	8/29/2019	N	Investigation-PhaseII	--	--	--	--	10 U	**30**	**140**	150 UJ	--	**38,000**	**6,900**
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-WG-19990507	5/7/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-181108	11/8/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-20190905	9/5/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB-1-181108	11/8/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-20190829	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-181105	11/5/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-181105	11/5/2018	N	Baseline	--	--	--	--	10 U	**50**	**200**	--	150 U	**27,000**	**2,000**
C-29/Former East Fuel Farm	MW2	MW-2-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--	10 U	10 U	**230**	150 UJ	--	**30,000**	**1,700**

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C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	SVOCs				Conventionals						
					Analyte:	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Phenol	Ethane	Ethene	Methane	Nitrogen, Nitrate (as N)	Nitrogen, Nitrate (As NO3)	Sulfate	Total Organic Carbon
					CAS RN:	218-01-9	53-70-3	193-39-5	108-95-2	74-84-0	74-85-1	74-82-8	14797-55-8	NO3	14808-79-8	TOC
					Screening Level:	--	--	--	--	--	--	--	10,000	--	--	--
					Exceedance											
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**											
C-29/Former East Fuel Farm	MW3	MW3-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-181105	11/5/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-181107	11/7/2018	N	Baseline	--	--	--	--	10 U	10 U	**540**	--	150 U	**40,000**	**4,200**
C-29/Former East Fuel Farm	MW4	DUP-GW-190830	8/30/2019	FD	Investigation-PhaseII	--	--	--	--	10 U	10 U	**1,400**	150 UJ	--	**5,100**	**5,700**
C-29/Former East Fuel Farm	MW4	MW-4-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--	10 U	**20**	**1,500**	150 UJ	--	**4,800**	**5,700**
C-29/Former East Fuel Farm	RIGW-2	RIGW-2-230926	9/26/2023	N	PhaseIII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RIGW-3	RIGW-3-230926	9/26/2023	N	PhaseIII	0.020 U	0.020 U	0.020 U	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-41	RISB-41-GW	4/4/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-42	RISB-42-GW	4/3/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-43	RISB-43-GW	4/4/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-44	RISB-44-GW	4/5/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	RISB-45-GW	4/4/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	DUP-GW-190404	4/4/2019	FD	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-GW	4/3/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-64	RISB-64-GW	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-65	RISB-65-GW	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-66	RISB-66-GW	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-67	RISB-67-GW	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	RISB-76-GW-221122	11/22/2022	N	PhaseIII	**0.020 R**	**0.020 R**	**0.020 R**	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-77	RISB-77-GW-221123	11/23/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	SVOCs				Conventionals						
					Analyte:	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Phenol	Ethane	Ethene	Methane	Nitrogen, Nitrate (as N)	Nitrogen, Nitrate (As NO3)	Sulfate	Total Organic Carbon
					CAS RN:	218-01-9	53-70-3	193-39-5	108-95-2	74-84-0	74-85-1	74-82-8	14797-55-8	NO3	14808-79-8	TOC
					Screening Level:	--	--	--	--	--	--	--	10,000	--	--	--
					Exceedance											
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**											
C-29/Former East Fuel Farm	RISB-79	RISB-79-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-80	RISB-80-GW-221108	11/8/2022	N	PhaseIII	**0.032 J-**	**0.020 R**	**0.020 R**	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-181108 [a]	11/8/2018	N	Baseline	--	--	--	--	10 U	**50**	**290**	--	150 U	**8,600**	**4,900**
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-20190829	8/29/2019	N	Investigation-PhaseII	--	--	--	--	10 U	**23**	**70**	150 UJ	--	**8,800**	500 U
C-29/Former East Fuel Farm	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-181107	11/7/2018	FD	Baseline	--	--	--	--	10 U	10 U	10 U	--	**1,500**	**14,000**	**1,500**
C-29/Former East Fuel Farm	DW2	DW-2-181107	11/7/2018	N	Baseline	--	--	--	--	10 U	10 U	10 U	--	**1,400**	**12,000**	**1,400**
C-29/Former East Fuel Farm	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	--	--	--	--	10 U	10 U	10 U	**1,400**	--	**19,000**	1,000 U
C-29/Former East Fuel Farm	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	--	--	--	--	10 U	10 U	10 U	**1,400**	--	**18,000**	1,000 U
C-29/Former East Fuel Farm	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--	--	--	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
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					Analyte Group:	Dissolved Metals									
					Analyte:	Arsenic	Barium	Cadmium	Chromium, Hexavalent	Chromium, Total	Chromium, Trivalent	Lead	Mercury	Nickel	Selenium
					CAS RN:	7440-38-2	7440-39-3	7440-43-9	18540-29-9	7440-47-3	16065-83-1	7439-92-1	7439-97-6	7440-02-0	7782-49-2
					Screening Level:	13.6	--	5	10	100	100	15	2	--	--
					Exceedance	Y									
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
C-29/Former East Fuel Farm	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-Phasel	**5.8**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	DUP-GW-221122	11/22/2022	N	PhaseIII	**4.4**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	AF-1	AF-1-WG-19960105	1/5/1996	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	10 U	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-181108	11/8/2018	N	Baseline	**4.2**	--	1.0 U	--	**2.1**	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-20190829	8/29/2019	N	Investigation-PhaseII	**9.4**	--	1.0 U	10 UJ	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-WG-19990507	5/7/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-181108	11/8/2018	N	Baseline	**2.9**	--	1.0 U	10 U	2.0 U	2.0 U	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-20190905	9/5/2019	N	Investigation-PhaseII	**2.9**	--	1.0 U	10 U	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	10 U	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB-1-181108	11/8/2018	N	Baseline	**25**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-20190829	8/29/2019	N	Investigation-PhaseII	**17**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	10.0 U	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19980224	2/24/1998	N	Historical	--	--	--	--	10 U	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-181105	11/5/2018	N	Baseline	**14**	--	1.0 U	10 U	2.0 U	2.0 U	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	MW1	MW-1-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19960507	5/7/1996	N	Historical	--	--	--	--	10.0 U	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19980224	2/24/1998	N	Historical	--	--	--	--	10 U	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-181105	11/5/2018	N	Baseline	**12**	--	1.0 U	10 U	2.0 U	2.0 U	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	MW2	MW-2-20190830	8/30/2019	N	Investigation-PhaseII	**7.5**	--	1.0 U	10 U	2.0 U	--	1.0 U	0.20 U	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
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TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	Dissolved Metals									
					Analyte:	Arsenic	Barium	Cadmium	Chromium, Hexavalent	Chromium, Total	Chromium, Trivalent	Lead	Mercury	Nickel	Selenium
					CAS RN:	7440-38-2	7440-39-3	7440-43-9	18540-29-9	7440-47-3	16065-83-1	7439-92-1	7439-97-6	7440-02-0	7782-49-2
					Screening Level:	13.6	--	5	10	100	100	15	2	--	--
					Exceedance	Y									
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
C-29/Former East Fuel Farm	MW3	MW3-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19960507	5/7/1996	N	Historical	--	--	--	--	10.0 U	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19980224	2/24/1998	N	Historical	--	--	--	--	10 U	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-181105	11/5/2018	N	Baseline	**2.7**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	MW3	MW-3-20190830	8/30/2019	N	Investigation-PhaseII	**2.5**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19960507	5/7/1996	N	Historical	--	--	--	--	10.0 U	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19980224	2/24/1998	N	Historical	--	--	--	--	10 U	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-181107	11/7/2018	N	Baseline	**6.9**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	MW4	DUP-GW-190830	8/30/2019	FD	Investigation-PhaseII	**2.8**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	MW4	MW-4-20190830	8/30/2019	N	Investigation-PhaseII	**2.8**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RIGW-2	RIGW-2-230926	9/26/2023	N	PhaseIII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RIGW-3	RIGW-3-230926	9/26/2023	N	PhaseIII	**10**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-41	RISB-41-GW	4/4/2019	N	ShallowInvest-Phasel	**6.0**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-42	RISB-42-GW	4/3/2019	N	ShallowInvest-Phasel	**1.3**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-43	RISB-43-GW	4/4/2019	N	ShallowInvest-Phasel	**7.8**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-44	RISB-44-GW	4/5/2019	N	ShallowInvest-Phasel	**5.7**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-45	RISB-45-GW	4/4/2019	N	ShallowInvest-Phasel	**2.9**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-45	DUP-GW-190404	4/4/2019	FD	ShallowInvest-Phasel	**2.9**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-GW	4/3/2019	N	ShallowInvest-Phasel	1.0 U	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-64	RISB-64-GW	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-65	RISB-65-GW	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-66	RISB-66-GW	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-67	RISB-67-GW	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	RISB-76-GW-221122	11/22/2022	N	PhaseIII	**4.7**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-77	RISB-77-GW-221123	11/23/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--

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					Analyte Group:	Dissolved Metals									
					Analyte:	Arsenic	Barium	Cadmium	Chromium, Hexavalent	Chromium, Total	Chromium, Trivalent	Lead	Mercury	Nickel	Selenium
					CAS RN:	7440-38-2	7440-39-3	7440-43-9	18540-29-9	7440-47-3	16065-83-1	7439-92-1	7439-97-6	7440-02-0	7782-49-2
					Screening Level:	13.6	--	5	10	100	100	15	2	--	--
					Exceedance	Y									
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
C-29/Former East Fuel Farm	RISB-79	RISB-79-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-80	RISB-80-GW-221108	11/8/2022	N	PhaseIII	**12**	**51**	1.0 U	--	2.0 U	--	1.0 U	0.20 U	**40**	4.0 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	10 U	--	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-181108 [a]	11/8/2018	N	Baseline	**7.7**	--	**1.7**	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-20190829	8/29/2019	N	Investigation-PhaseII	**7.6**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-181107	11/7/2018	FD	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW-2-181107	11/7/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-Phasel	**2.9**	--	1.0 U	10 U	2.0 U	2.0 U	1.0 U	0.20 U	--	--
C-29/Former East Fuel Farm	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-Phasel	**1.9**	--	1.0 U	10 U	**2.6**	**2.6**	1.0 U	0.20 U	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	Dissolved Metals		Total Metals							
					Analyte:	Silver	Zinc	Arsenic	Barium	Cadmium	Chromium, Hexavalent	Chromium, Total	Copper	Lead	Mercury
					CAS RN:	7440-22-4	7440-66-6	7440-38-2	7440-39-3	7440-43-9	18540-29-9	7440-47-3	7440-50-8	7439-92-1	7439-97-6
					Screening Level:	--	--	13.6	--	5	10	100	--	15	2
					Exceedance			Y				Y		Y	
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
C-29/Former East Fuel Farm	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	DUP-GW-221122	11/22/2022	N	PhaseIII	--	--	**73**	--	**1.8**	--	**450**	--	**64**	**0.65**
C-29/Former East Fuel Farm	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	AF-1	AF-1-WG-19960105	1/5/1996	N	Historical	--	--	--	--	--	--	**55,000**	**34**	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	10 U	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	10 U	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-181108	11/8/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-20190829	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-WG-19990507	5/7/1999	N	Historical	--	--	--	--	--	--	10 U	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-181108	11/8/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-20190905	9/5/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	10 U	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB-1-181108	11/8/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-20190829	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	10.0 U	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	10 U	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-181105	11/5/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	10.0 U	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	10 U	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-181105	11/5/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	Dissolved Metals		Total Metals							
					Analyte:	Silver	Zinc	Arsenic	Barium	Cadmium	Chromium, Hexavalent	Chromium, Total	Copper	Lead	Mercury
					CAS RN:	7440-22-4	7440-66-6	7440-38-2	7440-39-3	7440-43-9	18540-29-9	7440-47-3	7440-50-8	7439-92-1	7439-97-6
					Screening Level:	--	--	13.6	--	5	10	100	--	15	2
					Exceedance			Y				Y		Y	
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
C-29/Former East Fuel Farm	MW3	MW3-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	10.0 U	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	10 U	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-181105	11/5/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19940427	4/27/1994	N	Historical	--	--	--	--	--	10 U	**330**	**320**	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19960507	5/7/1996	N	Historical	--	--	--	--	--	--	10.0 U	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19980224	2/24/1998	N	Historical	--	--	--	--	--	--	10 U	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-181107	11/7/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	DUP-GW-190830	8/30/2019	FD	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RIGW-2	RIGW-2-230926	9/26/2023	N	PhaseIII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RIGW-3	RIGW-3-230926	9/26/2023	N	PhaseIII	--	--	**9.7**	--	1.0 U	--	2.0 U	--	1.0 U	0.20 U
C-29/Former East Fuel Farm	RISB-41	RISB-41-GW	4/4/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-42	RISB-42-GW	4/3/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-43	RISB-43-GW	4/4/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-44	RISB-44-GW	4/5/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	RISB-45-GW	4/4/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	DUP-GW-190404	4/4/2019	FD	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-GW	4/3/2019	N	ShallowInvest-Phasel	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-64	RISB-64-GW	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-65	RISB-65-GW	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-66	RISB-66-GW	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-67	RISB-67-GW	8/30/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	RISB-76-GW-221122	11/22/2022	N	PhaseIII	--	--	**73**	--	**1.9**	--	**470**	--	**66**	**0.58**
C-29/Former East Fuel Farm	RISB-77	RISB-77-GW-221123	11/23/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--

Table 11
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TECT Aerospace Cleanup Site
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					Analyte Group:	Dissolved Metals		Total Metals							
					Analyte:	Silver	Zinc	Arsenic	Barium	Cadmium	Chromium, Hexavalent	Chromium, Total	Copper	Lead	Mercury
					CAS RN:	7440-22-4	7440-66-6	7440-38-2	7440-39-3	7440-43-9	18540-29-9	7440-47-3	7440-50-8	7439-92-1	7439-97-6
					Screening Level:	--	--	13.6	--	5	10	100	--	15	2
					Exceedance			Y				Y		Y	
					Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
C-29/Former East Fuel Farm	RISB-79	RISB-79-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-80	RISB-80-GW-221108	11/8/2022	N	PhaseIII	1.0 U	2.5 U	**14**	**150**	1.0 U	--	**35**	--	**3.1**	0.20 U
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-WG-19990224	2/24/1999	N	Historical	--	--	--	--	--	--	10 U	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-181108 [a]	11/8/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-20190829	8/29/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-181107	11/7/2018	FD	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW-2-181107	11/7/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--	--	--	--
C-29/Former East Fuel Farm	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-PhaseI	--	--	--	--	--	--	--	--	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
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TECT Aerospace Cleanup Site
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					Analyte Group:	Total Metals			
					Analyte:	Nickel	Selenium	Silver	Zinc
					CAS RN:	7440-02-0	7782-49-2	7440-22-4	7440-66-6
					Screening Level:	--	--	--	--
					Exceedance				
					Units:	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**				
C-29/Former East Fuel Farm	RISB-30	RISB-30-GW	3/22/2019	N	ShallowInvest-PhaseI	--	--	--	--
C-29/Former East Fuel Farm	RISB-31	RISB-31-GW	4/9/2019	N	ShallowInvest-PhaseI	--	--	--	--
C-29/Former East Fuel Farm	RISB-52	RISB-52-GW	3/22/2019	N	ShallowInvest-PhaseI	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	DUP-GW-221122	11/22/2022	N	PhaseIII	--	--	--	--
C-29/Former East Fuel Farm	RISB-78	RISB-78-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--
C-29/Former East Fuel Farm	AF-1	AF-1-WG-19960105	1/5/1996	N	Historical	--	--	--	**58**
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-181108	11/8/2018	N	Baseline	--	--	--	--
C-29/Former East Fuel Farm	C29-MW1	C29-MW1-20190829	8/29/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-WG-19990507	5/7/1999	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-181108	11/8/2018	N	Baseline	--	--	--	--
C-29/Former East Fuel Farm	C29-MW2	C29-MW2-20190905	9/5/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-WG-19990224	2/24/1999	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB-1-181108	11/8/2018	N	Baseline	--	--	--	--
C-29/Former East Fuel Farm	HMB1	HMB1-20190829	8/29/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19940427	4/27/1994	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19960507	5/7/1996	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19980224	2/24/1998	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-19990224	2/24/1999	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-181105	11/5/2018	N	Baseline	--	--	--	--
C-29/Former East Fuel Farm	MW1	MW-1-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19940427	4/27/1994	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19960507	5/7/1996	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19980224	2/24/1998	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-19990224	2/24/1999	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW2-WG-20011024	10/24/2001	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-181105	11/5/2018	N	Baseline	--	--	--	--
C-29/Former East Fuel Farm	MW2	MW-2-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
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TECT Aerospace Cleanup Site
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					Analyte Group:	Total Metals			
					Analyte:	Nickel	Selenium	Silver	Zinc
					CAS RN:	7440-02-0	7782-49-2	7440-22-4	7440-66-6
					Screening Level:	--	--	--	--
					Exceedance				
					Units:	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**				
C-29/Former East Fuel Farm	MW3	MW3-WG-19940427	4/27/1994	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19960507	5/7/1996	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19980224	2/24/1998	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-19990224	2/24/1999	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW3-WG-20011024	10/24/2001	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-181105	11/5/2018	N	Baseline	--	--	--	--
C-29/Former East Fuel Farm	MW3	MW-3-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19940427	4/27/1994	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19960507	5/7/1996	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19980224	2/24/1998	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-19990224	2/24/1999	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW4-WG-20011024	10/24/2001	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-181107	11/7/2018	N	Baseline	--	--	--	--
C-29/Former East Fuel Farm	MW4	DUP-GW-190830	8/30/2019	FD	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	MW4	MW-4-20190830	8/30/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	RIGW-2	RIGW-2-230926	9/26/2023	N	PhaseIII	--	--	--	--
C-29/Former East Fuel Farm	RIGW-3	RIGW-3-230926	9/26/2023	N	PhaseIII	--	--	--	--
C-29/Former East Fuel Farm	RISB-41	RISB-41-GW	4/4/2019	N	ShallowInvest-Phasel	--	--	--	--
C-29/Former East Fuel Farm	RISB-42	RISB-42-GW	4/3/2019	N	ShallowInvest-Phasel	--	--	--	--
C-29/Former East Fuel Farm	RISB-43	RISB-43-GW	4/4/2019	N	ShallowInvest-Phasel	--	--	--	--
C-29/Former East Fuel Farm	RISB-44	RISB-44-GW	4/5/2019	N	ShallowInvest-Phasel	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	RISB-45-GW	4/4/2019	N	ShallowInvest-Phasel	--	--	--	--
C-29/Former East Fuel Farm	RISB-45	DUP-GW-190404	4/4/2019	FD	ShallowInvest-Phasel	--	--	--	--
C-29/Former East Fuel Farm	RISB-46	RISB-46-GW	4/3/2019	N	ShallowInvest-Phasel	--	--	--	--
C-29/Former East Fuel Farm	RISB-64	RISB-64-GW	8/30/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	RISB-65	RISB-65-GW	8/29/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	RISB-66	RISB-66-GW	8/29/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	RISB-67	RISB-67-GW	8/30/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	RISB-76	RISB-76-GW-221122	11/22/2022	N	PhaseIII	--	--	--	--
C-29/Former East Fuel Farm	RISB-77	RISB-77-GW-221123	11/23/2022	N	PhaseIII	--	--	--	--

Table 11
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

					Analyte Group:	Total Metals			
					Analyte:	Nickel	Selenium	Silver	Zinc
					CAS RN:	7440-02-0	7782-49-2	7440-22-4	7440-66-6
					Screening Level:	--	--	--	--
					Exceedance				
					Units:	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**				
C-29/Former East Fuel Farm	RISB-79	RISB-79-GW-221129	11/29/2022	N	PhaseIII	--	--	--	--
C-29/Former East Fuel Farm	RISB-80	RISB-80-GW-221108	11/8/2022	N	PhaseIII	**78**	4.0 U	1.0 U	**44**
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-WG-19990224	2/24/1999	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-181108 [a]	11/8/2018	N	Baseline	--	--	--	--
C-29/Former East Fuel Farm	SCPWD-1	SCPWD-1-20190829	8/29/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-181107	11/7/2018	FD	Baseline	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW-2-181107	11/7/2018	N	Baseline	--	--	--	--
C-29/Former East Fuel Farm	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	--	--	--	--
C-29/Former East Fuel Farm	RISB-47	RISB-47-GW	4/5/2019	N	ShallowInvest-Phasel	--	--	--	--
C-29/Former East Fuel Farm	RISB-48	RISB-48-GW	4/5/2019	N	ShallowInvest-Phasel	--	--	--	--

Abbreviations and Acronyms:

-- = not analyzed
CAS RN = Chemical Abstracts Service Registry No.
ID = identification
DRO = diesel-range organics
FD = field duplicate
GRO = gasoline-range organics
µg/L = micrograms per liter
N = primary sample
NWTPH-Dx = Northwest TPH extended-range diesel analytical method
ORO = oil-range organics
SVOC = semivolatile organic compound
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Notes:

Bold text indicates detected analyte.
Blue shading indicates detected analyte exceeds applicable cleanup level.
a) Additional sample volume was collected and analyzed by NWTPH-Dx using silica-gel cleanup due to the presence of organic material that was observed at the time of sampling. DRO was not detected above the laboratory reporting limit (130 µg/L) and ORO was detected at 380 µg/L.
U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J- = The result is an estimated quantity and the result may be biased low.
R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.

Table 12
C-29 / Former East Fuel Farm Historical Data – Detected Constituents in Soil Gas
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

			Analyte:	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,4-Dioxane	Benzene	cis-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
			CAS RN:	71-55-6	75-34-3	107-06-2	123-91-1	71-43-2	156-59-2	127-18-4	79-01-6	75-01-4
			Soil Gas Screening Level:	76,000	52			11		321	11	9.5
			Indoor Air Screening Level:								0.334	0.284
			Units:	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Area	**Location**	**Field Sample ID**	**Sampling Date**									
C-29/Former East Fuel Farm	RISG-42	RISG-42-190404	4/4/2019	80 U	77 U	--	--	77 U	--	79 U	79 U	**2,000**
C-29/Former East Fuel Farm	RISG-100	RISG-100-191210	12/10/2019	1.8 U	1.9 U	--	--	**3.2**	--	1.8 U	**9.1**	1.8 U
C-29/Former East Fuel Farm	RISG-101	RISG-101-191210	12/10/2019	2.4 U	2.5 U	--	--	2.4 U	--	2.4 U	2.4 U	2.4 U
C-29/Former East Fuel Farm	RISG-102	RISG-102-191210	12/10/2019	3.3 U	3.3 U	--	--	**5.7**	--	3.1 U	**10**	**210**

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Abbreviations and Acronyms:

-- = not analyzed

CAS RN = Chemical Abstracts Service Registry No.

ID = identification

µg/m^3 = micrograms per cubic meter

Table 13
Deep Aquifer Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs			Conventionals
						Analyte:	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Trichloroethene	Total Organic Carbon
						Screening Level:	5.2	32	1.5	--
						Exceedance:	Y	N	Y	--
						Units:	µg/kg	µg/kg	µg/kg	%
Area	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task				
Deep Aquifer	DW1	DW1-SO-57.5-20001212	57.5	57.5	12/12/2000	Historical	10 U	10 U	**10**	--
Deep Aquifer	DW1	DW1-SO-77-20001212	77	77	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW1	DW1-SO-97.5-20001212	97.5	97.5	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW1	DW1-SO-117-20001212	117	117	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW1	DW1-SO-137-20001212	137	137	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW2	DW2-SO-7-20001212	7	7	12/12/2000	Historical	**46**	**12**	**380**	--
Deep Aquifer	DW2	DW2-SO-17-20001212	17	17	12/12/2000	Historical	**87**	10 U	120 U	--
Deep Aquifer	DW2	DW2-SO-27-20001212	27	27	12/12/2000	Historical	**200**	10 U	**480**	--
Deep Aquifer	DW2	DW2-SO-37-20001212	37	37	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW2	DW2-SO-47-20001212	47	47	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW2	DW2-SO-57-20001212	57	57	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW2	DW2-SO-98.5-20001212	98.5	98.5	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW2	DW2-SO-117-20001212	117	117	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW3	DW3-SO-7-20001212	7	7	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW3	DW3-SO-76-20001212	76	76	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW3	DW3-SO-36-20001212	36	36	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW3	DW3-SO-66-20001212	66	66	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW3	DW3-SO-136-20001212	136	136	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	DW3	DW3-SO-151-20001212	151	151	12/12/2000	Historical	10 U	10 U	10 U	--
Deep Aquifer	RIDW-1	RIDW-1-(105-107.5')	105	107.5	12/5/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-1	RIDW-1-(135-137.5')	135	137.5	12/6/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--

Table 13
Deep Aquifer Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs			Conventionals
						Analyte:	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Trichloroethene	Total Organic Carbon
						Screening Level:	5.2	32	1.5	--
						Exceedance:	Y	N	Y	--
						Units:	µg/kg	µg/kg	µg/kg	%
Area	Location	Field Sample ID	Start Depth	End Depth	Sampling Date	Task				
Deep Aquifer	RIDW-1	RIDW-1-(142.5-145')	142.5	145	12/6/2018	DeepWellInstall	--	--	--	**0.059**
Deep Aquifer	RIDW-1	RIDW-1-(23-25')	23	25	12/3/2018	DeepWellInstall	1.5 UJ	10 UJ	1.5 UJ	--
Deep Aquifer	RIDW-1	RIDW-1-(49-50')	49	50	12/3/2018	DeepWellInstall	1.5 UJ	10 UJ	1.5 UJ	**0.11**
Deep Aquifer	RIDW-1	RIDW-1-(57.5-60')	57.5	60	12/5/2018	DeepWellInstall	1.5 UJ	10 UJ	1.5 UJ	--
Deep Aquifer	RIDW-1	RIDW-1-(81.5-82.5')	81.5	82.5	12/5/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-1	SOIL DUP-1	49	50	12/3/2018	DeepWellInstall	1.5 UJ	10 UJ	1.5 UJ	**0.11**
Deep Aquifer	RIDW-2	RIDW-2-(105-107.5')	105	107.5	12/8/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-2	RIDW-2-(125-127.5')	125	127.5	12/10/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-2	RIDW-2-(145-147.5')	145	147.5	12/10/2018	DeepWellInstall	--	--	--	0.050 U
Deep Aquifer	RIDW-2	RIDW-2-(20-22.5')	20	22.5	12/7/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-2	RIDW-2-(37.5-40')	37.5	40	12/7/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-2	RIDW-2-(50-52')	50	52	12/7/2018	DeepWellInstall	1.5 U	10 U	1.5 U	**0.12**
Deep Aquifer	RIDW-2	RIDW-2-(90-92')	90	92	12/8/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-3	RIDW-3-(12.5-15')	12.5	15	12/11/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-3	RIDW-3-(45-47.5')	45	47.5	12/11/2018	DeepWellInstall	1.5 U	10 U	1.5 U	**0.087**
Deep Aquifer	RIDW-3	RIDW-3-(70-72.5')	70	72.5	12/12/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-3	RIDW-3-(95-97.5')	95	97.5	12/12/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-3	RIDW-3-(110-112.5')	110	112.5	12/12/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-3	RIDW-3-(130-132.5')	130	132.5	12/13/2018	DeepWellInstall	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-3	RIDW-3-(132.5-135')	132.5	135	12/13/2018	DeepWellInstall	--	--	--	0.050 U

Table 13
Deep Aquifer Historical Data – Detected Constituents in Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	VOCs			Conventionals
						Analyte:	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Trichloroethene	Total Organic Carbon
						Screening Level:	5.2	32	1.5	--
						Exceedance:	Y	N	Y	--
						Units:	µg/kg	µg/kg	µg/kg	%
Area	**Location**	**Field Sample ID**	**Start Depth**	**End Depth**	**Sampling Date**	**Task**				
Deep Aquifer	RIDW-4	RIDW-4-(24-25')	24	25	9/4/2019	Investigation-PhaseII	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-4	RIDW-4-(66-67')	66	67	9/5/2019	Investigation-PhaseII	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-4	RIDW-4-(126-127')	126	127	9/5/2019	Investigation-PhaseII	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-5	RIDW-5-(36.5-37.5')	36.5	37.5	11/10/2022	PhaseIII	1.5 U	10 U	1.5 U	**0.13**
Deep Aquifer	RIDW-5	RIDW-5-(95.5-96.5')	95.5	96.5	11/11/2022	PhaseIII	1.5 U	10 U	1.5 U	**0.055**
Deep Aquifer	RIDW-5	RIDW-5-(136-137')	136	137	11/11/2022	PhaseIII	1.5 U	10 U	1.5 U	--
Deep Aquifer	RIDW-5	RIDW-5-(147-148')	147	148	11/14/2022	PhaseIII	--	--	--	**0.054**
Deep Aquifer	RIDW-6	RIDW-6-(25-26')	25	26	11/15/2022	PhaseIII	1.5 U	10 U	1.5 U	**0.11**
Deep Aquifer	RIDW-6	RIDW-6-(56-57')	56	57	11/15/2022	PhaseIII	1.5 U	10 U	1.5 U	**0.052**
Deep Aquifer	RIDW-6	DUP-SOIL-221116	133.5	134.5	11/16/2022	PhaseIII	1.5 U	10 U	1.5 U	**0.051**
Deep Aquifer	RIDW-6	RIDW-6-(133.5-134.5')	133.5	134.5	11/16/2022	PhaseIII	1.5 U	10 U	1.5 U	0.050 U

Notes:

Bold text indicates detected analyte.

Blue shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Abbreviations and Acronyms:

-- = not analyzed
µg/kg = micrograms per kilogram
ID = identification
VOC = volatile organic compound

Table 14
Deep Aquifer Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						VOCs																	
Analyte:						Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	2-Hexanone	4-Isopropyltoluene	4-Methyl-2-pentanone
CAS RN:						127-18-4	79-01-6	156-59-2	75-01-4	630-20-6	71-55-6	79-34-5	79-00-5	75-34-3	75-35-4	95-63-6	106-93-4	107-06-2	78-87-5	108-67-8	591-78-6	99-87-6	108-10-1
Screening Level:						5	0.54	16	0.029	1.7	200	0.5	0.77	7.7	7	80	0.022	0.48	1.2	80	40	--	640
Exceedance						Y	Y	Y	Y		Y		Y	Y	Y			Y	Y				
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**																		
Deep Aquifer	DW1	DW1-WG-19991228	12/28/1999	N	Historical	--	**8**	5 U	--	--	5 U	--	--	--	--	--	--	5 U	5 U	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20000308	3/8/2000	N	Historical	--	**62**	**5**	--	--	5 U	--	--	--	--	--	--	5 U	5 U	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20031017	10/17/2003	N	ChlorSolv-Aq	--	**81**	5 U	--	--	5 U	--	--	--	--	--	--	5 U	5 U	--	--	--	--
Deep Aquifer	DW1	DW-1-181107	11/7/2018	N	Baseline	2.0 U	**25**	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	DW1	DW1-190912	9/12/2019	N	Investigation-PhaseII	2.0 U	**300**	**16**	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	5 U	5 U	--	--	**49**	--	--	--	--	--	--	**26**	**10**	--	--	--	--
Deep Aquifer	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	5 U	5 U	--	--	**45**	--	--	--	--	--	--	**15**	**13**	--	--	--	--
Deep Aquifer	DW2	DW-2-181107	11/7/2018	N	Baseline	2.0 U	**2.4**	**3.0**	0.020 U	0.50 U	2.0 U	0.50 U	**15**	2.0 U	**2.0**	2.0 U	0.010 U	**6.1**	**4.6**	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	DW2	DUP-181107	11/7/2018	FD	Baseline	2.0 U	**2.4**	**3.1**	0.020 U	0.50 U	2.0 U	0.50 U	**15**	2.0 U	2.0 U	2.0 U	0.010 U	**6.0**	**4.5**	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	2.0 U	**120**	**190 J**	**0.92 J**	0.50 U	2.0 U	0.50 U	**6.8 J**	2.0 U	2.0 U	2.0 U	0.010 U	**4.2 J**	**3.0 J**	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	2.0 U	**100**	**66 J**	**0.41 J**	0.50 U	2.0 U	0.50 U	**3.7 J**	2.0 U	2.0 U	2.0 U	0.010 U	**2.1 J**	**1.6 J**	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	DW3	DW3-WG-20000519	5/19/2000	N	Historical	--	5 U	5 U	--	--	5 U	--	--	--	--	--	--	5 U	5 U	--	--	--	--
Deep Aquifer	DW3	DW-3-181107	11/7/2018	N	Baseline	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	DW3	DW3-190912	9/12/2019	N	Investigation-PhaseII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-1	RIDW-1-190128	1/28/2019	N	DeepWellInstall	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-1	GWDUP-1-190128	1/28/2019	FD	DeepWellInstall	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-1	RIDW-1-190912	9/12/2019	N	Investigation-PhaseII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-2	RIDW-2-190128	1/28/2019	N	DeepWellInstall	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-2	RIDW-2-190911	9/11/2019	N	Investigation-PhaseII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-3	RIDW-3-190128	1/28/2019	N	DeepWellInstall	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-3	RIDW-3-190911	9/11/2019	N	Investigation-PhaseII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	0.020 U	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-4	RIDW-4-190919	9/19/2019	N	Investigation-PhaseII	2.0 U	**1.2**	**8.5**	**0.18**	0.50 U	2.0 U	0.50 U	**1.1**	2.0 U	2.0 U	2.0 U	0.010 U	**5.8**	**4.0**	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-5	RIDW-5-230925	9/25/2023	N	PhaseIII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	**0.68**	0.50 U	2.0 U	10 U	2.0 U	10 U
Deep Aquifer	RIDW-6	RIDW-6-230925	9/25/2023	N	PhaseIII	2.0 U	0.50 U	2.0 U	0.020 U	0.50 U	2.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	0.010 U	**0.56**	0.50 U	2.0 U	10 U	2.0 U	10 U

Table 14
Deep Aquifer Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						VOCs																
Analyte:						Acetone	Benzene	Carbon Disulfide	Carbon Tetrachloride	Chloroethane	Chloroform	Ethylbenzene	Isopropylbenzene	Methyl Ethyl Ketone	Methylene Chloride	Methyl-tert-butyl ether	Naphthalene	n-Propylbenzene	sec-Butylbenzene	Toluene	trans-1,2-Dichloroethene	Xylenes, Total
CAS RN:						67-64-1	71-43-2	75-15-0	56-23-5	75-00-3	67-66-3	100-41-4	98-82-8	78-93-3	75-09-2	1634-04-4	91-20-3	103-65-1	135-98-8	108-88-3	156-60-5	1330-20-7
Screening Level:						7,200	0.8	800	0.63	--	1.4	700	800	4,800	5	24	160	800	800	640	100	1,600
Exceedance							Y				Y										Y	
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**																	
Deep Aquifer	DW1	DW1-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20011024	10/24/2001	N	Historical	--	1 U	--	--	--	--	1 U	--	--	--	--	--	--	--	1 U	--	3 U
Deep Aquifer	DW1	DW1-WG-20031017	10/17/2003	N	ChlorSolv-Aq	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW-1-181107	11/7/2018	N	Baseline	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	**40**	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	DW1	DW1-190912	9/12/2019	N	Investigation-PhaseII	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**2.3**	2.0 U
Deep Aquifer	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DW-2-181107	11/7/2018	N	Baseline	25 U	0.50 U	2.0 U	0.50 U	2.0 U	**0.67**	2.0 U	2.0 U	10 U	5.0 U	**2.9**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	DW2	DUP-181107	11/7/2018	FD	Baseline	25 U	0.50 U	2.0 U	0.50 U	2.0 U	**0.65**	2.0 U	2.0 U	10 U	5.0 U	**2.8**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 UJ	**16**	2.0 U	2.0 U	2.0 U	2.0 U	**16 J**	2.0 U
Deep Aquifer	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 UJ	**15**	2.0 U	2.0 U	2.0 U	2.0 U	**5.3 J**	2.0 U
Deep Aquifer	DW3	DW3-WG-20000519	5/19/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW3	DW-3-181107	11/7/2018	N	Baseline	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	DW3	DW3-190912	9/12/2019	N	Investigation-PhaseII	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-1	RIDW-1-190128	1/28/2019	N	DeepWellInstall	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-1	GWDUP-1-190128	1/28/2019	FD	DeepWellInstall	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-1	RIDW-1-190912	9/12/2019	N	Investigation-PhaseII	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-2	RIDW-2-190128	1/28/2019	N	DeepWellInstall	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-2	RIDW-2-190911	9/11/2019	N	Investigation-PhaseII	25 U	0.50 U	**3.9**	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-3	RIDW-3-190128	1/28/2019	N	DeepWellInstall	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-3	RIDW-3-190911	9/11/2019	N	Investigation-PhaseII	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-4	RIDW-4-190919	9/19/2019	N	Investigation-PhaseII	25 U	0.50 U	2.0 U	0.50 U	2.0 U	**3.5**	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-5	RIDW-5-230925	9/25/2023	N	PhaseIII	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Deep Aquifer	RIDW-6	RIDW-6-230925	9/25/2023	N	PhaseIII	25 U	0.50 U	2.0 U	0.50 U	2.0 U	0.50 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table 14
Deep Aquifer Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

						Analyte Group:	TPH			SVOCs								Conventionals						
						Analyte:	Petroleum Hydrocarbons as GRO	Petroleum Hydrocarbons as DRO	Petroleum Hydrocarbons as ORO	1,4-Dioxane	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Ethane	Ethene	Methane	Nitrogen, Nitrate (as N)	Nitrogen, Nitrate (As NO3)	Sulfate	Total Organic Carbon
						CAS RN:	PHC_C5-C12	PHC_C12-C24	PHC_C24-C40	123-91-1	56-55-3	50-32-8	205-99-2	207-08-9	218-01-9	53-70-3	193-39-5	74-84-0	74-85-1	74-82-8	14797-55-8	NO3	14808-79-8	TOC
						Screening Level:	1,000	500	500	0.44	--	--	--	--	--	--	--	--	--	--	10,000	--	--	--
						Exceedance	Y	Y	Y	Y														
						Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**																			
Deep Aquifer	DW1	DW1-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20011024	10/24/2001	N	Historical	50 U	130 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20031017	10/17/2003	N	ChlorSolv-Aq	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW-1-181107	11/7/2018	N	Baseline	--	--	--	0.40 U	--	--	--	--	--	--	--	--	10 U	10 U	10 U	--	**1,300**	**11,000**	1,000 U
Deep Aquifer	DW1	DW1-190912	9/12/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--	--	10 U	10 U	10 U	**1,200**	--	**11,000**	1,000 U
Deep Aquifer	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DW-2-181107	11/7/2018	N	Baseline	--	--	--	**1.8**	--	--	--	--	--	--	--	--	10 U	10 U	10 U	--	**1,400**	**12,000**	**1,400**
Deep Aquifer	DW2	DUP-181107	11/7/2018	FD	Baseline	--	--	--	**1.6**	--	--	--	--	--	--	--	--	10 U	10 U	10 U	--	**1,500**	**14,000**	**1,500**
Deep Aquifer	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	--	--	--	0.40 U	--	--	--	--	--	--	--	--	10 U	10 U	10 U	**1,400**	--	**18,000**	1,000 U
Deep Aquifer	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	--	--	--	0.40 U	--	--	--	--	--	--	--	--	10 U	10 U	10 U	**1,400**	--	**19,000**	1,000 U
Deep Aquifer	DW3	DW3-WG-20000519	5/19/2000	N	Historical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW3	DW-3-181107	11/7/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--	--	--	10 U	10 U	10 U	--	**3,100**	**10,000**	1,000 U
Deep Aquifer	DW3	DW3-190912	9/12/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--	--	10 U	10 U	10 U	**4,800**	--	**13,000**	1,000 U
Deep Aquifer	RIDW-1	RIDW-1-190128	1/28/2019	N	DeepWellInstall	--	--	--	--	--	--	--	--	--	--	--	--	10 U	10 U	10 U	--	150 U	**13,000**	**4,300**
Deep Aquifer	RIDW-1	GWDUP-1-190128	1/28/2019	FD	DeepWellInstall	--	--	--	--	--	--	--	--	--	--	--	--	10 U	10 U	10 U	--	150 U	**11,000**	**4,100**
Deep Aquifer	RIDW-1	RIDW-1-190912	9/12/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--	--	10 U	10 U	10 U	150 U	--	**7,400**	1,000 U
Deep Aquifer	RIDW-2	RIDW-2-190128	1/28/2019	N	DeepWellInstall	--	--	--	--	--	--	--	--	--	--	--	--	10 U	10 U	10 U	--	**210**	**72,000**	**2,700**
Deep Aquifer	RIDW-2	RIDW-2-190911	9/11/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--	--	10 U	10 U	**20**	**210**	--	**16,000**	**1,600**
Deep Aquifer	RIDW-3	RIDW-3-190128	1/28/2019	N	DeepWellInstall	--	--	--	0.40 U	--	--	--	--	--	--	--	--	10 U	10 U	10 U	--	150 U	**21,000**	**7,400**
Deep Aquifer	RIDW-3	RIDW-3-190911	9/11/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--	--	--	10 U	10 U	10 U	150 U	--	**4,900**	**1,700**
Deep Aquifer	RIDW-4	RIDW-4-190919	9/19/2019	N	Investigation-PhaseII	--	--	--	**4.8**	--	--	--	--	--	--	--	--	10 U	10 U	10 U	150 U	--	**26,000**	**8,200**
Deep Aquifer	RIDW-5	RIDW-5-230925	9/25/2023	N	PhaseIII	50 U	**170**	**380**	**1.6**	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-6	RIDW-6-230925	9/25/2023	N	PhaseIII	50 U	130 U	250 U	**1.3**	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--	--	--	--	--

Table 14
Deep Aquifer Historical Data – Detected Constituents in Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group:						Dissolved Metals					Total Metals				
Analyte:						Arsenic	Cadmium	Chromium, Total	Lead	Mercury	Arsenic	Cadmium	Chromium, Total	Lead	Mercury
CAS RN:						7440-38-2	7440-43-9	7440-47-3	7439-92-1	7439-97-6	7440-38-2	7440-43-9	7440-47-3	7439-92-1	7439-97-6
Screening Level:						13.6	5	100	15	2	13.6	5	100	15	2
Exceedance						Y					Y		Y	Y	
Units:						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Area	**Location**	**Field Sample ID**	**Sampling Date**	**Sample Type**	**Task**										
Deep Aquifer	DW1	DW1-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20011024	10/24/2001	N	Historical	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-WG-20031017	10/17/2003	N	ChlorSolv-Aq	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW-1-181107	11/7/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW1	DW1-190912	9/12/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DW2-WG-19991228	12/28/1999	N	Historical	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DW2-WG-20000308	3/8/2000	N	Historical	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DW-2-181107	11/7/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DUP-181107	11/7/2018	FD	Baseline	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DW2-190910	9/10/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW2	DUP-190910	9/10/2019	FD	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW3	DW3-WG-20000519	5/19/2000	N	Historical	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW3	DW-3-181107	11/7/2018	N	Baseline	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	DW3	DW3-190912	9/12/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-1	RIDW-1-190128	1/28/2019	N	DeepWellInstall	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-1	GWDUP-1-190128	1/28/2019	FD	DeepWellInstall	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-1	RIDW-1-190912	9/12/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-2	RIDW-2-190128	1/28/2019	N	DeepWellInstall	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-2	RIDW-2-190911	9/11/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-3	RIDW-3-190128	1/28/2019	N	DeepWellInstall	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-3	RIDW-3-190911	9/11/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-4	RIDW-4-190919	9/19/2019	N	Investigation-PhaseII	--	--	--	--	--	--	--	--	--	--
Deep Aquifer	RIDW-5	RIDW-5-230925	9/25/2023	N	PhaseIII	**3.0**	1.0 U	**2.8**	1.0 U	0.20 U	**3.5**	1.0 U	**8.3**	1.0 U	0.20 U
Deep Aquifer	RIDW-6	RIDW-6-230925	9/25/2023	N	PhaseIII	**3.3**	1.0 U	**5.9**	1.0 U	0.20 U	**6.2**	1.0 U	**43**	**3.0**	0.20 U

Abbreviations and Acronyms:
-- = not analyzed
CAS RN = Chemical Abstracts Service Registry No.
ID = identification
DRO = diesel-range organics
FD = field duplicate
GRO = gasoline-range organics
µg/L = micrograms per liter
N = primary sample
ORO = oil-range organics
SVOC = semivolatile organic compound
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Notes:
Bold text indicates detected analyte.
Blue shading indicates detected analyte exceeds applicable cleanup level.
U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Table 15
Screening Levels for Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group	CAS	Analyte	Units of Measurement	Protection of Groundwater Vadose @ 13 degrees Celsius	Protection of Groundwater Saturated @ 13 degrees Celsius	MTCA Method A (Lead, Mercury, TPH Only)	Direct Contact Pathway (Ingestion Only) MTCA Method B Unrestricted Land Use Method B Formula Values		Screening Levels (Before adjustment for Background)	Background Soil Metals Conc. Puget Sound Region 90th Percentile Value	Adjusted Screening Levels
							Non-carcinogen	Carcinogen			
Conventionals	877-24-7	Total Organic Carbon	mg/kg								
Metals	7440-38-2	Arsenic	mg/kg	2.90	0.150		24	0.667	0.150	7	7
Metals	7440-43-9	Cadmium	mg/kg	0.69	0.035		80		0.035	1	1
Metals	7440-47-3	Chromium (total)	mg/kg						42	42	42
Metals	16065-83-1	Chromium (III)	mg/kg	480,000	24,000		120,000		24,000		24,000
Metals	18540-29-9	Chromium (VI)	mg/kg	0.02	0.00089		240	0.038	0.00089		0.00089
Metals	7439-92-1	Lead	mg/kg	3,000	150	250			150	17	150
Metals	7439-97-6	Mercury	mg/kg	2.10	0.10	2.0			0.10	0.07	0.10
PCBs	12674-11-2	Aroclor 1016	mg/kg		*						
PCBs	11104-28-2	Aroclor 1221	mg/kg								
PCBs	11141-16-5	Aroclor 1232	mg/kg								
PCBs	53469-21-9	Aroclor 1242	mg/kg								
PCBs	12672-29-6	Aroclor 1248	mg/kg								
PCBs	11097-69-1	Aroclor 1254	mg/kg		*						
PCBs	11096-82-5	Aroclor 1260	mg/kg		*						
PCBs	11100-14-4	Aroclor 1268	mg/kg								
PCBs	1336-36-3	Total PCBs	mg/kg	0.34	0.017			0.5	0.017		0.017
TPH	DRO	TPH, diesel-range organics	mg/kg			2,000			2,000		2,000
TPH	ORO	TPH, heavy oils	mg/kg			2,000			2,000		2,000
TPH	GRO	TPH: gasoline-range organics, benzene present*	mg/kg			30			30		30
TPH	GRO	TPH: gasoline-range organics, no detectable benzene*	mg/kg			100			100		100
cPAHs	50-32-8	Benzo(a)pyrene	mg/kg	3.9	0.19		24.00	0.19	0.19		0.19
VOCs	630-20-6	1,1,1,2-Tetrachloroethane	µg/kg	9.8	0.63		2,400,000	38,000	0.63		0.63
VOCs	79-34-5	1,1,2,2-Tetrachloroethane	µg/kg	1.2	0.080		1,600,000	5,000	0.080		0.080
VOCs	79-00-5	1,1,2-Trichloroethane	µg/kg	17	1.1		320,000	18,000	1.1		1.1
VOCs	107-06-2	1,2-Dichloroethane	µg/kg	23	1.60		480,000	11,000	1.60		1.60
VOCs	78-87-5	1,2-Dichloropropane	µg/kg	25	1.70		3,200,000	27,000	1.70		1.70
VOCs	591-78-6	2-Hexanone	µg/kg	170	12		400,000		12		12
VOCs	99-87-6	4-Isopropyltoluene	µg/kg								
VOCs	108-10-1	4-Methyl-2-Pentanone	µg/kg	2,700	190		6,400,000		190		190
VOCs	67-64-1	Acetone	µg/kg	29,000	2,100		72,000,000		2,100		2,100
VOCs	71-43-2	Benzene	µg/kg	27	1.7		320,000	18,200	1.7		1.7
VOCs	75-15-0	Carbon disulfide	µg/kg	4,100	250		8,000,000		250		250
VOCs	56-23-5	Carbon Tetrachloride	µg/kg	41	2.2		320,000	14,000	2.2		2.2
VOCs	75-00-3	Chloroethane	µg/kg		*						
VOCs	67-66-3	Chloroform	µg/kg	74	4.8		800,000	32,000	4.8		4.8
VOCs	98-82-8	Cumene (common name for isopropylbenzene)	µg/kg	15,000	790		8,000,000		790		790
VOCs	75-34-3	Dichloroethane; 1,1-	µg/kg	41	2.60		16,000,000	180,000	2.60		2.60

Table 15
Screening Levels for Soil
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group	CAS	Analyte	Units of Measurement	Protection of Groundwater Vadose @ 13 degrees Celsius	Protection of Groundwater Saturated @ 13 degrees Celsius	MTCA Method A (Lead, Mercury, TPH Only)	Direct Contact Pathway (Ingestion Only) MTCA Method B Unrestricted Land Use Method B Formula Values		Screening Levels (Before adjustment for Background)	Background Soil Metals Conc. Puget Sound Region 90th Percentile Value	Adjusted Screening Levels
							Non-carcinogen	Carcinogen			
VOCs	75-35-4	Dichloroethene; 1,1-	µg/kg	46	2.50		4,000,000		2.50		2.50
VOCs	156-59-2	Dichloroethene; 1,2-,cis	µg/kg	79	5.2		160,000		5.2		5.2
VOCs	156-60-5	Dichloroethene; 1,2-, trans	µg/kg	520	32		1,600,000		32		32
VOCs	100-41-4	Ethylbenzene	µg/kg	5,900	340		8,000,000		340		340
VOCs	106-93-4	Ethylene dibromide (1,2-dibromoethane)	µg/kg	0.27	0.018		720,000	500	0.018		0.018
VOCs	78-93-3	Methyl ethyl ketone	µg/kg	20,000	1,400		48,000,000		1,400		1,400
VOCs	1634-04-4	Methyl T-Butyl Ether	µg/kg	100	7.2			560,000	7.2		7.2
VOCs	75-09-2	Methylene chloride	µg/kg	22	1.50		480,000	94,000	1.50		1.50
VOCs	91-20-3	Naphthalene	µg/kg	4,500	240		1,600,000		240		240
VOCs	103-65-1	Propylbenzene; n-	µg/kg	16,000	880		8,000,000		880		880
VOCs	135-98-8	sec-Butylbenzene	µg/kg	25,000	1,300		8,000,000		1,300		1,300
VOCs	127-18-4	Tetrachloroethene (PCE)	µg/kg	50	2.80		480,000	480,000	2.80		2.80
VOCs	108-88-3	Toluene	µg/kg	4,500	270		6,400,000		270		270
VOCs	1330-20-7	Total xylenes	µg/kg	14,000	830		16,000,000		830		830
VOCs	71-55-6	Trichloroethane; 1,1,1-	µg/kg	1,500	84		160,000,000		84		84
VOCs	79-01-6	Trichloroethene (TCE)	µg/kg	25	1.5		40,000	12,000	1.5		1.5
VOCs	95-63-6	Trimethylbenzene; 1,2,4-	µg/kg	1,300	72		800,000		72		72
VOCs	108-67-8	Trimethylbenzene; 1,3,5-	µg/kg	1,300	71		800,000		71		71
VOCs	75-01-4	Vinyl chloride	µg/kg	1.7	0.090		240,000	670	0.090		0.090

Notes:

Soil screening levels have not been adjusted for PQL because the achievable laboratory reporting limits are based on dry weight. PQL adjustments will be presented in the RI.

*No partitioning information provided in CLARC for protection of groundwater calculation

Abbreviations and Acronyms:

CAS = Chemical Abstracts Service
CLARC = Ecology's Cleanup Levels and Risk Calculations database
cPAH = carcinogenic polycyclic aromatic hydrocarbon
DRO = diesel-range organics
GRO = gasoline-range organics
µg/kg = micrograms per kilogram
mg/kg =milligrams per kilogram
MTCA = Model Toxics Control Act
ORO = oil-range organics
PCB = polychlorinated biphenyl
PQL = practical quantitation limit
RI = remedial investigation
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Table 16
Screening Levels for Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group	CAS	Analyte	Unit of Measurement	Federal MCL	Washington State MCL	MTCA Method A (Lead, Mercury, and TPH Only)	Method B Standard Formula Values		Washington State Action Levels	Groundwater Protective of Vapor Intrusion (a)	Screening Levels (Before Adjustment for PQL and Background)	Laboratory PQL	Groundwater Background Concentration	Adjusted Screening Level
							Non-carcinogen	Carcinogen						
Conventionals	NA	Ferrous Iron	µg/L								NA	--		
Conventionals	14797-55-8	Nitrate	µg/L	10,000	10,000		26,000				10,000	153		10,000
Conventionals	14808-79-8	Sulfate	µg/L								NA	260		
Conventionals	877-24-7	Total Organic Carbon	µg/L								NA	500		
Dissolved Gases	74-84-0	Ethane	µg/L								NA	10		
Dissolved Gases	74-85-1	Ethene	µg/L								NA	10		
Dissolved Gases	74-82-8	Methane	µg/L								NA	10		
Metals	7440-38-2	Arsenic	µg/L	10	10		4.8	0.058			0.058	1	13.6	13.6
Metals	7440-43-9	Cadmium	µg/L	5	5		8				5	1		5
Metals	7440-47-3	Chromium (total)	µg/L	100	100						100	2		100
Metals	16065-83-1	Chromium (III)	µg/L		100		24,000				100	10		100
Metals	18540-29-9	Chromium (VI)	µg/L				48	0.046			0.046	10		10
Metals	7439-92-1	Lead	µg/L	15	15	15					15	1		15
Metals	7439-97-6	Mercury	µg/L	2	2	2					2	0.2		2
TPH	DRO	TPH, diesel-range organics	µg/L			500					500	130		500
TPH	ORO	TPH, heavy oils	µg/L			500					500	250		500
TPH	GRO	TPH: gasoline-range organics, benzene present	µg/L			800					800	50		800
TPH	GRO	TPH: gasoline-range organics, no detectable benzene	µg/L			1,000					1,000	50		1,000
VOCs	630-20-6	1,1,1,2-Tetrachloroethane	µg/L				240	1.70			1.70	0.5		1.70
VOCs	79-34-5	1,1,2,2-Tetrachloroethane	µg/L				160	0.220			0.220	0.5		0.50
VOCs	79-00-5	1,1,2-Trichloroethane	µg/L	5	5		32	0.77			0.77	0.5		0.77
VOCs	123-91-1	1,4-Dioxane	µg/L				240	0.44			0.44	0.40		0.44
VOCs	591-78-6	2-Hexanone	µg/L				40				40	10		40.00
VOCs	99-87-6	4-Isopropyltoluene	µg/L								NA	2		
VOCs	108-10-1	4-Methyl-2-Pentanone	µg/L				640				640	10		640
VOCs	67-64-1	Acetone	µg/L				7,200				7,200	25		7,200
VOCs	71-43-2	Benzene	µg/L	5	5		32	0.800		2.40	0.800	0.5		0.800
VOCs	75-15-0	Carbon disulfide	µg/L				800				800	2		800
VOCs	56-23-5	Carbon tetrachloride	µg/L	5	5		32	0.630			0.630	0.5		0.630
VOCs	75-00-3	Chloroethane	µg/L								NA	2		
VOCs	67-66-3	Chloroform	µg/L	80	80		80	1.40			1.40	0.5		1.40
VOCs	98-82-8	Cumene (common name for isopropylbenzene)	µg/L				800				800	2		800
VOCs	75-34-3	Dichloroethane; 1,1-	µg/L				1,600	7.7		11	7.7	2		7.7
VOCs	107-06-2	Dichloroethane; 1,2-	µg/L	5	5		48	0.48			0.48	0.02		0.48
VOCs	75-35-4	Dichloroethene; 1,1-	µg/L	7	7		400				7	2		7
VOCs	156-59-2	Dichloroethene; 1,2-, cis	µg/L	70	70		16				16	2		16
VOCs	156-60-5	Dichloroethene; 1,2-, trans	µg/L	100	100		160				100	2		100
VOCs	78-87-5	Dichloropropane; 1,2-	µg/L	5	5		320	1.20			1.20	0.5		1.20
VOCs	100-41-4	Ethylbenzene	µg/L	700	700		800				700	2		700
VOCs	106-93-4	Ethylene dibromide (1,2-dibromoethane)	µg/L	0.05	0.05		72	0.022			0.022	0.01		0.022
VOCs	78-93-3	Methyl ethyl ketone	µg/L				4,800				4,800	10		4,800
VOCs	1634-04-4	Methyl T-Butyl Ether	µg/L					24.0			24	2		24

Table 16
Screening Levels for Groundwater
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte Group	CAS	Analyte	Unit of Measurement	Federal MCL	Washington State MCL	MTCA Method A (Lead, Mercury, and TPH Only)	Method B Standard Formula Values		Washington State Action Levels	Groundwater Protective of Vapor Intrusion (a)	Screening Levels (Before Adjustment for PQL and Background)	Laboratory PQL	Groundwater Background Concentration	Adjusted Screening Level
							Non-carcinogen	Carcinogen						
VOCs	75-09-2	Methylene chloride	µg/L	5	5		48	5.8			5	5		5
VOCs	91-20-3	Naphthalene	µg/L				160				160	2		160
VOCs	103-65-1	n-Propylbenzene	µg/L				800				800	2		800
VOCs	135-98-8	sec-Butylbenzene	µg/L				800				800	2		800
VOCs	127-18-4	Tetrachloroethene (PCE)	µg/L	5	5		48	21		25.0	5	2		5
VOCs	108-88-3	Toluene	µg/L	1,000	1,000		640				640	2		640
VOCs	1330-20-7	Total xylenes	µg/L	10,000	10,000		1,600				1,600	4		1,600
VOCs	71-55-6	Trichloroethane; 1,1,1-	µg/L	200	200		16,000			5,400	200	2		200
VOCs	79-01-6	Trichloroethene (TCE)	µg/L	5	5		4	0.54		1.40	0.54	0.5		0.54
VOCs	95-63-6	Trimethylbenzene; 1,2,4-	µg/L				80				80	2		80.00
VOCs	108-67-8	Trimethylbenzene; 1,3,5-	µg/L				80				80	2		80
VOCs	75-01-4	Vinyl chloride	µg/L	2	2		24	0.029		0.33	0.029	0.029		0.029
cPAHs	56-55-3	Benzo(a)pyrene	µg/L				4.8	0.023				0.04		0.04
PFAS	13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-Da; Genx)	µg/L				0.024				0.024	0.00668		0.024
PFAS	375-73-5	Perfluorobutanesulfonic acid (PFBS)	µg/L				4.8		0.345		4.8	0.00142		0.345
PFAS	375-22-4	Perfluorobutanoic acid (PFBA)	µg/L				8				8	0.0064		8
PFAS	355-46-4	Perfluorohexanesulfonic acid (PFHxS)	µg/L				0.16		0.065		0.16	0.00146		0.065
PFAS	307-24-4	Perfluorohexanoic acid (PFHxA)	µg/L				8				8	0.0016		8
PFAS	375-95-1	Perfluorononanoic acid (PFNA)	µg/L				0.04		0.009		0.04	0.0016		0.009
PFAS	1763-23-1	Perfluorooctanesulfonic acid (PFOS)	µg/L				0.048		0.015		0.048	0.00149		0.015
PFAS	335-67-1	Perfluorooctanoic acid (PFOA)	µg/L				0.048		0.010		0.048	0.0016		0.010

Notes:
(a) Values provided only for constituents on the air analyte list.

Abbreviations/Acronyms:
CAS = Chemical Abstracts Service
cPAH = carcinogenic polycyclic aromatic hydrocarbon
DRO = diesel-range organics
GRO = gasoline-range organics
µg/L = micrograms per liter
MCL = maximum contaminant level
MTCA = Model Toxics Control Act
NA = not available
ORO = oil-range organics
PFAS = per- and polyfluorinated substances
PQL = practical quantitation limit
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

Table 17
Screening Levels for Soil Gas
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

CAS	Analyte	Indoor Air Screening Levels (µg/m^3)			Soil Gas Screening Levels (µg/m^3)			Groundwater Screening Levels (µg/L)		
		Carcinogenic	Non-carcinogenic	Screening Levels	Carcinogenic	Non-carcinogenic	Screening Levels	Carcinogenic	Non-carcinogenic	Screening Levels
71-43-2	Benzene	0.321	13.7	0.321	11	460	11	2.4	100	2.4
75-34-3	Dichloroethane; 1,1-	1.56		1.56	52		52	11.0		11
127-18-4	Tetrachloroethene	9.62	18.3	9.62	320	610	321	25.0	48.0	25
71-55-6	Trichloroethane; 1,1,1-		2,290	2,290		76,000	76,000		5,400	5,400
79-01-6	Trichloroethene	0.334	0.914	0.334	11	30	11	1.40	3.90	1.4
75-01-4	Vinyl chloride	0.284	45.7	0.284	9.5	1,500	9.5	0.33	54	0.33

Notes:

Analyte list was determined based on results from TO-15 analysis of soil gas conducted during the 2017 and 2018 Phase II investigation by Landau Associates.

Abbreviations/Acronyms:

CAS = Chemical Abstracts Service

µg/L = microgram per liter

µg/m^3 = microgram per cubic meter

Table 18
Agreed Order Remedial Investigation Exploration Summary
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Investigation Area/Exploration Location	Exploration Type	Media Sampled			Exploration Purpose
		Soil	Groundwater	Soil Gas	
Building C-19					
RIDW-7	Monitoring Well	✓			Further delineate the vertical extent of chlorinated solvents in soil near the former vapor degreaser
RISB-100	Soil Boring	✓	✓		Further delineate the extent of the chlorinated solvent plume to the east of the former vapor degreaser
RISB-101 through RISB-103	Soil Boring	✓	✓		Further delineate the extent of chlorinated solvents in groundwater around existing boring RISB-58 located east of the northern half of Building C-19
Building C-20, C-21, C-22 Complex					
RISG-203 through RISG-205	Soil Gas Probe	✓		✓	Further delineate the extent of soil gas exceeding screening levels to the south of Building C-20 in the vicinity of LAI-26 and petroleum hydrocarbon exceedances in soil at RISB-22
RISB-105 and RISB-106	Soil Boring	✓	✓		Further delineate the extent of total chromium in soil and diesel- and oil-range hydrocarbons in groundwater to the west and south of Building C-22
RISB-113 and RISB-114	Soil Boring	✓	✓		Further delineate the extent of diesel- and oil-range hydrocarbons in groundwater in the Building C-20, -21, and -C-22 Complex
RIGW-103 and RIGW-104	Monitoring Well	✓	✓		Establish a groundwater monitoring network in the Building C-20, C-21, C-22 complex and evaluate extent of hydrocarbon contamination in the area
Trench Drain Survey	Sonde Survey				Determine discharge point of trench drain; compare discharge point location with existing site data for potential follow-up soil and groundwater sampling
RIGW-100 and RIGW-101	Monitoring Well	✓	✓		Establish a groundwater monitoring network in the Building C-20, C-21, C-22 complex. Conduct chromium speciation in soil and groundwater near RISB-13
Building C-23/C-23 Annex					
RISB-107 and RISB-108	Soil Boring	✓	✓		Delineate the extent of chlorinated VOCs and oil-range hydrocarbons beneath the northern portion of Building C-23 Annex
RISB-115	Soil Boring	✓	✓		Delineate extent of chlorinated VOC contamination east of Building C-23 Annex, near RISB-61
RISG-206 through RISG-208	Soil Gas Probe			✓	Delineate the extent of chlorinated VOCs beneath the northern portion of Building C-23 Annex
RISB-104	Soil Boring	✓	✓		Evaluate groundwater and/or soil conditions near the former oil shed and de-burr area east of Building C-23
UST Survey	GPR Survey				Determine if one or more USTs are present near the SW corner of Building C-23
RISB-109 and RISB-110	Soil Boring	✓	✓		Evaluate soil and groundwater conditions in the area of suspected UST near SW corner of Building C-23
RIGW-102	Monitoring Well	✓	✓		Establish a groundwater monitoring well in the Building C-23/C-23 Annex complex
Former Building C-29/Former East Fuel Farm					
RISB-111, RISB-116, and RISB-117	Soil Boring	✓	✓		Further delineate the extent of VOC contamination in groundwater and/or soil southwest of former Building C-27
RISG-209 through RISG-218	Soil Gas Probe			✓	Characterize the nature and extent of VOCs in soil gas within the VOC plume centered around former Building C-27
RISB-112	Soil Boring	✓			Delineate the northerly extent of chromium contamination in soil at the north end of former Building C-29

Table 18
Agreed Order Remedial Investigation Exploration Summary
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Investigation Area/Exploration Location	Exploration Type	Media Sampled			Exploration Purpose
		Soil	Groundwater	Soil Gas	
Deep Aquifer					
RIDW-7	Monitoring Well		✓		Re-characterize deep aquifer groundwater conditions in the immediate vicinity of DMW1 in the Buildng C-19 area
RIDW-8	Monitoring Well		✓		Re-characterize deep aquifer groundwater conditions in the immediate vicinity of DMW2 in the former C-29/ Former East Fuel Farm area

Abbreviations and Acronyms:
UST = underground storage tank
VOCs = volatile organic compounds

Table 19
Investigation Summary – Soil Borings
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

				ACTIVITY		SOIL								GROUNDWATER								
Location ID	Area	Type	Status	Soil Sampling	Water Sampling	Sample ID Prefix[1]	VOCs (EPA Method 8260D)	TPH-G (NWTPH-Gx)	TPH-D and TPH-O (NWTPH-Dx)	cPAHs (EPA Method 8270 SIM)	Naphthalene (EPA 8270 E)	Trivalent, Hexavalent, and Total Chromium (6020A)[2]	Total Metals (6020A and 7471A)[3]	Sample ID Prefix[1]	Sampling Frequency	VOCs (EPA Method 8260D)	1,4-Dioxane (EPA Method 8270 SIM)	TPH-G (NWTPH-Gx)	TPH-D and TPH-O (NWTPH-Dx)	cPAHs (EPA 8270E SIM) + Naphthalene	Naphthalene (EPA 8270 E)	Total Metals (6020A and 7471A)[3]
RISB-100	C-19	Sonic	Planned	X	X	RISB-100	X							RISB-100-GW	One-time	X	X					
RISB-101	C-19	Sonic	Planned	X	X	RISB-101	X							RISB-101-GW	One-time	X	X					
RISB-102	C-19	Sonic	Planned	X	X	RISB-102	X							RISB-102-GW	One-time	X	X					
RISB-103	C-19	Sonic	Planned	X	X	RISB-103	X							RISB-103-GW	One-time	X	X					
RISB-105	C-20,-21,-22	Sonic	Planned	X	X	RISB-105				X	X	X		RISB-105-GW	One-time				X	X	X	
RISB-106	C-20,-21,-22	Sonic	Planned	X	X	RISB-106				X	X	X		RISB-106-GW	One-time				X	X	X	
RISB-113	C-20,-21,-22	Sonic	Planned	X	X	RISB-113		X	X					RISB-113-GW	One-time			X	X	X	X	
RISB-114	C-20,-21,-22	Sonic	Planned	X	X	RISB-114	X	X	X					RISB-114-GW	One-time	X			X	X		
RISB-104	C-23/Annex	Sonic	Planned	X	X	RISB-104	X		X	X				RISB-104-GW	One-time	X	X		X	X		
RISB-107	C-23/Annex	Sonic	Planned	X	X	RISB-107	X							RISB-107-GW	One-time	X	X		X	X		
RISB-108	C-23/Annex	Sonic	Planned	X	X	RISB-108	X							RISB-108-GW	One-time	X	X		X	X		
RISB-109	C-23/Annex	Sonic	Planned	X	X	RISB-109	X	X	X	X			X	RISB-109-GW	One-time	X	X	X	X	X		X
RISB-110	C-23/Annex	Sonic	Planned	X	X	RISB-110	X	X	X	X			X	RISB-110-GW	One-time	X	X	X	X	X		X
RISB-115	C-23/Annex	Sonic	Planned	X	X	RISB-115	X							RISB-115-GW	One-time	X						
RISB-111	C-29/Former Fuel Farm	Sonic	Planned	X	X	RISB-111	X							RISB-111-GW	One-time	X	X					
RISB-112	C-29/Former Fuel Farm	Sonic	Planned	X		RISB-112						X										
RISB-116	C-29/Former Fuel Farm	Sonic	Planned	X	X	RISB-116	X							RISB-116-GW	One-time	X	X					
RISB-117	C-29/Former Fuel Farm	Sonic	Planned	X	X	RISB-117	X							RISB-117-GW	One-time	X	X					
			TOTAL	**18**	**17**	**---**	**14**	**4**	**5**	**5**	**2**	**3**	**2**	**---**	**---**	**14**	**12**	**3**	**9**	**9**	**3**	**2**

Notes:

(1) Sample IDs for soil and groundwater will contain a depth interval or a date following the prefix shown on the table. For example, the sample ID for a soil sample collected at location RISB-100 from 20 to 21 feet bgs would be "RISB-100-S-20-21" and a groundwater sample collected at location RISB-100 on April 15, 2024 would have a sample ID of "RISB-100-GW-20240415."

(2) Total chromium by EPA Method 6020A UCT; hexavalent chromium by SM 3500; mercury by EPA Method 7470A; and trivalent chromium will be quantified through calculation.

(3) Metals to include arsenic, cadmium, total chromium, lead, and zinc by EPA Method 6020A UCT; hexavalent chromium by SM 3500; mercury by EPA Method 7470A; and trivalent chromium will be quantified through calculation.

Table 19
Investigation Summary – Soil Borings
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Abbreviations and Acronyms:

bgs = below ground surface
cPAHs = carcinogenic polycyclic aromatic hydrocarbons
EPA = US Environmental Protection Agency
ID = identification
NWTPH-Dx = Northwest total petroleum hydrocarbon extended-range diesel analytical method
NWTPH-Gx = Northwest total petroleum hydrocarbon extended-range gasoline analytical method
SIM = selected ion monitoring
VOC = volatile organic compound
TPH-D = diesel-range total petroleum hydrocarbons
TPH-G = gasoline-range total petroleum hydrocarbons
TPH-O = oil-range total petroleum hydrocarbons

Table 20
Investigation Summary – Groundwater Monitoring Wells
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

				ACTIVITY						SOIL					GROUNDWATER										
Location ID	Area	Type	Status	Soil Sampling	Install/Develop	Quarterly Water Levels	Decommission	Groundwater Sampling	Top of Casing Elevation Survey	Sample ID Prefix[1]	Sample Interval (ft, bgs)	VOCs (EPA Method 8260D)	TPH-G (NWTPH-Gx)	TPH-D and TPH-O (NWTPH-Dx)	Sample ID Prefix[1]	Screen Interval (ft)	Sampling Frequency	VOCs (EPA Method 8260D)	1,4-Dioxane (EPA Method 8270 SIM)	TPH-G (NWTPH-Gx)	TPH-D and TPH-O (NWTPH-Dx)	cPAHs (EPA 8270E SIM)	Total and Dissolved Metals[3]	Hexavalent and Trivalent Chromium[4]	PFAS (EPA Method 1633)
RIGW-55	C-19	Monitoring Well	Existing			X		X		None	None				RIGW-55	4 - 9	Semiannual	X	X	X	X	X			
SCPWD-2	C-19	Monitoring Well	Existing			X		X		None	None				SCPWD-2	20 - 30	Semiannual	X	X						
SCPWD-3	C-19	Monitoring Well	Existing			X		X		None	None				SCPWD-3	20 - 30	Semiannual	X	X						
SCPWD-4	C-19	Monitoring Well	Existing			X		X		None	None				SCPWD-4	20 - 30	Semiannual	X	X						
RIGW-100	C-20,-21,-22	Monitoring Well	Planned		X	X		X	X	None	None				RIGW-100	to be determined at time of installation	Semiannual	X	X	X	X	X	X	X	
RIGW-101	C-20,-21,-22	Monitoring Well	Planned		X	X		X	X	None	None				RIGW-101	to be determined at time of installation	Semiannual	X	X	X	X	X			
RIGW-103	C-20,-21,-22	Monitoring Well	Planned	X	X	X		X	X	RIGW-103-S	None	X	X	X	RIGW-103	to be determined at time of installation	Semiannual	X		X	X	X			
RIGW-104	C-20,-21,-22	Monitoring Well	Planned	X	X	X		X	X	RIGW-104-S	None	X		X	RIGW-104	to be determined at time of installation	Semiannual	X			X	X			
RIGW-102	C-23/Annex	Monitoring Well	Planned		X	X		X	X	None	None				RIGW-102	to be determined at time of installation	Semiannual	X	X	X			X	X	
C29-MW1	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				C29-MW1	15 - 20	Semiannual	X	X	X	X	X			
C29-MW2	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				C29-MW2	unknown[5]	Semiannual	X	X	X	X	X			
HMB1	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				HMB1	8 - 18	Semiannual	X	X	X	X	X			X
MW-1	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				MW1	14.5 - 24.5	Semiannual	X	X	X	X	X			
MW-2	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				MW2	12 - 17	Semiannual	X	X	X	X	X			
MW-3	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				MW3	12.5 - 17.5	Semiannual	X	X	X	X	X			
MW-4	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				MW4	7 - 17	Semiannual	X	X	X	X	X			
RIGW-1	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				RIGW-1	10 - 20	Semiannual	X	X	X	X	X			
RIGW-2	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				RIGW-2	3 - 13	Semiannual	X	X	X	X	X			
RIGW-3	C-29/Former Fuel Farm	Monitoring Well	Existing			X		X		None	None				RIGW-3	15 - 20	Semiannual	X	X	X	X	X			
DW1	Deep Aquifer	Monitoring Well	Existing			X	X	X		None	None				DW1	137 - 147	One time	X	X						
DW2	Deep Aquifer	Monitoring Well	Existing			X	X	X		None	None				DW2	137 - 147	One time	X	X						
DW3	Deep Aquifer	Monitoring Well	Existing			X		X		None	None				DW3	134 - 144	Semiannual	X	X						
RIDW-1	Deep Aquifer	Monitoring Well	Existing			X		X		None	None				RIDW-1	139.5 - 149.5	Semiannual	X	X						
RIDW-2	Deep Aquifer	Monitoring Well	Existing			X		X		None	None				RIDW-2	142 - 152	Semiannual	X	X						
RIDW-3	Deep Aquifer	Monitoring Well	Existing			X		X		None	None				RIDW-3	140.5 - 150.5	Semiannual	X	X						
RIDW-4	Deep Aquifer	Monitoring Well	Existing			X		X	X	None	None				RIDW-4	135 - 145	Semiannual	X	X						
RIDW-5	Deep Aquifer	Monitoring Well	Existing			X		X		None	None				RIDW-5	140 - 150	Semiannual	X	X						
RIDW-6	Deep Aquifer	Monitoring Well	Existing			X		X		None	None				RIDW-6	134 - 144	Semiannual	X	X						
RIDW-7	Deep Aquifer	Monitoring Well	Planned	X	X	X		X	X	RIDW-7-S	5-55[2]	X			RIDW-7	to be determined at time of installation	Semiannual	X	X						
RIDW-8	Deep Aquifer	Monitoring Well	Planned		X	X		X	X	RIDW-8-S	None				RIDW-8	to be determined at time of installation	Semiannual	X	X						

Table 20
Investigation Summary – Groundwater Monitoring Wells
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

				ACTIVITY						SOIL					GROUNDWATER										
Location ID	Area	Type	Status	Soil Sampling	Install/Develop	Quarterly Water Levels	Decommission	Groundwater Sampling	Top of Casing Elevation Survey	Sample ID Prefix[1]	Sample Interval (ft, bgs)	VOCs (EPA Method 8260D)	TPH-G (NWTPH-Gx)	TPH-D and TPH-O (NWTPH-Dx)	Sample ID Prefix[1]	Screen Interval (ft)	Sampling Frequency	VOCs (EPA Method 8260D)	1,4-Dioxane (EPA Method 8270 SIM)	TPH-G (NWTPH-Gx)	TPH-D and TPH-O (NWTPH-Dx)	cPAHs (EPA 8270E SIM)	Total and Dissolved Metals[3]	Hexavalent and Trivalent Chromium[4]	PFAS (EPA Method 1633)
MW1	Offsite Boeing	Monitoring Well	Existing			X				None	None				None										
MW2	Offsite Boeing	Monitoring Well	Existing			X				None	None				None										
MW3	Offsite Boeing	Monitoring Well	Existing			X				None	None				None										
MW4	Offsite Boeing	Monitoring Well	Existing			X				None	None				None										
MW6	Offsite Boeing	Monitoring Well	Existing			X				None	None				None										
MW7	Offsite Boeing	Monitoring Well	Existing			X				None	None				None										
			TOTAL	3	7	36	2	30	8	---	---	3	1	2	---	---	---	30	28	15	15	15	2	2	1

Notes:

(1) Sample IDs for soil and groundwater will contain a depth interval or a date following the prefix shown on the table. For example, the sample ID for a soil sample collected from 10-11 ft bgs at location RIGW-101 on June 30, 2024 would be "RIGW-101-S-10-11" and a groundwater sample collected at location RIGW-101 on September 15, 2024 would have a sample ID of "RIGW-101-20240915."

(2) See Section 6.1.2 of work plan for soil sampling during drilling of RIDW-7.

(3) Metals to include arsenic, cadmium, total chromium, copper, and lead by EPA Method 6020A UCT; and mercury by EPA Method 7470A.

(4) Hexavalent chromium by SM 3500; trivalent chromium will be quantified through calculation.

(5) Screened interval for C29-MW2 is unknown but Landau redeveloped the well in October 2018 and measured the final well depth to be 14.4 ft.

Abbreviations and Acronyms:

bgs = below ground surface
cPAHs = carcinogenic polycyclic aromatic hydrocarbons
EPA = US Environmental Protection Agency
ft = feet
ID = identification
NWTPH-Dx = Northwest total petroleum hydrocarbon extended-range diesel analytical method
NWTPH-Gx = Northwest total petroleum hydrocarbon extended-range gasoline analytical method
PFAS = per- and polyfluoroalkyl substances
SIM = selected ion monitoring
SM = standard methods
TPH-D = diesel-range total petroleum hydrocarbons
TPH-G = gasoline-range total petroleum hydrocarbons
TPH-O = oil-range total petroleum hydrocarbons
VOCs = volatile organic compounds

Table 21
Investigation Summary – Soil Gas
Agreed Order Remedial Investigation Work Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

				ACTIVITY		SOIL				SOIL GAS SAMPLING ANALYSIS			
Location ID	Subarea	Type	Status	Soil Sampling	Soil Gas Sampling	Sample ID Prefix[1]	Sample Interval	TPH-Gx (NWTPH-Gx)	TPH-Dx (NWTPH-Dx)	Sample ID Prefix[2]	Sample Interval	Sampling Frequency	VOCs (EPA Method TO-15)[3]
RISG-203	C-20,C-21,C-22	Soil Gas	Planned		X	None				RISG-203	TBD[4]	One-time	X
RISG-204	C-20,C-21,C-22	Soil Gas	Planned	X	X	RISG-204-S	1 to 5 ft bgs	X	X	RISG-204	TBD[4]	One-time	X
RISG-205	C-20,C-21,C-22	Soil Gas	Planned	X	X	RISG-205-S	1 to 5 ft bgs	X	X	RISG-205	TBD[4]	One-time	X
RISG-206	C-23/C-23 Annex	Soil Gas	Planned		X	None				RISG-206	TBD[4]	One-time	X
RISG-207	C-23/C-23 Annex	Soil Gas	Planned		X	None				RISG-207	TBD[4]	One-time	X
RISG-208	C-23/C-23 Annex	Soil Gas	Planned		X	None				RISG-208	TBD[4]	One-time	X
RISG-209	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-209	TBD[4]	One-time	X
RISG-210	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-210	TBD[4]	One-time	X
RISG-211	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-211	TBD[4]	One-time	X
RISG-212	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-212	TBD[4]	One-time	X
RISG-213	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-213	TBD[4]	One-time	X
RISG-214	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-214	TBD[4]	One-time	X
RISG-215	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-215	TBD[4]	One-time	X
RISG-216	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-216	TBD[4]	One-time	X
RISG-217	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-217	TBD[4]	One-time	X
RISG-218	C-29/Former Fuel Farm	Soil Gas	Planned		X	None				RISG-218	TBD[4]	One-time	X
Ambient Air	Site-Wide	Ambient Air	Planned			None				AA-	Above ground[5]	One-time	X
			TOTAL	**2**	**17**	---	---	**2**	**2**	---	---	--	**17**

Notes:

(1) Sample IDs for soil will contain a depth interval following the prefix shown on the table. For example, the sample ID for a soil sample collected at location RISG-204 from 2.5 to 3.5 feet bgs would be "RISG-204-S-2.5-3.5."

(2) Sample IDs for soil gas will contain a date following the prefix shown on the table. For example, the sample ID for a soil gas sample collected at location RISG-204 on July 1, 2024 would be "RISG-204-20240701." Sample IDs for ambient air will include a prefix and a date. For example, an ambient air sample collected on September 22, 2024 would be "AA-20240922."

(3) Compounds to report on the TO-15 analysis include benzene, 1,1-dichloroethane, 1,1,1-trichloroethane, tetrachloroethene, trichloroethene, and vinyl chloride.

(4) To a depth of 5 ft bgs or at the till-fill interface, whichever is shallower. Vapor implants will not be set shallower than 2.5 ft bgs. If groundwater is encountered, the implant will be set at least 1 ft above the groundwater table.

(5) Ambient air sample will be collected over an 8-hour time period on a day when the majority of soil gas samples are collected. Sample canister will be placed in a location that is upwind from the Site at the time of soil gas sampling.

Abbreviations and Acronyms:

bgs = below ground surface
EPA = US Environmental Protection Agency
ft = foot/feet
ID = identification
TBD = to be determined
VOCs = volatile organic compounds

APPENDIX A

Sampling and Analysis Plan

LANDAU ASSOCIATES

SAMPLING AND ANALYSIS PLAN

Agreed Order Remedial Investigation and Feasibility Study Work Plan
Paine Field TECT Aerospace Leasehold
Everett, Washington

May 3, 2024

Prepared for

Snohomish County
Everett, Washington

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LIST OF ABBREVIATIONS AND ACRONYMS

bgs ..... below ground surface
cPAH ..... carcinogenic polycyclic aromatic hydrocarbon
DI ..... de-ionized
Ecology ..... Washington State Department of Ecology
EPA ..... US Environmental Protection Agency
ft ..... foot/feet
GPS ..... Global Positioning System
IDW ..... investigation-derived waste
Landau ..... Landau Associates, Inc.
mL ..... milliliter
NTU ..... nephelometric turbidity unit
PFAS ..... per- and polyfluorinated substances
PID ..... photoionization detector
ppm ..... parts per million
PVC ..... polyvinyl chloride
QAPP ..... quality assurance project plan
QA/QC ..... quality assurance/quality control
RI ..... remedial investigation
SAP ..... sampling and analysis plan
SGC ..... silica-gel cleanup
Site ..... TECT property
TECT ..... TECT Aerospace
TPH ..... total petroleum hydrocarbons
Vapor Pin ..... Cox-Colvin Vapor Pin™
VOC ..... volatile organic compound
USCS ..... Unified Soil Classification System
WAC ..... Washington Administrative Code
work plan ..... Remedial Investigation and Feasibility Study Work Plan

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1.0 INTRODUCTION

Landau Associates, Inc. (Landau) prepared this sampling and analysis plan (SAP), which describes the procedures for conducting field activities during the remedial investigation (RI) at the TECT Aerospace (TECT) property (Site), located in Everett, Washington (Figure 1 of the RI work plan). This SAP is an appendix to the TECT Aerospace Remedial Investigation and Feasibility Study Work Plan (work plan). The primary objective of this SAP is to provide sampling and analysis procedures and methodologies consistent with accepted procedures such that the data collected will be adequate for use in characterizing environmental conditions at the Site. This SAP was prepared in accordance with the requirements of Washington Administrative Code (WAC) 173-340-820.

This SAP addresses RI field work, during which samples of soil, groundwater, and soil gas will be collected at the Site. The anticipated number of samples and analyses for each of these three media are summarized in Table 19, Table 20, and Table 21 of the RI work plan, respectively. The tables describe the anticipated sampling activities for each of the following investigation areas:

- Building C-19
- Building C-20, C-21, C-22 Complex
- Building C-23 and C-23 Annex
- Former Building C-29 / Former East Fuel Farm
- Deep Aquifer.

The following sections describe the field procedures to be employed for the planned sampling activities.

2.0 DRILLING AND SAMPLING

Soil and groundwater grab samples will be collected from borings drilled using either a direct-push drill, rotosonic drill, or hollow-stem auger drill rig. Shallow borings will be extended to the maximum depth of field-observed contamination or, if field-observed contamination is not present, to 30 feet (ft) below ground surface (bgs). Borings associated with the deep aquifer investigation will extend to approximately 150 ft bgs.

The borings will be completed by a driller licensed in the State of Washington and will be monitored by a Landau environmental professional. Soil will be described and classified in accordance with the Unified Soil Classification System (USCS). Prior to initiation of drilling or any other intrusive subsurface activity, the locations of each proposed exploration will be checked in the field by reviewing information from Snohomish County to locate aboveground and/or underground utilities or physical obstructions that would prevent drilling at the proposed location. Snohomish County will be responsible for providing maps and location information for non-conductible utilities. In addition, a public utility locate service will be contacted to locate underground utilities at the perimeter of the Site and a private utility locate service will be retained to survey the planned exploration locations and mark conductible underground utilities. The final location for each borehole will be selected based on the findings of the field check and the utility locating and marking. Depending on the proximity of utilities to the sampling location, use of a low-impact utility clearance process may be warranted. This may include the use of a hand auger and/or vacuum truck air-knife to a depth of 5 ft bgs to avoid damaging any subsurface utilities or other structures.

Before and between drilling of each boring and at the completion of the project, downhole drilling equipment will be cleaned using a high-pressure hot water or steam washer, as described in Section 7.3. During rotosonic or direct-push drilling, continuous soil samples will be collected at each soil boring location to classify soil lithology in accordance with the USCS. Soil cores collected using a hollow-stem auger will be cored using semicontinuous drilling techniques. Due to the presence of dense to very dense glacial till at the Site, rotosonic drilling methods will be the primary drilling method to advance soil borings and collect samples. A hollow-stem auger rig may be used for installing shallow soil gas probes. For soil borings advanced using a hollow-stem auger rig, the soil samples will be obtained using a 3-inch-diameter, 1.5-ft-long, split-spoon sampler. For soil borings advanced using a direct-push drill rig, soil samples will be collected using a closed-piston sampling device with a 48-inch-long, 1.5-inch-diameter core sampler. For soil borings advanced with a rotosonic drill rig, soil samples will be collected in 5-to 20-ft core barrels; core barrel diameters range from 3 to 8 inches depending on the soil clast size and drill rig limitations.

A record of the soil and groundwater conditions observed during drilling will be recorded on a Log of Exploration form. The boring log will also show soil types, evidence of contamination based on field screening, depths of analytical samples, and other pertinent information.

2.1 Shallow Temporary Soil Boring Procedure

This section describes procedures for drilling and sampling shallow temporary soil borings, which are identified in this work plan with the "RISB" prefix. Unless noted otherwise, each of these borings will be drilled to a minimum of 30 ft bgs. One soil sample will be collected for laboratory analysis from each of the first two 10-ft sampling intervals (i.e., 0 to 10 ft, 10 to 20 ft). The samples will be collected from the portion of the sampling interval yielding the greatest potential for contamination based on field screening results. Additional soil samples will be collected from 20 to 30 ft, 30 to 40 ft, and so on if field screening continues to indicate the presence of contamination within these sampling intervals or if needed to delineate the vertical extent of contamination detected in the 10- to 20-ft sample interval. In addition, a groundwater sample will be collected from the boring if sufficient perched groundwater is encountered during drilling to allow sample collection. Detailed procedures to be followed during drilling and sampling of shallow soil borings are provided below.

- After any necessary utility locating/clearance excavations, starting at the ground surface, collect a 10-ft soil core by advancing the rotosonic core barrel to 10 ft bgs. Examine the soil core, log the soil as described in Section 2.0, and conduct field screening of the core as detailed in Section 2.2. Collect a soil sample over an approximate 1-ft length of the core at the point along the core that exhibits the highest contamination level based on field screening. If contamination is not observed, collect the sample over the bottom 1 ft of the core.
- Examine the soil core for the presence of perched groundwater by noting any interval containing wet or saturated conditions.
- Advance the rotosonic outer casing to 10 ft bgs and clean out the borehole by removing soil cuttings from inside the casing down to 10 ft bgs.
- Collect a second 10-ft soil core by advancing the rotosonic core barrel to 20 ft bgs. Conduct the same steps as described above for logging, field screening, and soil sampling.
- If perched groundwater is observed in the 0- to 20-ft bgs interval, install a 5-ft-long temporary well (as described below) and collect a groundwater sample from the saturated interval yielding the highest level of contamination. If groundwater sampling is not required at a specific boring location, then skip the following four sub-bullets and proceed to the next solid bullet.
  - If groundwater samples will be analyzed for petroleum hydrocarbons, the temporary well screen should be placed across the groundwater table by positioning the top of the well screen up to 1 ft above the top of the perched groundwater depth.
  - If samples will not be analyzed for petroleum hydrocarbons, collect one groundwater grab sample from 1 ft to 6 ft below the top of the groundwater table.
  - Groundwater samples will be collected by first advancing the outer casing to the bottom of the targeted sampling interval and removing soil cuttings from inside the casing. A 5-ft-long screened section of polyvinyl chloride (PVC) pipe (i.e., temporary well) will then be lowered to the bottom of the borehole and a 12/20 Colorado or 2/12 Cemex Lapis Luster sand pack (or equivalent) will be placed around the screen section and up to approximately 1 ft above the screened interval. The outer casing will then be raised to expose the entire length of sand pack to the formation. Groundwater samples will then be collected from the temporary well using methods described in Section 2.4.1.

  - If field screening indicates the presence of contamination in the 0- to 20-ft interval, proceed to the casing stepdown procedure (below). If contamination is not present, proceed to the next bullet.

- If no contamination is present in the 0- to 20-ft bgs interval, decommission the boring.
- If perched groundwater is not observed in the 0- to 20-ft bgs interval and field screening indicates the presence of contamination in the 0- to 20-ft interval, then proceed with the 20- to 30-ft core barrel (without conducting stepdown procedures) and follow the same procedures for sampling water if it is present in the 20- to 30-ft interval.
- After perched groundwater sampling is complete, a casing stepdown is required to prevent downward vertical migration of the perched aquifer. To construct a stepdown:
  - Advance a larger-diameter rotosonic outer casing to a depth 0.5 to 1.0 ft below the saturated interval and into low-permeability till. Remove the PVC well casing, cuttings, and sand pack from inside the outer casing. Add approximately 2 ft of bentonite chips and allow at least 30 minutes for the chips to hydrate to form a seal that will prevent carrydown of perched groundwater to lower depths.
  - Lower a smaller-diameter inner casing to the bottom of the bentonite plug and remove bentonite from inside the smaller-diameter casing.
- After completing the stepdown, advance the next 10-ft soil core barrel through the center of the smaller-diameter inner casing to 30 ft bgs (or 40 ft bgs if groundwater was present in the 20- to 30-ft interval) and repeat the steps described above for field screening, logging, and soil sampling.
  - If field screening does not indicate the presence of contamination, collect a soil sample from the bottom 1 ft of the core barrel and decommission the boring as detailed in Section 2.6.
  - If contamination is observed, collect a soil sample as described above (i.e., from the interval yielding the highest level of contamination based on field screening) and advance a fourth 10-ft soil core and repeat the steps described above for field screening, logging, and soil sampling.
  - Continue advancing 10-ft soil core barrels to 40 ft, 50 ft, and so on, until contamination is no longer observed.

2.2 Field Screening

Soil, groundwater, and soil gas will be field-screened for evidence of environmental impact. Field-screening techniques may include visually inspecting the soil or groundwater for staining, discoloration, and other evidence of environmental impact; monitoring soil cores for the presence of volatile organic compounds (VOCs) using a portable photoionization detector (PID); observation of odors; and sheen testing. Field screening will be conducted at all exploration locations on all media.

Initial soil core temperatures will be measured using an external laser thermometer prior to conducting VOC monitoring. VOC monitoring for soil will be conducted using headspace analysis and will be performed by first measuring VOC levels along the length of freshly exposed soil in recovered soil cores using the PID. If VOC readings above background levels are observed, a small amount of soil from that portion of the soil core yielding the VOCs will be placed in a Ziploc® bag. The bag will then be sealed, the

contents broken up, and the bag allowed to equilibrate for 2 to 5 minutes. The tubing from a PID will then be inserted into the Ziploc bag, the bag will be resealed around the tube, and the highest value measured by the PID will be recorded. A PID will also be used to screen soil gas for VOCs during purging prior to sample collection. Sheen testing will be conducted by agitating a small volume of soil in a black pan or plastic cup with clean tap water to see if a sheen is generated. Groundwater samples will be observed for evidence of sheen, odor, and discoloration.

All field-screening results will be recorded and entered in the comments section of the soil boring logs. Additionally, any PID readings greater than 5 parts per million (ppm) will be noted on the chain-of-custody form to communicate the potential for contamination to the laboratory.

2.3 Soil Sampling

This section discusses soil sampling methodology. See Section 6.0 of the work plan for a discussion of soil sampling locations and analytical methods. Sample containers, labeling, and handling methods are discussed below.

Soil cores must be allowed to cool to 20 degrees Celsius or less before samples are collected. Soil samples collected for analysis for volatile parameters (e.g., gasoline-range total petroleum hydrocarbons [TPH] and any VOCs including benzene, toluene, ethylbenzene, and xylenes [BTEX]) must be collected before non-volatile samples and in accordance with US Environmental Protection Agency (EPA) Method 5035A. The EPA 5035A soil sampling method is intended to reduce volatilization and biodegradation of samples. The EPA 5035A procedure for soil sample collection is as follows:

- Collect soil from an undisturbed section of the soil cores using a laboratory-provided coring device (i.e., EnCore® sampler, EasyDraw Syringe®, or a Terra Core™ sampling device) in accordance with laboratory-specified procedures. Each core will typically consist of approximately 5 grams of soil. Collect three discrete cores from each sampling location. One EasyDraw Syringe or Terra Core device will be used to collect the three discrete cores; however, if the EnCore samplers are used, then three sampling devices are required.
- Remove excess soil from the coring device. If an EasyDraw Syringe or Terra Core sampling device is used for sample collection, then place each soil “core” directly into a preserved 40 milliliter (mL) vial with a stirbar. Vials will contain preservative as indicated in Table A-1. If the EnCore sampler is used, then close the sampler for transport to the laboratory.
- Collect 2 ounces of soil and place in a laboratory-supplied jar for moisture content analysis and laboratory screening purposes. Fill the jar to minimize headspace.

Soil samples to be tested for non-volatile parameters (i.e., metals and diesel- and oil-range TPH) will be collected from the identified soil sampling intervals using the following methods:

- Scrape the outside of the soil core to expose a fresh sampling surface using a clean, decontaminated stainless-steel spoon.
- Collect an appropriate volume of soil from the exposed sampling surface with a second decontaminated stainless-steel spoon and place it into a decontaminated stainless-steel bowl.
- Homogenize the soil in the bowl using the stainless-steel spoon.

- Transfer the homogenized soil into the appropriate laboratory-supplied sample container.

Note that collection of soil samples for analysis for TPH at some locations is not planned unless field-screening results indicate the potential presence of petroleum hydrocarbons.

Soil samples collected from temporary borings for laboratory analysis will be labeled using the following format:

"RISB-location-depth interval"

For example, a soil sample collected between 4 and 5 ft bgs at RISB-100 would be RISB-100-4-5.

Identification of soil samples collected during installation of new groundwater monitoring wells should use the following format:

"RIGW-location-soil-depth interval"

For example, a soil sample collected between 10 and 11 ft bgs at RIGW-101 would be RIGW-101-S-10-11.

The soil and groundwater sampling location identification and analyses for each of the proposed temporary borings are summarized in Table 19 of the work plan. The soil sampling identification and analyses to be collected during the installation of monitoring wells are summarized in Table 20 of the work plan. Proposed borings and monitoring well locations are shown on Figures 3i, 4i, 5i, 6i, 12 and 13 of the work plan.

2.4 Groundwater Grab Sampling

This section discusses groundwater grab sampling methodology. See Section 6.0 of the work plan for a discussion of groundwater grab sampling locations and analytical methods. Sample containers, labeling, and handling methods are discussed below.

Groundwater grab samples will be collected for laboratory analysis from borings as described in Table 19 of the work plan. If direct-push drilling is used, the groundwater samples will be collected using a groundwater sampler consisting of a 4-ft-long, wire-wrapped, stainless-steel screen (0.010-inch slot size) with a retractable protective steel sheath or a Schedule 40 PVC pre-packed screen. The groundwater sampler will be advanced to the sample depth and the protective sheath will be retracted to expose the stainless-steel screen to the formation. If rotosonic or hollow-stem auger drilling is used, temporary monitoring wells with PVC screens, or Schedule 40 PVC pre-packed screens will be constructed in the boreholes and used for groundwater sample collection.

Low-flow purging will be conducted using a peristaltic pump for 10 minutes or until the purge water is clear (less than 50 nephelometric turbidity units [NTUs]), whichever is sooner. During purging, pH, conductivity, and temperature will be measured using a flow-through cell and recorded on a field sample collection form. Groundwater samples will be collected directly into the appropriate sample containers using disposable polyethylene tubing and a peristaltic pump. Samples will be chilled to 6°C immediately after collecting the sample. Groundwater samples for dissolved metals analyses will be collected last and field-filtered through a 0.45-micron, in-line disposable filter. A note will be made on

the sample label, sample collection form, and chain-of-custody form to indicate that the sample has been field-filtered.

For groundwater samples that are to be analyzed for carcinogenic polycyclic aromatic hydrocarbons (cPAHs), the samples will be observed to assess the degree of turbidity in the sample to determine if an additional step is needed to yield analytical results that are representative of actual groundwater cPAH conditions and that are not impacted by turbidity due to well construction. If the sample appears to be turbid (i.e., greater than approximately 50 NTUs), the impact of suspended material on the analytical results will be minimized by allowing the sample to settle for at least an hour. The clear supernatant portion of the sample will be extracted from the sample container and transferred to a second container, which will then be submitted to the laboratory. A notation will be made on the sample collection form stating that this settling step was taken for the sample.

Groundwater samples scheduled for analysis by the Northwest TPH extended-range diesel analytical method (NWTPH-Dx) will be analyzed with and without silica-gel cleanup to assess the impact of biogenic material in the sample on analytical results in accordance with the Washington State Department of Ecology (Ecology's) recent guidance for use of silica-gel cleanup (Ecology 2023).

The groundwater grab samples collected from the soil borings will be labeled using the following format:

"RISB-location-GW"

For example, a groundwater grab sample collected at RISB-100 would be RISB-100-GW.

2.5 Soil Gas Sampling

Procedures for soil gas sampling follow the recommendations in the Washington State Department of Ecology (Ecology) guidance document on vapor intrusion evaluation (Ecology 2022) and are detailed below.

2.5.1 Temporary Soil Gas Well Installation

2.5.1.1 Outside of a Building Footprint

Temporary soil gas wells located outside of tenant-occupied buildings will be installed by a licensed drilling contractor using direct-push, sonic, or auger drilling techniques. These soil gas wells will consist of 0.25-inch-diameter Teflon® or Nylaflow® tubing with a 6-inch-long, stainless-steel vapor implant. Vapor implants will be installed to a depth of 5 ft bgs or at the till-fill interface, whichever is shallower; however, they will not be installed shallower than 2.5 ft unless the location is surrounded by a competent concrete or asphalt slab within a 10-ft radius. If groundwater is encountered, the implant will be set at least 1 ft above the groundwater table. Water levels will be confirmed at the time of field installation (in nearby wells and in groundwater grab sample borings) so that soil gas wells are constructed to the appropriate depth.

Silica sand will be placed around the screened interval to depths of at least 6 inches above and below the implant. Approximately 6 inches of dry granular bentonite will be installed above the filter pack. Borings will be sealed from the top of the dry granular bentonite to the ground surface with hydrated

cement/bentonite grout. Soil gas wells will be equipped with dedicated valves. All dedicated materials (tubing, probe screen, valve) will be delivered from the manufacturer pre-cleaned and sealed in plastic.

2.5.1.2 Sub-Slab

Temporary sub-slab vapor sampling points (within a building slab) will be constructed by drilling a hole through the concrete floor slab, inserting a sample collection device, and sealing the hole around the sample collection device so that ambient air cannot enter the subsurface. A sample point will be constructed by inserting a Cox-Colvin Vapor Pin™ (Vapor Pin) of approximately 3 to 12 inches in length into the hole. The installation process for the Vapor Pin is described below followed by a description of the sampling protocol.

Sub-slab soil gas samples will be collected from just beneath or within a slab from a ⅝-inch- or 1-inch-diameter hole. The hole will be drilled with a handheld rotary hammer style drill.[1]

Each location will be cored with an outer 1.5-inch-diameter (to 1.5 inches bgs) and inner ⅝-inch-diameter core (through the full thickness of the slab) to install a Vapor Pin. If wet methods are required for coring the concrete, water application will be discontinued before penetrating the slab to prevent water from entering the subsurface environment. Immediately following coring, field staff will insert a PID into the drilled hole to quickly check for the presence of VOCs, and will proceed with installing the sample point to minimize the introduction of soil gas into indoor air as described below:

- **Cox-Colvin Vapor Pin**: Vapor Pins are composed of a barbed, stainless-steel sample point fitted with an inert, compressible, silicon sleeve. Each Vapor Pin will be installed using a hammer and specialized installation tool to drive the Vapor Pin into a ⅝-inch-diameter vertical hole within the slab. Driving the Vapor Pin into the hole compresses the sleeve, creating a seal between the sample point and slab surface. Typically, slabs are thicker than 3 inches, so most of the Vapor Pin will rest within the slab and extensions will be added to the pin until the bottom of the pin rests below the slab and above the underlying soil. After the Vapor Pin is installed, the end with a hose barb is exposed at the ground surface. A fitted cap will be attached to the barb to allow the sub-slab soil gas to equilibrate without exposure to ambient air. A flush-mounted plug will be placed over the fitted cap to protect the sample point from damage.

2.5.2 Soil Gas Sample Collection

Sample collection activities at soil gas wells will occur after an equilibration period (at least 2 hours after installation of sample points) to allow for soil gas conditions to return to steady state prior to sample collection. Soil gas sampling will not be conducted during or immediately following a heavy rain event. Sampling will not be conducted within 48 hours following a rain event with more than 0.5 inches of rain in 24 hours.

[1] Some coring debris will remain at the bottom of the boring; therefore, drilling should extend beneath the bottom of the slab by approximately 4 to 6 inches to expose the soil before installing the Vapor Pin or implant. Sub-slab conditions (such as Site-specific construction features) may require shallower drilling beneath the sub-slab, which will be evaluated at each sampling location and/or in each building prior to installation of the sample collection device. A broom and dustpan or shop vacuum will be used to collect coring debris deposits on the ground surface; a shop vacuum will be used only to clear the hole prior to breakthrough of the floor slab or after installation of the sample collection device.

Following the equilibration period, a shut-in test, helium leak test, and purge will be completed prior to sample collection, as detailed below.

2.5.2.1 Shut-In Test

The purpose of a shut-in test is to check the air-tightness of all connections in the sample train prior to conducting the helium leak test. The shut-in test will be completed using the following steps:

1. After the equilibration period is complete, connect the entire sample train to the soil gas implant tubing. The sample train will consist of the Summa canister, flow regulator (if necessary), vacuum gauge assembly, valves, tubing, and syringe. Double-check the tightness of all connections.
2. Use the syringe to pull a vacuum on the sample train. When both the in-line and canister vacuum gauges indicate a vacuum of at least 15 inches of mercury, record the shut-in test starting vacuum pressure and time. Continue to watch for vacuum drops for 1 minute. Record the shut-in test ending vacuum and time. If the vacuum holds steady with no observable drop for 1 minute, this indicates that there are no leaks in the sample train between the sample tubing and the Summa canister.
3. If the vacuum pressure drops during the shut-in test period, a leak is present. Double-check the tightness of fittings, examine tubing and other equipment for defects or other possible leaks, and repeat the test. If the pressure continues to drop, replace the sample train pieces in the following order: tubing, valves, canister.

2.5.2.2 Helium Leak Test

The helium leak test is optional and may be excluded if potential subsurface interferences are present such as significant amounts of methane. The helium leak test procedure described below requires one Dielectric Helium Leak Detector MGD 2002 (or equivalent) hand-held meter. Select the appropriate height shroud to fully encapsulate the aboveground portion of the sample port. Place the shroud over the sample port and extend the sample tubing through the outlet at the top of the shroud. Hydrated bentonite or bentonite clay can be used around the base of the shroud if an uneven ground surface is present. Follow the steps described below.

1. Connect the helium tank to the shroud through an inlet port and ensure that all connections are tight.
2. Turn on the helium detector and zero-out the instrument in ambient air to read a helium concentration of 0 ppm. Insert the meter probe inside the shroud.
3. Release helium into the shroud until the helium detector indicates that the air inside the shroud is approximately 50 percent helium. Record the highest concentration of helium in ppm.
4. The same syringe used in the shut-in test can also be used for the helium test. Using the syringe, purge the sample train of at least one volume of air and discharge to ambient air. Then draw approximately 400 mL of soil gas into the Tedlar® bag. Close the Tedlar bag and remove it from the sample train.
5. Remove the helium detector from the sample shroud. Zero-out the instrument to read a helium concentration of 0 ppm.

6. Insert the helium detector into the shrouded sample train to measure the helium concentration in the extracted soil gas. The concentration of helium in the sample train should be zero.
7. If concentrations of helium are detected in the Tedlar bag sample, a leak may be present in the surface seal, allowing ambient air to enter the well. Double-check the surface seal, tightness of fittings, and other possibilities for leaks and repeat the test. If helium continues to be detected in the Tedlar bag, there is the potential that a gas is present in the subsurface formation that is causing interference with the helium detection meter. To check for an interfering gas, remove the helium shroud, disconnect the sampling train from the sampling tubing coming out of the ground, purge the in-ground tubing and sand pack, and check for helium directly from the sample tubing. If helium is detected, there is likely an interfering gas present. Reconnect the sample train, reinstall the helium shroud, rerun the shut-in and helium leak tests, collect the sample, and add analysis for helium to the chain-of-custody form for this sampling location. If helium is not detected in the formation gas, there may be a problem with the surface seal that allowed helium to get into the formation during the helium leak test. Assess the surface, look for damage or areas that could be sealed with hydrated bentonite, seal as appropriate, and rerun the helium leak test.

Following completion of the shut-in-test and helium leak test, the entire sample train has been tested for leaks.

2.5.2.3 Purge

1. Use the syringe to purge 3 volumes from the sample train (approximately 6 mL per ft of ¼-inch sample tubing). Repeat the process if the required purge volume is greater than the capacity of the syringe.
2. Record the purge volume.

2.5.2.4 Sample Collection

1. Open the Summa canister valve to begin collecting the sample. Record the time the canister was opened and the initial volume of the canister. The sample collection rate should be 200 mL per minute or less.
2. Once the vacuum gauge on the Summa canister reaches 5 inches of mercury, close the valve on the Summa canister. Ensure the Summa canister valve is closed prior to disconnecting it from the well to prevent accidental entrance of remnant low-level helium from the shroud into the Summa canister.

2.5.3 Soil Gas Sample Handling and Analysis

Samples will be delivered to the laboratory for analysis for the compounds listed in Table 21 of the work plan by EPA Method TO-15. If a helium leak test cannot be completed as described above, the sample will be analyzed for helium by ASTM International Method D-1946. Soil gas samples will be collected in 1-liter Summa canisters, provided by the analytical laboratory. Each Summa canister used for sample collection will be certified to contain less than the reporting limit for each of the target compounds.

Prior to sampling, each soil gas sample will be assigned a unique alphanumeric identifier as follows:

Soil Gas

"RISG-location-YYYYMMDD"

For example, a soil gas sample collected at RISG-100 on October 5, 2024 would be RISG-100-20241005.

Analytical methods, sample containers, holding times, and preservation requirements are provided in Table A-1.

2.6 Decommissioning Borings

Once completed, soil borings will be decommissioned and filled using bentonite chips. Water will be poured in to hydrate the chips and the top of the boring will be patched to match the original ground surface. The thickness of this cap will match or be thicker than the original surface layer. A protective cone will be placed on or nearby to initially protect the surface patch.

3.0 MONITORING WELL INSTALLATION AND GROUNDWATER SAMPLING

Procedures for installing and developing permanent monitoring wells and collecting groundwater samples from the monitoring wells are described below. Well construction details are provided on Figures A-1 (shallow wells) and A-2 (deep wells).

3.1 Installation and Construction of Monitoring Wells

Boreholes for the groundwater monitoring wells will be drilled using rotosonic drilling equipment. Shallow monitoring wells will be drilled to the depth that intersects the perched water conditions at the time of drilling such that the top of the screen will be placed, where feasible, approximately 1 ft below the suspected depth of the water table. If TPH is a suspected contaminant at a particular well location, then the top of the well screen will be placed 2 ft above the groundwater table. Deep monitoring wells will be drilled to approximately 150 ft bgs. Monitoring wells will be constructed by a licensed drilling contractor in the State of Washington, in accordance with the Minimum Standards for Construction and Maintenance of Wells (Chapter 173-160 WAC). Observation of drilling and well installation activities will be conducted by a Landau environmental professional familiar with environmental sampling and construction of resource protection wells.

The monitoring wells will be constructed with 2-inch-diameter, flush-threaded, Schedule 40 PVC or fiberglass pipe. Each shallow well will be constructed with a 5-ft screen. Deep aquifer wells will have a 10-ft screen set to cover the portion of the aquifer between 5 and 15 ft below the top of the deep aquifer water table. Stepdown installation techniques will be required for wells that will be installed within an area with known contamination.

- Stepdown procedures will include use of a conductor casing that has a larger diameter than the inner casing used to advance the borehole for well installation.
- Field-screening techniques will be used to determine the maximum depth of the conductor casing but contaminated soil and perched groundwater are not anticipated to extend beyond 40 ft bgs. Continuous soil cores will be screened using a PID and the use of conductor casing will be terminated at a depth where PID readings indicate no VOCs are present in the soil cores.
- At least 2 ft of bentonite grout seal will be placed at the bottom of the borehole and allowed to cure for at least 30 minutes before advancing the inner casing beyond the contaminated zone.

The screen at each well will be constructed with a 0.020-inch machine-slotted PVC or fiberglass casing. A filter pack material consisting of pre-washed, pre-sized number 10/20 silica sand or 2/12 Monterey Beach sand (or equivalent) will be placed from the bottom of the well to between 1 and 2 ft above the top of the screen. Filter pack material will be placed slowly and carefully to avoid bridging of material.

A bentonite seal will be placed above the filter sand pack material to within about 3 ft of the ground surface. In shallow wells, the seal can be 100 percent bentonite chips, while in the deep aquifer wells the seal will consist of 5 percent bentonite grout placed over approximately 5 ft of bentonite chips to prevent the grout from infiltrating into the filter pack. Concrete will be used to backfill the boring to the

subgrade for placement of the protective cover. The wells will be completed with flush-mounted protective casings. Airport-grade well covers will be used in locations with airplane traffic.

The well names and the identification numbers assigned by Ecology will be marked on the well identification tags supplied by Ecology. The tags will be attached to each well casing (inside the well monument) following well installation.

3.2 Well Development

The monitoring wells will be developed after construction to remove formation material from the well borehole and the filter pack prior to groundwater-level measurement and sampling. Development will occur no sooner than 24 hours after well installation and will be achieved by repeatedly surging the well with a surge block and purging the well until the water runs clear, and at least five well casing volumes have been removed. During development, the purged groundwater will be monitored for turbidity.

Ideally, the wells will be developed until the turbidity of the purged groundwater decreases to 5 NTUs. However, it is expected that the silty lithology will contribute to elevated turbidity during well development. If the goal of 5 NTU cannot be achieved, 10 well casing volumes will be removed and well development will be considered complete. If the well dewaters during the initial surging and purging effort, one final well casing volume will be removed after the well has fully recharged, if practicable. Well development activities will be recorded on a well development form.

3.3 Groundwater Sample Collection

Groundwater samples will be collected at least 72 hours after well development. Water levels will be measured prior to sample collection as described in Section 5.0. Groundwater samples will be collected at each monitoring well using low-flow sampling techniques and the following procedures:

- Immediately following removal of each well monument cover, the well head will be observed for damage, leakage, and staining. Additionally, immediately following removal of the well head cap, any odors will be documented, and the condition of the well opening will be observed. Any damage, leakage, or staining to the well head or well opening will be documented.
- The depth to groundwater will be measured from the top of the casing prior to extraction of water from the well, using the procedures described in Section 5.0.
- Prior to sampling, each well will be purged using a peristaltic pump (for shallow wells) or a decontaminated, non-dedicated bladder pump (for deep wells) that is attached to dedicated purge and sample collection tubing. Purging will begin with a low pumping rate. The pumping rate will be maintained at less than 1 liter per minute and, if possible, with drawdown of less than 1 ft during purging. Purging will continue until specific conductance, pH, dissolved oxygen, temperature, and turbidity have stabilized, as described below, or for a maximum of 20 minutes.
- Field parameters, including pH, temperature, specific conductance, dissolved oxygen, oxidation reduction potential, and turbidity, will be continuously monitored during purging using a flow cell. Purging of the well will be considered complete when all field parameters become stable for three successive readings. The successive readings should be within +/– 0.1 pH units for pH, +/– 3 percent for conductivity, and +/– 10 percent for both dissolved oxygen and turbidity.

- If a well is overdrawn or goes dry during purging, the well will be pumped down fully and allowed to equilibrate (i.e., recover) before sampling. If volume remains in the casing after all sample containers are filled, then parameters will be recorded and the issue will be noted on the sample collection form.
- Purge data will be recorded on a groundwater sample collection form including purge volume; time of commencement and termination of purging; any observations regarding color, turbidity, or other factors that may have been important in evaluating sample quality; and field measurements of pH, specific conductance, temperature, dissolved oxygen, and turbidity.
- Following the stabilization of field parameters, the flow cell will be disconnected and groundwater samples will be collected. Sample data will be recorded on a groundwater sample collection form, including sample number and time collected, and the observed physical characteristics of the sample (e.g., color, turbidity, odor, and sheen).
- Any problems or significant observations will be noted in the "comments" section of the groundwater sample collection form.
- Groundwater samples will be collected directly into the appropriate sample containers using the same pump used for purging. To prevent degassing during sampling for VOCs, a pumping rate will be maintained below about 100 m/L per minute. The VOC containers will be filled completely so that no head space remains. Samples will be chilled to 6°C immediately after collection. Clean gloves will be worn when collecting each sample.
- Groundwater samples for total and dissolved metals analysis will be preserved, as specified in Table A-1. Groundwater for dissolved metals analyses will be collected last and field-filtered through a 0.45-micron, in-line disposable filter. A note will be made on the sample label, sample collection form, and chain-of-custody form to indicate the sample has been field-filtered.

Groundwater samples collected from shallow monitoring wells for laboratory analysis will be labeled using the following format:

Shallow Groundwater Wells

"RIGW-location-YYYYMMDD"

For example, a groundwater sample collected at RIGW-1 on October 5, 2024 would be RIGW-1-20241005.

Deep Groundwater Wells

"RIDW-location-YYYYMMDD"

For example, a groundwater sample collected at RIDW-3 on October 5, 2024 would be RIDW-3-20241005.

The analyses, IDs and target depths of both planned and existing monitoring wells are provided in Table 20 of the work plan. The locations of the planned borings and monitoring wells, and existing monitoring wells are shown on Figures 3i, 4i, 5i, 6i, 12, and 13 of the work plan.

3.4 Additional Procedures for Sample Collection for PFAS Analysis

Due to the widespread use of per- and polyfluorinated substances (PFAS) in personal care products, the food service industry, and field equipment, and the potential for microscopic amounts of such products to contaminate samples, additional operating procedures for collecting soil and/or groundwater samples for PFAS analysis will be needed to avoid false positive detections of PFAS compounds. A daily PFAS sampling checklist is included as Attachment A-1. When field personnel are collecting samples for PFAS analysis, the PFAS checklist will be followed and signed before sampling each day to document that no PFAS-containing products were used by field staff.

In addition to the operational procedures described above, quality control sample collection will be implemented during each sampling event for PFAS analysis. One equipment rinse blank sample will be collected following decontamination of non-dedicated (i.e., water-level probe) sampling equipment. After the water-level probe is decontaminated according to the procedures outlined in Section 7.1, samplers shall rinse the probe with certified PFAS-free, de-ionized (DI) water and collect the rinse water directly into unused sample containers. Additionally, one field blank sample will be collected to test the purity of certified PFAS-free DI water, which will be provided by the analytical laboratory.

4.0 LABORATORY ANALYSIS FOR SOIL, GROUNDWATER, AND SOIL GAS

Specific analyses by sampling location are listed in Tables 19, 20, and 21 of the work plan. The analytical methods for the below-named compounds are summarized in Table 3 of the quality assurance project plan (QAPP; Appendix B of the work plan).

- Soil samples from soil borings and monitoring well installation will be selectively analyzed for one or more of the following: VOCs; diesel-, oil-, and gasoline-range TPH; BTEX; polycyclic aromatic hydrocarbons; cPAHs; and metals. Diesel- and oil-range TPH analyses will include the use of silica-gel cleanup (SGC) methods. Metals that will be analyzed for include arsenic, cadmium, total chromium, lead, zinc, mercury, and hexavalent chromium. Trivalent chromium will be quantified through calculation.
- Groundwater samples from soil borings and permanent monitoring wells will be selectively analyzed for VOCs; 1,4-dioxane; diesel-, oil-, and gasoline-range TPH; BTEX; and cPAHs. Diesel- and oil-range TPH analyses will completed both with and without SGC. Groundwater samples collected from permanent wells may also be analyzed for total and dissolved metals, including arsenic, cadmium, total chromium, copper, lead, mercury, and hexavalent chromium. Trivalent chromium will be quantified through calculation.
- Groundwater samples planned for PFAS analysis will be analyzed using EPA Method 1633. The target laboratory analysis reporting limits for each PFAS compound is provided in Table B-2 of the QAPP.
- Soil gas samples will all be analyzed for VOCs only.

Groundwater samples scheduled for analysis by Method NWTPH-Dx will be analyzed with and without silica-gel cleanup to assess the impact of biogenic material in the sample on analytical results in accordance with Ecology's recent guidance for use of silica-gel cleanup (Ecology 2023). All soil samples scheduled for analysis by Method NWTPH-Dx will be analyzed with silica-gel cleanup.

5.0 GROUNDWATER ELEVATION MONITORING

To evaluate groundwater elevations and flow direction, depth to groundwater will be measured at all monitoring wells during each sampling event and at least once during the wet season and once during the dry season. This section describes the monitoring well survey and water-level measurement procedures needed to evaluate groundwater flow direction.

The location of each new monitoring well will be surveyed using Global Positioning System (GPS) equipment to facilitate accurate placement of these features on project figures and drawings. GPS surveying will be conducted after the wells have been installed.

Monitoring well reference elevations will be surveyed by a professional licensed surveyor to the nearest 0.01 ft for use in evaluating groundwater and lithologic unit elevations. Elevations will be surveyed on the north side of the casing and the survey point will be marked with a small notch. Both the top of the monitoring well PVC casing elevation and ground surface elevation adjacent to the monitoring well will be measured. Top of casing elevations will be used to develop deep aquifer groundwater elevation contour maps.

Water-level measurements will be collected at each of the monitoring wells before the sampling event commences. All water levels will be collected following Landau's standard operating procedure for elevation monitoring, which generally includes taking measurements using an electronic water-level indicator from the top of the north side of the well casing and recording depth to water to the nearest 0.01 ft. Following this, field staff will wait 2 to 5 minutes before taking another reading and will continue to take readings every 2 to 5 minutes until there is no change in the water level between readings, indicating stabilization is complete.

If the well was installed in an area of floating petroleum product on the water table and the well screen was placed across the water table, an oil/water interface probe will be used to measure the depth to the top of the product layer and to the top of the water layer. The apparent thickness of the floating product layer will then be calculated by subtraction of the two measurements.

6.0 QUALITY ASSURANCE AND QUALITY CONTROL

Samples collected during the RI for laboratory analysis will follow quality assurance/quality control (QA/QC) procedures and standards outlined in the QAPP (Appendix B of the work plan). Field QA/QC includes the collection of QC samples consisting of blind field duplicate samples, matrix spike and matrix spike duplicate samples, trip blanks, rinse blanks, and perfluorooctane sulfonate/perfluorooctonoic acid-free DI blanks. The procedures for collection of the QC samples are detailed in the QAPP (Appendix B of the work plan). Sample containers, preservatives, and holding times for each chemical analysis are listed in Table A-1.

7.0 EQUIPMENT DECONTAMINATION

The decontamination procedures described below are to be used by field personnel to clean drilling, sampling, and related field equipment. Deviation from these procedures must be documented in field records.

7.1 Water-Level Indicator

The tape from the water-level indicator will be rinsed and wiped with Alconox® or Liquinox® soap and distilled water between each well measurement.

7.2 Sampling Equipment

All sampling equipment used (e.g., stainless-steel bowls, stainless-steel spoons, soil split-spoon samplers, etc.) will be cleaned using a three-step process, as follows:

1. Scrub surfaces of equipment that would be in contact with the sample with brushes using a Alconox or Liquinox and water solution.
2. Rinse and scrub equipment with clean tap water.
3. Rinse equipment a final time with DI water to remove tap water impurities.

Decontamination of reusable sampling devices (i.e., non-dedicated bladder pumps, etc.) will occur between each sample collection and will follow the above steps. At least 5 gallons of each decontamination liquid will be pumped through non-dedicated pump systems that cannot be fully disassembled.

7.3 Heavy Equipment

Heavy equipment (i.e., drilling equipment that is used downhole, or that contacts material and equipment going downhole) will be cleaned by a hot water, high-pressure wash before each use and at completion of the project. Potable tap water will be used as the cleaning agent.

8.0 RESIDUAL WASTE MANAGEMENT

Investigation-derived waste (IDW), including soil cuttings and water generated during drilling and sampling, and waste/wastewater generated during decontamination of sampling equipment or devices, will be collected and managed in containers/drums provided by the driller. All waste will be characterized in accordance with applicable regulations based on the laboratory analytical results and historical knowledge. All IDW will be disposed of at facilities approved by Snohomish County and in accordance with applicable regulations. Field crews will keep a detailed inventory of the contents (i.e., source) of each container/drum to facilitate waste profiling and ultimate disposal of the IDW. An effort will be made to combine cuttings or water from known or suspected drilling/sampling locations containing high levels of contamination into designated containers/drums so as to minimize the number of containers/drums requiring special handling and disposal of IDW.

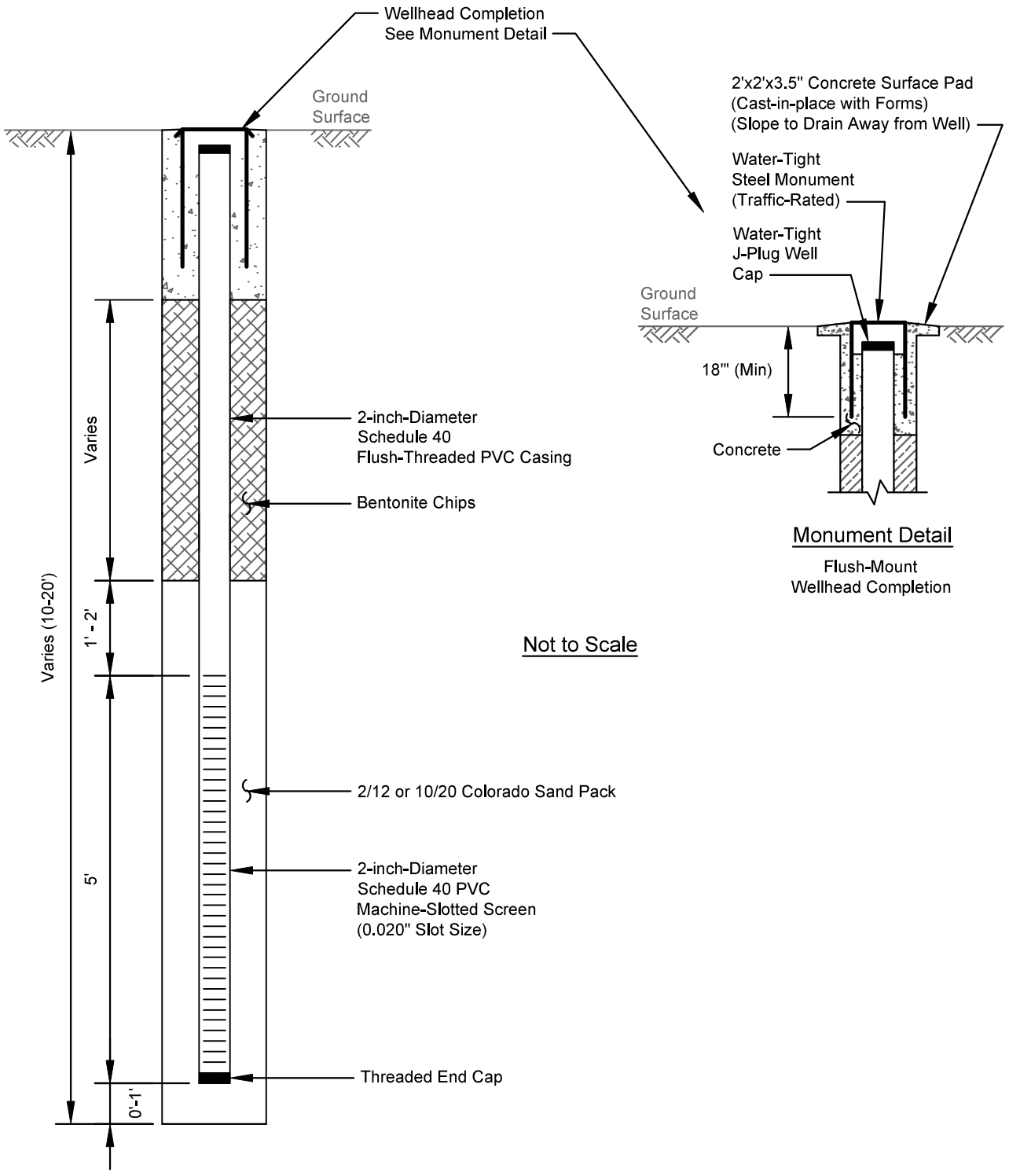
9.0 USE OF THIS SAMPLING AND ANALYSIS PLAN

This Sampling and Analysis Plan has been prepared for the exclusive use of Snohomish County Public Works and applicable regulatory agencies for specific application to the former Paine Field TECT Aerospace Leasehold. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau, shall be at the user's sole risk. Landau warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. Landau makes no other warranty, either express or implied.

10.0 REFERENCES

Ecology. 2022. *Guidance for Evaluating Vapor Intrusion in Washington State: Investigation and Remedial Action*. Publication No. 09-09-047. Toxics Cleanup Program, Washington State Department of Ecology. March. https://apps.ecology.wa.gov/publications/documents/0909047.pdf.

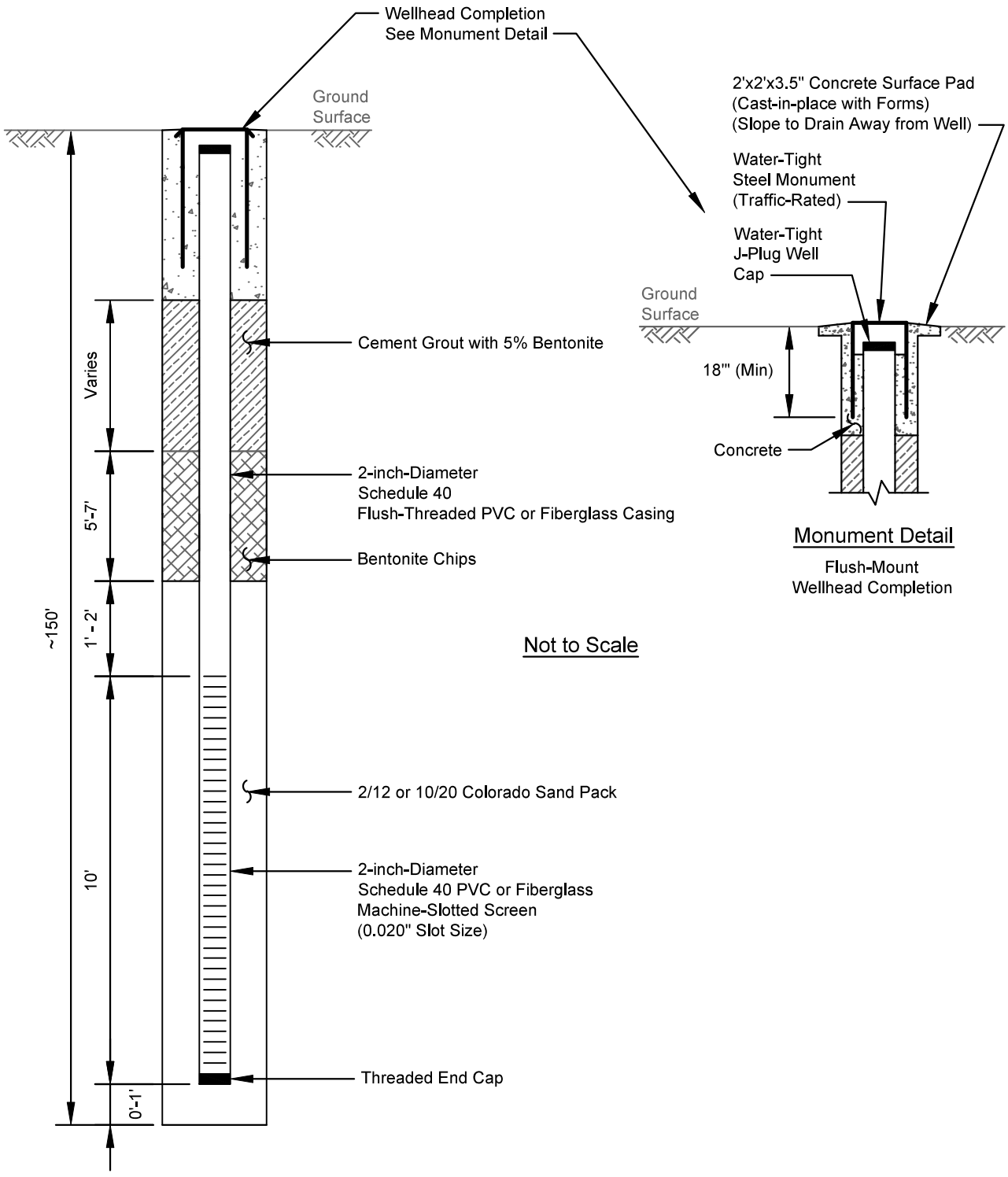
Ecology. 2023. *Guidance for Silica Gel Cleanup in Washington State*. Publication No. 22-09-059. Toxics Cleanup Program, Washington State Department of Ecology. September. https://apps.ecology.wa.gov/publications/documents/2209059.pdf.



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LANDAU ASSOCIATES

TECT Aerospace Everett, Washington	**Shallow Monitoring Well Construction Detail**	Figure A-1



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LANDAU ASSOCIATES

TECT Aerospace Everett, Washington	**Deep Monitoring Well Construction Detail**	Figure A-2

Table A-1
Sample Containers, Preservatives, and Holding Times
Sampling and Analysis Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Matrix	Method	Container	Preservative	Holding Time (a)	Laboratory Performing Analyses
Soil	Gasoline-range Petroleum Hydrocarbons by NWTPH-Gx	4 oz + 5035 methanol vial	<6°C	14	ALS Global Everett
Soil	Diesel- and Oil-range Petroleum Hydrocarbons by NWTPH-Dx	4 oz	<6°C	14 days/40 days	ALS Global Everett
Soil	Total Metals by EPA Method 6020A (7471A for mercury)	4 oz amber glass	<6°C (mercury only)	180 (mercury 28 days)	ALS Global Everett
Soil	Hexavalent Chromium by EPA Method 7196	4 oz polyethylene or glass	<6°C	30 days to extraction then 24 hours for analysis	ALS Global Everett
Soil	VOCs by EPA Method 8260	4 oz, + 5035 methanol vila and two stirbar vials	HCl to pH<2; <6°C	14 days freeze stirbar vials within 48 hours	ALS Global Everett
Soil	cPAHs by EPA Method 8270 SIM	4 oz	<6°C	14 days/40 days	ALS Global Everett
Groundwater	Gasoline-range Petroleum Hydrocarbons by NWTPH-Gx	2 x 40-mL glass	Add HCl to pH<2; <6°C	14	ALS Global Everett
Groundwater	Diesel- and Oil-range Petroleum Hydrocarbons by NWTPH-Dx	500-mL amber glass	<6°C	7 days/40 days	ALS Global Everett
Groundwater	Dissolved Metals by EPA Method 200.8	500 mL plastic	If field filtered, HNO_3 to pH <2; <6°C	180	ALS Global Everett
Groundwater	Total Metals by EPA Method 200.8 (245.1 for mercury)	500 mL plastic	HNO_3 to pH <2; <6°C	180 (mercury 28 days)	ALS Global Everett
Groundwater	Hexavalent Chromium by EPA Method 7196	500 mL polyethylene or glass	<6°C	24 hours	ALS Global Everett

Table A-1
Sample Containers, Preservatives, and Holding Times
Sampling and Analysis Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Matrix	Method	Container	Preservative	Holding Time (a)	Laboratory Performing Analyses
Groundwater	VOCs by EPA Method 8260D	3 x 40-mL glass	HCl to pH<2; <6°C	14 days (7 days pH >2)	ALS Global Everett
Groundwater	cPAHs by EPA Method 8270 SIM	2 x 1-L amber glass	<6°C	7 days/40 days	ALS Global Everett
Groundwater	1,4-Dioxane by EPA Method 8270 SIM	2 x 1-L amber glass	<6°C	7 days/40 days	ALS Global Kelso
Groundwater	PFAS by EPA Method 1633	2 x 1-L amber glass	<6°C	7 days/40 days	Enthalpy
Soil Gas	TO-15	Summa canister	N/A		ALS-S

Note:
(a) Time from sample collection to extraction/time from sample extraction to analysis.

Acronyms/Abbreviations:
°C = degrees Celsius
cPAH = carcinogenic polycyclic aromatic hydrocarbon
EPA = US Environmental Protection Agency
H_3PO_4 = Phosphoric acid
HCl = hydrochloric acid
HNO_3 = nitric acid
L = liter
mL = milliliter
N/A = not applicable
NWTPH-Dx = Northwest total petroleum hydrocarbon extended-range diesel analytical method
NWTPH-Gx = Northwest total petroleum hydrocarbon extended-range gasoline analytical method
oz = ounces
PFAS = perfluoroalkyl and polyfluoroalkyl substances
SIM = selected ion monitoring
TO = toxic organics
VOC = volatile organic compound

Table A-2
Field Quality Control Sampling Summary
Sampling and Analysis Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Matrix	Collection Frequency			
	Field Duplicates	Matrix Spike/Matrix Spike Duplicates	Trip Blanks	Ambient Air
Soil	N/A	1 per 20 samples	1 per cooler containing samples scheduled for volatile analyses	N/A
Groundwater	1 per 20 samples	1 per 20 samples	1 per cooler containing samples scheduled for volatile analyses	N/A
Soil Gas	N/A	N/A	N/A	One 8-hour sample per sampling event

Acronym/Abbreviation:
N/A = not applicable

ATTACHMENT A-1

PFAS Daily Checklist

Daily PFAS Sampling Protocol Checklist

Date _____ Project Name _____ Project No. _____

Agreed

Personal Care Routine: On the day of sampling do not use shampoo, conditioner, body gel, cosmetic cream, hand cream, or sunscreen unless they are made with only natural ingredients. Do not use insect repellent unless it is made with only natural ingredients or DEET. ☐

Proper Clothing: Clothing should be made from natural fibers (preferable 100% cotton). Field clothing should be washed with minimal detergent (no fabric softener or scented products), and an additional rinse-only cycle prior to drying (no dryer sheets). Replace high-visible safety vests with washed orange-colored safety cotton shirt. Use only rain gear made of polyethylene, vinyl or PVC. ☐

Vehicle Cleaned of PFAS-Containing Materials (see prohibited materials list below). Lunch materials, plastic water bottles, field equipment cases, solutions, sharpies, spray paints, and plastic items, along with all non-needed field gear will be removed from vehicle and not allowed within 35 feet of well or sample containers. Vehicle has 100% cotton sheet covering the driver's seat. ☐

Daily Decontamination Completed (All tools, field equipment, and rain gear) ☐

Nitrile Glove Use: A new pair of Nitrile gloves must be worn prior to each of the following activities at each sampling location. ☐

- Contact with sample containers
- Decontamination of sampling equipment
- Insertion of anything into the well
- Insertion of silicon tubing into the peri pump
- Completion of monitoring well purging
- Sample collection
- Handling QA/QC samples
- Handling any non-dedicated sampling equip.

Read and Followed PFAS SOP ☐

Agreement to the following prohibited materials: ☐

-Items or materials that contain fluorpolymers (PTFE, PVDF, PCTFE, ETFE, FEP)
-LDPE materials, PTFE or Teflon
-Waterproof field books or paper
-Plastic clipboards, binders, or spiral hard cover
-Gel pens, regular or thick-sized markers (i.e., sharpies)
-PFAS-treated paper towels (no blue towels)
-Adhesive notes, tape, string, cords
-Aluminum foil, wax paper, coated textiles (lunch boxes)
-Chemical/reusable ice/gel packs
-Fast food, paper packaging, prewrapped foods
-Fire extinguishers
-Tyvek, Gore-Tex or waterproof synthetics
- Sunscreen, insect repellent, personal care products (unless made with natural materials)

Describe any deviations from above list and rationale for deviation:

_____

_____

_____

PFAS Samplers:

_____	_____
_____	_____
_____	_____
Name	Signature

APPENDIX B

Quality Assurance Project Plan

LANDAU ASSOCIATES

QUALITY ASSURANCE PROJECT PLAN

Agreed Order Remedial Investigation and Feasibility Study Work Plan
Paine Field TECT Aerospace Leasehold
Everett, Washington

May 3, 2024

Prepared for

Snohomish County
Everett, Washington

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B-5	Data Validation Elements

ATTACHMENTS

Attachment	Title
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LIST OF ABBREVIATIONS AND ACRONYMS

Airport ..... Snohomish County Airport/Paine Field
ALS ..... Analytical Laboratory Services
ATS ..... Aviation Technical Services
CFR ..... Code of Federal Regulations
CLP ..... Contract Laboratory Program
COC ..... chain of custody
County ..... Snohomish County
DQI ..... data quality indicator
DQO ..... data quality objective
Ecology ..... Washington State Department of Ecology
EDD ..... electronic data deliverable
Enthalpy ..... Enthalpy Analytical
EPA ..... US Environmental Protection Agency
EQuIS ..... Environmental Quality Information Systems
eV ..... electron volt
FS ..... feasibility study
GC/MS ..... gas chromatography/mass spectrometry
HASP ..... health and safety plan
HAZWOPER ..... Hazardous Waste Operations and Emergency Response
Landau ..... Landau Associates, Inc.
LCS ..... laboratory control sample
LCSD ..... laboratory control sample duplicate
MDL ..... method detection limit
MQO ..... measurement quality objective
MS ..... matrix spike
MSD ..... matrix spike duplicate
NWTPH-Dx ..... Northwest TPH extended-range diesel analytical method
Order ..... Agreed Order No. No. DE21781
PFAS ..... perfluorinated and polyfluorinated substances
PID ..... photoionization detector
PM ..... project manager
QA ..... quality assurance
QAPP ..... quality assurance project plan
QC ..... quality control
RI ..... remedial investigation
RL ..... reporting limit
RPD ..... relative percent difference
SAP ..... sampling and analysis plan

LIST OF ABBREVIATIONS AND ACRONYMS (CONTINUED)

Site ..... TECT Aerospace Leasehold
SL ..... screening level
SOPs ..... standard operating procedure
TECT ..... TECT Aerospace
TPH ..... total petroleum hydrocarbons
VOC ..... volatile organic compound
WAC ..... Washington Administrative Code
work plan ..... TECT Aerospace RI/FS Work Plan

1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) establishes the quality assurance (QA) objectives and quality control (QC) procedures for the remedial investigation (RI) being conducted on Snohomish County Airport (Airport) property formerly leased to TECT Aerospace (TECT) and on the former East Fuel Farm property. These areas, collectively referred to as the Site, are located in the southeastern portion of Sector 5 of the Airport in Everett, Washington (Figure 1), and include existing and former buildings (Figure 2).

This QAPP was prepared by Landau Associates, Inc. (Landau) on behalf of Snohomish County (County) in accordance with requirements in Agreed Order No. DE21781 (Order) between the County and the Washington State Department of Ecology (Ecology). The Order became effective on August 30, 2023 and requires the County to conduct a Remedial Investigation (RI) and Feasibility Study (FS) and to prepare a preliminary Cleanup Action Plan to address known subsurface contamination at the Site. This QAPP is an appendix to the TECT Aerospace RI/FS Work Plan (work plan).

2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The specific roles, activities, and responsibilities of project participants are described in this section. Snohomish County Public Works has the primary responsibility for managing the work completed at the Site. Landau is the primary consultant for the management and execution of the sampling and reporting activities associated with the RI. Individuals listed below shall receive an electronic copy of the approved QAPP, as well as any subsequent revised versions of the documentation.

Title/Role	Name	Organization	Responsibilities
County Project Manager (PM)	Andrew Rardin	County	Manages the project for the County.
Washington State Department of Ecology (Ecology) PM	David Unruh	Ecology	Oversees the project on behalf of Ecology.
Consultant PM	Stephanie Renando	Landau	Supervises and coordinates all work for the project. These responsibilities include project planning and execution, scheduling, staffing, data evaluation, report preparation, subcontracts, and managing deliverables. Communicates directly with Ecology PM.
Quality Assurance (QA) Manager	Danille Jorgensen	Landau	Oversees and directs quality assurance reviews for the project, including laboratory procedures and actions. Coordinates and reviews data validation. Has oversight responsibility for management and integrity of the data.
Data Validator	Kristi Schultz	Landau	Reviews laboratory analytical data and provides data validation.
Field Lead	Devan Brandt	Landau	Leads and coordinates field activities, including documentation, sampling, and sample handling. Reports directly to the Consultant PM.
Health and Safety Manager	Christine Kimmel	Landau	Responsible for review and implementation of the project health and safety plan.
Field Equipment Manager	Ken Reid	Landau	Ensures equipment is properly maintained and in good condition for project use.
Environmental Laboratory PM(s)	Rob Greer, Kurt Clarkson, Sue Anderson	Analytical Laboratory Services (ALS)	Manages laboratory analysis and reporting, including supervising in-house chain of custody and scheduling sample analyses within required holding times; oversees data review and preparation of laboratory reports and electronic data deliverables (EDDs).
	Avalon D'Anna	Enthalpy Analytical (Enthalpy)	

ALS, located in Everett, Washington (ALS-E) and in Kelso, Washington (ALS-K), along with Enthalpy located in El Dorado, California, will conduct the laboratory chemical analyses of soil and groundwater. ALS located in Simi Valley, California (ALS-S) will conduct the laboratory chemical analyses of air and soil gas. Environmental laboratories conducting work under this QAPP will maintain current accreditation through Ecology for applicable methods and analytes. Contact information for the primary consultant and laboratories is provided below.

Contact	Responsibility
Landau 155 NE 100th Street, Suite 302 Seattle, WA 98125 Telephone: (206) 631-8680	Coordinate laboratory analyses Data validation Reporting
ALS-E 8620 Holly Drive Everett, WA 98208 Telephone: (425) 356-2600	Chemical analyses of soil and groundwater
ALS-K 1317 13th Avenue South Kelso, WA 98626 Telephone: (360) 577-7222	Chemical analyses of soil and groundwater (1,4-dioxane)
Enthalpy 1104 Windfield Way El Dorado Hills, CA 95762 Telephone: (916) 673-1520	Chemical analyses of soil and groundwater (per- and polyfluoroalkyl substances [PFAS])
ALS-S 2655 Park Center Drive, Suite A Simi Valley, CA 93065 Telephone: (805) 577-2086	Chemical analyses of air and soil gas

3.0 PROJECT BACKGROUND/DESCRIPTION

The Site is approximately 39 acres in size and is located in the southeastern portion of the Snohomish County Airport. The Site is generally bounded by Runway 34-16 and associated taxiways on the east, a paved surface parking lot followed by Paine Field Road to the south, 109th Street and 30th Avenue South to the west, and the Aviation Technical Services (ATS) Hangar 1 lease area to the north. The former East Fuel Farm is located within the boundary of the ATS lease area.

The Site is currently zoned for light industrial use (Snohomish County; accessed November 6, 2023). Currently, the Site land is leased by Snohomish County to tenants for aerospace manufacturing and other light industrial operations.

Various environmental investigations and remedial actions have been conducted at the Site to characterize and evaluate the chemical quality and physical condition of soil, groundwater, and soil gas, or to address documented releases. Descriptions of previous activities are provided in the text of the work plan.

3.1 Project Goals and Objectives

This QAPP has been prepared to cover work related to the RI. The specifics of the investigation are provided in the work plan published concurrently with this QAPP.

The purpose of this QAPP is to provide the project QA objectives and QC procedures that will be used to support the evaluation and interpretation of data determined to be of acceptable quality and completeness. This QAPP has been prepared based on the requirements outlined in the US Environmental Protection Agency's (EPA's) Guidance for Quality Assurance Project Plans (EPA 2002), EPA's Requirements for Quality Assurance Project Plans (EPA 2001), and Ecology's Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies (Ecology 2016).

To the extent possible, the procedures included in this QAPP have been standardized to support effective evaluation of data resulting from sampling of the various media that has the potential to be evaluated at the Site. In the event that additional investigation activities are conducted following the publication of this QAPP (i.e., additional activities not addressed in the RI work plan), work plan addenda will be prepared to document data quality objectives and sampling, and will include any revisions to screening levels (SLs), reporting limits (RLs), sampling procedures, and laboratories, as needed.

Analytical testing will be in accordance with the methodologies established by the Standard Methods for the Examination of Water and Wastewater, 24th edition (APHA 2022) and the EPA compendium of test methods (SW-846; EPA; accessed November 13, 2023). Laboratory standard operating procedures (SOPs) are provided in Attachment B-1.

4.0 QUALITY ASSURANCE OBJECTIVES

This section describes the QA and QC objectives and processes including data quality objectives (DQOs), data quality indicators (DQIs), measurement quality objectives (MQOs), and QC procedures for field and laboratory work.

4.1 Data Quality Objectives

DQOs specify the environmental decisions that the data will support and the corresponding level of data quality required to ensure that decisions are based on sound scientific data. The DQOs for this project are determined by the area of investigation:

- Building C-19
  - Obtain data that are representative of Site conditions
  - Characterize concentrations of contaminants of concern in soil and groundwater, which include volatile organic compounds (VOCs) and 1,4-dioxane
  - Obtain data that are comparable to applicable screening criteria
- Former Building C-29 and East Fuel Farm
  - Obtain data that are representative of Site conditions
  - Characterize concentrations of contaminants of concern in soil, groundwater, and soil gas, which include VOCs, 1,4-dioxane, metals (including hexavalent chromium), and/or diesel-, oil-, and gasoline-range total petroleum hydrocarbons (TPH)
  - Analyses will also include perfluorinated and polyfluorinated substances (PFAS) in groundwater to determine if they are present
  - Obtain data that are comparable to applicable screening criteria
- Building C-23
  - Obtain data that are representative of Site conditions
  - Characterize concentrations of contaminants of concern in soil, groundwater, and soil gas, which include VOCs, metals, and/or diesel- and oil-range TPH
  - Obtain data that are comparable to applicable screening criteria
- Building Complex C-20, C-21, and C-22
  - Obtain data that are representative of Site conditions
  - Characterize concentrations of contaminants of concern in soil, groundwater, and soil gas, which include VOCs, metals, carcinogenic polycyclic aromatic hydrocarbons, and/or gasoline-, diesel- and oil-range TPH
  - Obtain data that are comparable to applicable screening criteria
- Deep Aquifer Investigation
  - Obtain data that are representative of Site conditions

- Characterize concentrations of contaminants of concern in deep soil and groundwater, which include VOCs and 1,4-dioxane
- Obtain data that are comparable to applicable screening criteria.

4.2 Data Quality Indicators

DQIs are used to establish DQOs and are discussed in detail below. A summary of DQIs and their associated MQOs are presented by sample matrix in Table B-1.

4.2.1 Precision

Precision is a measure of variability in the results of replicate measurements due to random error (Ecology 2016). Precision is best expressed in terms of the standard deviation or relative percent difference (RPD). QC sample types that can be used to evaluate precision include field and laboratory duplicates, matrix spike duplicates (MSDs), and laboratory control sample duplicates (LCSDs). The precision of duplicate measurements will be expressed as an RPD, which is calculated by dividing the absolute value of the difference of the two measurements by the average of the two measurements, and expressing it as a percentage. The formula for RPD calculation is shown below:

$$\mathrm{RPD} = \left[\frac{|\mathrm{D1} - \mathrm{D2}|}{[(\mathrm{D1} + \mathrm{D2}) \div 2]}\right] \times 100\%$$

Where:

D1 = first measurement value
D2 = second measurement value (duplicate).

4.2.2 Accuracy

Accuracy is a combination of precision and bias, in that it represents the degree to which a measured value represents the known value (Ecology 2016). Accuracy is expressed as the percent recovery of spiked samples (matrix spike [MS], laboratory control sample [LCS], and surrogate spike). The general formula used to calculate percent recovery is shown below (for MS/MSD percent recovery, the result from the unspiked sample is taken into account in the formula):

$$\%\mathrm{R} = \left[\frac{\mathrm{SSR}}{\mathrm{C_s}}\right] \times 100\%$$

Where:

%R = percent recovery
SSR = spiked sample result
C_s = concentration of the spike added.

Bias is the systematic or persistent distortion of a measurement process that causes errors in one direction. Bias of the laboratory results will be evaluated based on analysis of reference materials, method blanks, and MS samples.

4.2.3 Representativeness

Representativeness is an indicator of how accurately a result reflects the desired characteristic(s) of a defined population, accounting for both temporal and spatial variability (Ecology 2016). Representativeness qualitatively describes how well the analytical data characterize an area of concern. Representativeness is largely determined by the sampling design; analytical parameters for use in its evaluation include method-specified holding times and preservation requirements, and matrix heterogeneity. The sampling design for this project is discussed in the RI work plan.

4.2.4 Comparability

Comparability is the "degree of confidence with which one data set can be compared to another" (Ecology 2016). QC procedures and MQOs, as stated in this QAPP, will provide for measurements that are consistent and representative of the media and conditions measured.

4.2.5 Completeness

Completeness is a measure of "the amount of valid data obtained from a measurement system compared to the amount that could be expected to be obtained under normal conditions" (EPA 2009). Field completeness is calculated as the number of actual samples collected divided by the number of planned samples. Analytical completeness is calculated as the number of valid data points divided by the total number of data points requested. Data points are considered invalid if they are rejected during data validation. The data validation approach for this project is provided in Section 7.0. The requirements for field sampling and analytical completeness are 90 percent each.

4.2.6 Sensitivity

Sensitivity is the capability of a method or an instrument to discern the difference between very small amounts of a substance. For the purposes of this project, sensitivity is the lowest concentration that can be accurately detected by the analytical method. The analytical method will be considered sufficiently sensitive if the RLs are below the specific SLs for the area under investigation. In some instances, RLs are greater than SLs due to limitations of commonly used analytical technology. Proposed method and target RLs are provided in Tables B-2 and B-3. As necessary to meet project-specified SLs, sample results will be reported to the method detection limit (MDL). Results that are detected at concentrations between the MDL and the RL will be J-qualified as estimated.

5.0 SPECIAL TRAINING/CERTIFICATION

Personnel conducting onsite investigation tasks will have completed formal 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) health and safety training, in compliance with 29 Code of Federal Regulations (CFR) 1910.120 and Chapter 296 of the Washington Administrative Code (WAC). Certificates of successful completion of training, which will be maintained in personnel health and safety files, will verify on-the-job training for those tasks staff are assigned to complete. At least one member of each field team and the designated Site safety officer will be trained in cardiopulmonary resuscitation and first aid.

Borings will be completed and monitoring wells will be constructed by a licensed drilling contractor in the State of Washington, following Washington State well standards. Oversight of drilling and well installation activities will be conducted by an environmental professional familiar with environmental sampling and construction of resource protection wells.

Laboratories conducting work under this QAPP shall maintain current applicable state certification for analytical methods and target analytes. Laboratories used for this project have a documented Qualified Stormwater Manager™ (QSM™) program.

Excavation, trenching, and shoring (Chapter 296-155 WAC, Part N) activities or work in confined spaces (Chapter 296-62 WAC, Part M) are not anticipated in this scope of work; therefore, this QAPP does not address training in physical worker safety issues that may be associated with excavation or confined spaces.

6.0 DOCUMENTS AND RECORDS

This section describes the management requirements for production, distribution, and storage of documents and records associated with planned activities at the Site.

6.1 Document Distribution

Prior to beginning field activities, field staff will receive and have an opportunity to review project-related documents pertinent to the field activities, including work plans, sampling and analysis plans (SAPs), and health and safety plans (HASPs), as appropriate to the planned activities. Project managers/coordinators will meet with field staff prior to field activities to review the relevant plans accordingly. The HASP will be reviewed in the field on the first day of activities, with each field person documenting their attendance to the HASP review on a sign-in sheet. The HASP will be reviewed again every few days or when a new field person begins working on field activities. The SAP, HASP, and work plans for each phase of the project will be finalized prior to commencement of field activities, and only the finalized versions will be distributed to field staff. Changes to procedures and plans after finalization will be documented as addenda and distributed along with the original finalized versions.

6.2 Field Documentation

Field equipment will have reference and related manuals stored in with the equipment. In addition, equipment that requires calibration will be accompanied by a calibration logbook. Field staff will record the calibration process in the logbook every time a calibration is completed.

A complete record of field activities will be maintained for the duration of the field phase of the work. Documentation will include the following:

- Daily recordkeeping by field personnel of field activities
- Recordkeeping of samples collected for analysis (field sampling forms)
- Use of sample labels and tracking forms for samples collected for analysis.

The field logs will provide a description of sampling activities completed, sampling personnel, daily weather conditions, and a record of modifications to the procedures and plans identified in the work plan or related documentation. The field logs are intended to provide sufficient data and observations to enable project staff to reconstruct events that occurred during the sampling period.

Field logs will be supplemented by sample collection forms, boring logs, and groundwater well logs completed by field staff, as applicable. The information that will be recorded in these forms is specified in the RI SAP.

Additional records associated with drilling will include driller's daily reports and well-related documentation when a well is installed.

Sample possession and handling will also be documented with chain-of-custody (COC) forms so that samples are traceable from the time of sample processing in the field, to delivery to the laboratory, and to the ultimate data analysis. Sample handling and COC procedures are described in Section 7.3.

The following example field forms are provided in Attachment B-2:

- Chain-of-Custody
- Field Report
- Groundwater Elevation Record
- Groundwater Low-Flow Sample Collection Form
- Log of Exploration
- Log of Test Pit
- Soil/Sediment Sample Collection Form
- Survey Field Notes Form
- As-Built Well Completion Form
- Well Development Record Form.

6.3 Analytical Data Records

Laboratory analytical data reports will be provided in electronic format by the laboratory. These reports will be included as appendices in documents where data are reported, and will be kept along with all other documents in the project files. Data will be provided in a Stage 2 laboratory report format. Data package elements are listed in Section 7.7.

6.4 Storage

Documents and records associated with the project (i.e., final documents, billing and invoice records) and the documents described in Sections 6.2 and 6.3 will be stored in electronic form in project files on Landau's servers for the duration of the project.

7.0 DATA GENERATION AND ACQUISITION

This section provides an overview of the data collecting and handling processes that will ensure data quality that meets project standards. More details about these processes are included in the RI SAP.

7.1 Sampling Process Design

A sampling design that achieves the DQOs described in Section 3.0 has been prepared and is detailed in the RI SAP.

7.2 Sampling Methods and Containers

Samples will be collected using methods that are standard in environmental remediation. A detailed description of the sampling methods for each medium is provided in the RI SAP. Methods for sampling, decontamination, and well installation are provided as SOPs in the RI work plan, published concurrently with this QAPP.

Sample containers will be provided by the laboratory. Extra containers will be requested to ensure that clean containers are available to replace any broken or misused containers during sampling events. The laboratory will provide kits (e.g., plunger for EPA Method 5035 soil sampling) to collect samples for analyses that require special methods to fill the sample container.

7.3 Sample Handling and Custody

Soil and water samples submitted to the analytical laboratories will be collected in the appropriate sample containers and preserved as specified in Table B-4. The storage temperatures and maximum holding times for physical/chemical analyses are also provided in Table B-4.

The transport and handling of samples will be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to release of samples. Samples will be logged on a COC form (Attachment B-2) and will be kept in coolers on ice until delivery to the analytical laboratory. The COC will accompany each shipment of samples to the laboratory. A sample is in custody if at least one of the following is true:

- It is in someone's physical possession
- It is in someone's view
- It is secured in a locked container or otherwise sealed so that tampering will be evident
- It is kept in a secured area, restricted to authorized personnel only.

Sample control and COC protocols in the field and during transport to the laboratory will be conducted in general conformance with the procedures described below.

- As few persons as possible will handle samples.
- Sample bottles will be obtained new or pre-cleaned from the laboratory performing the analyses.

- The sample collector will be personally responsible for the completion of the COC record and the care and custody of samples collected until they are transferred to another person or dispatched properly under COC rules.
- The onsite team leader will oversee implementation of the field custody procedures during the field work and, in the event of non-compliance, will determine if corrective action is required.
- The coolers in which the samples are shipped will be accompanied by the COC record identifying their contents. The original record and laboratory copy will accompany the shipment (sealed inside the shipping container). The other copy will be distributed as appropriate to Landau's QA officer or designee. The QA officer for this project is Danille Jorgensen.
- Shipping containers will be sealed with custody seals for shipment to the laboratory. The method of shipment, name of courier, and other pertinent information will be entered in the "remarks" section of the COC record.
- If sent by mail, the package will be registered with return receipt requested. If sent by common carrier, a bill of lading will be used. Freight bills, postal services receipts, and bills of lading will be retained as part of the permanent documentation.

When samples are transferred, the individuals relinquishing and receiving the samples will sign the COC form and record the date and time of transfer. The sample collector will sign the form in the first signature space. The only exception to this is the shipment of samples via commercial carriers. Because sample containers are sealed with the COC record inside prior to delivery to the carrier, the custody signature will be that of the individual taking possession of the samples from the carrier at its final destination. Each person taking custody will observe whether the shipping container is correctly sealed and in the same condition as noted by the previous custodian; deviations will be noted on the appropriate section of the COC record.

A designated sample custodian at the laboratory will accept custody of the shipped samples, verify the integrity of the custody seals, and certify that the sample identification numbers match those on the COC record. The custodian will then enter sample identification number data into a bound logbook, which is arranged by a project code and station number. If containers arrive with broken custody seals, the laboratory will note this on the COC record and immediately notify the sampler who will, in turn, notify the QA manager and the Landau project manager/project coordinator.

7.4 Analytical Methods

Laboratory methods and target RLs for all potential analyses of soil, water, and soil gas are summarized in Tables B-2 and B-3. Samples collected and analyzed as part of the RI will be reported to the MDL as necessary to meet project-specified SLs. The contracted chemical laboratory will implement project-required SOPs for sample preparation, cleanup, and analysis based on Method SW-846 (EPA; accessed November 13, 2023). Documentation of these SOPs will be kept on file at the contracted laboratory and are also provided as Attachment B-1 of this QAPP.

Documentation of appropriate method performance for the project target compounds will be available from the selected laboratory and will include the criteria for acceptance, rejection, or qualification of

data. The laboratory is also required to periodically update method performance data such as control limits and MDLs.

For the dissolved metals analyses, the samples will be filtered in the field to remove suspended material.

Groundwater samples scheduled for analysis by the Northwest TPH extended-range diesel analytical method (NWTPH-Dx) may be analyzed with and without silica-gel cleanup to assess the impact of biogenic material in the sample on analytical results in accordance with Ecology's recent guidance for use of silica-gel cleanup (Ecology 2023). All soil samples scheduled for analysis by Method NWTPH-Dx will be analyzed with silica-gel cleanup.

Sample containers, preservation, and holding times are provided in Table B-4.

7.5 Quality Control

This section details the measurement checks required to meet the DQIs for this program. The QC samples and the frequency at which they will be collected and/or analyzed by matrix and analysis are summarized in Table B-1. The evaluation of these QC samples is discussed further in Section 8.

7.5.1 Field Quality Control

Field and analytical QC samples will be used to evaluate data precision, accuracy, representativeness, comparability, completeness, and sensitivity of the analytical results for this investigation.

The QC procedures for measuring field parameters such as pH, redox potential, conductance, dissolved oxygen, turbidity, and temperature in groundwater samples are discussed in the SAP and will include calibrating the instruments, measuring duplicate samples, and checking the reproducibility of the measurements by taking multiple readings on a single sample or reference standard. To ensure that field measurement is accomplished accurately, field equipment will undergo routine maintenance and calibration as described below.

7.5.1.1 Testing, Inspection, and Maintenance

Landau conducts routine inspections and preventive maintenance (parts replacement and cleaning) for all pieces of field equipment in our supply and equipment room. Maintenance activities are conducted by Landau field technicians, who are specifically trained in the use, operation, and maintenance of the equipment. All field equipment used during this project, which may include water-level indicators, photoionization detectors (PIDs), and water field parameter meters (e.g., pH), will be cleaned and decontaminated prior to use. Each piece of equipment will be inspected and tested to ensure proper working function and facilitate replacement or repair of broken or non-operational components. Extra batteries will be included in the equipment cases or in field vehicles for replacing dead batteries during field work. Extra disposables will be packed for equipment requiring disposables for use, such as ferrous iron kits.

Field equipment is maintained by the field equipment manager. Field staff continually notify the field equipment manager when equipment maintenance is needed. This system ensures that the equipment is maintained and working for the next field project. Equipment will be repaired or replaced, as needed.

Meters used to make field measurements will be further inspected and tested during calibration, as described in the next section.

7.5.1.2 Calibration and Frequency

All field equipment are calibrated according to the manufacturers' guidelines and recommendations. If a PID is used during this project, it will be calibrated on a daily basis according to the manufacturer's specifications. The PID preferred by Landau field personnel uses a 10.2-eV (electron volt) probe and is calibrated using a manufacturer-supplied standard gas (isobutylene, equivalent to 34 parts per million benzene). Similarly, water field parameter meters will be calibrated at the start of each sampling day with laboratory-prepared calibration standards within the range of the anticipated measurement. An instrument will also be recalibrated at any time an anomalous reading suggests instrument imprecision or inaccuracy.

7.5.1.3 Inspection/Acceptance of Supplies and Consumables

Supplies are ordered and maintained by the field equipment manager. Disposables and consumables include nitrile gloves, Ziploc® bags for sample ice, field test kits, and polyethylene tubing.

7.5.2 Laboratory Quality Control

Analytical procedures will be documented in writing as laboratory SOPs, with each SOP including a QA section that addresses the minimum QC requirements for the procedure. Certain QC requirements are matrix- or method-specific, but in general, the QA program must include the following:

- Instrument calibration
- Preparation and analysis of reagent/preparation blanks
- Analysis of instrument and/or method blanks
- Preparation and analysis of MSs and MSDs
- Preparation and analysis of surrogate spikes
- Analysis of laboratory duplicates for inorganics
- Preparation and analysis of LCSs and standards
- Identification of internal standard areas and control limits, for gas chromatography/mass spectrometry (GC/MS) analysis
- System performance checks for both organic and total metals analyses.

7.5.2.1 Laboratory Quality Control Samples

An analytical batch is defined as 20 samples or less of the same type of matrix, prepared and analyzed as a group. The following analytical QC samples will be associated with each batch if the control procedure is applicable to the analysis.

Method Blank

A reagent or media blank will be analyzed as a check on laboratory contamination (glassware, reagents, analytical hardware) that might affect analytical results. A sample consisting of laboratory reagent-grade water (distilled and de-ionized water) or a solid matrix will be analyzed to monitor the analytical instrument for contamination. The method blank will be processed through the entire analytical procedure, including sample preparation. The results will be used in conjunction with other control data to validate overall system performance and identify bias that may impact data quality. Method blanks must be analyzed per EPA Method SW-846 for applicable analyses, at least once with each analytical batch, with a 1 in 20 sample minimum.

Laboratory Control Samples

Independently prepared LCSs will be processed through the entire analytical procedure. The purpose of these samples is to monitor and assure the accuracy of the procedure in the absence of matrix interference. Results of the LCSs will be charted and must meet acceptance criteria. LCSs must be analyzed per EPA Method SW-846 for applicable analyses, at least once with each analytical batch, with a 1 in 20 sample minimum.

Laboratory Control Sample Duplicates

Independently prepared LCSDs will be processed through the entire analytical procedure. The purpose of the LCSD is to assure the precision of the procedure in the absence of matrix interference. Precision results in RPD will be tabulated and charted. The RPD equation is given below under Duplicate Samples or MSDs. LCSDs must be analyzed per EPA Method SW-846 for applicable analyses, at least once with each analytical batch, with a 1 in 20 sample minimum.

Surrogates

Sample aliquots and laboratory QC samples scheduled for organic analysis will be spiked with surrogates. The surrogates to be added will be in compliance with the SW-846 analytical method referenced, and will be detailed in the laboratory method SOP. The purpose of the surrogates is to monitor and assure the accuracy of the analytical performance on individual samples and to indicate the presence of system bias, extraction inefficiencies, and/or matrix interferences. The recoveries of the surrogates will be charted and must meet acceptance criteria.

Internal Standards

Sample aliquots and laboratory QC samples scheduled for GC/MS analysis will be spiked with internal standards prior to extraction or analysis as applicable. The internal standards to be added will be in compliance with the SW-846 analytical method referenced, and will be detailed in the laboratory

method SOP. The purpose of the internal standards is to ensure GC/MS instrument sensitivity and stability, and to provide for accurate target analyte quantitation. The internal standard area counts and retention times will be charted and must meet acceptance criteria.

Matrix Spike

An aliquot of a sample will be spiked with a known amount of the selected analyte(s). Percent recoveries of the selected spiked analytes will be tabulated by subtracting the non-spiked concentration from the spiked sample results. Results are used to assess accuracy in specific matrices. Matrix spikes must be analyzed per EPA Method SW-846 for applicable analyses, at least once with each matrix-specific analytical batch, with a 1 in 20 sample minimum.

Percent recovery is calculated as follows:

$$\%R = \frac{(C_1 - C_0)}{C_2} \times 100$$

Where:

$\%R$	=	Percent recovery
C_1	=	Measured concentration in spiked sample aliquot
C_0	=	Measured concentration in unspiked sample aliquot
C_2	=	Actual concentration of spike added.

Duplicate Samples or Matrix Spike Duplicates

MSDs will be analyzed to monitor the method precision. Results in RPD will be tabulated and charted. The RPD calculation (for two samples, C_1 and C_2) is shown below. For analytical methods in which spiking is not applicable, sample duplicates will be used to assess precision. Duplicates or MSDs must be analyzed per EPA Method SW-846 for applicable analyses, at least once with each matrix-specific analytical batch, and with a 1 in 20 sample minimum.

$$RPD = \frac{C_1 - C_2}{\left(\frac{C_1 + C_2}{2}\right)} \times 100$$

Where:

RPD	=	Relative percent difference
C_1	=	Larger of the two observed values
C_2	=	Smaller of the two observed values.

The laboratory's QA program will be reviewed by the Quality Assurance Officer with specific emphasis on the acceptance criteria for QC samples, and on related corrective action should the QC criteria not be met. Acceptance criteria and corrective action consistent with Method SW-846 Update III method criteria will be deemed acceptable.

Data obtained will be properly recorded. The required QC summary package for organic and inorganic data and the EDD format is detailed in this QAPP. The laboratory will reanalyze samples not handled or

analyzed in conformance with the QC criteria, if sufficient sample volume is available. It is expected that sufficient volumes/weights of samples will be collected to allow for reanalysis when necessary.

Completed data reports from the laboratory will include a narrative outlining any problems, corrections, anomalies, and conclusions, as well as COC documentation and results for all analyses and laboratory QC.

7.6 Data Management

Field data (groundwater field parameter data and water-level measurements) will be entered into cumulative Excel spreadsheets and/or the Environmental Quality Information Systems (EQuIS) database. Data will be verified to determine all entered data are correct and without omissions and errors. Field notes, including field reports, sampling forms, survey forms, test pit logs, boring logs, and well construction diagrams, will be maintained in the project files. Survey notes will be reduced to provide coordinates and elevations that will be uploaded to the database.

Laboratory analytical results, including QC data, will be submitted electronically. Electronic formats will include a PDF file of the laboratory report, and electronic data deliverable (EDD) files that will be uploaded directly to the EQuIS database. EQuIS EDDs will be provided by the laboratory in the EFWEDD format (also known as EQuIS 4-File), using Landau-valid values. After validation of the data, any applicable qualifiers will be added to the database.

Stage 2 laboratory reports will include the following:

- Case narrative, including adherence to prescribed protocols, non-conformity events, corrective measures, and/or data deficiencies (including initial and continuing instrument calibrations, and explanations for any missed target RLs)
- EPA Contract Laboratory Program (CLP)-equivalent forms
- COC documentation
- Sample receipt and condition documentation
- Sample summary or equivalent
- Method summary or equivalent
- Sample results (with date, units, and RLs)
- Laboratory data qualifier definitions
- Method/laboratory blank results
- Sample surrogate results
- Field QC results
- Laboratory control sample results
- Matrix spike results
- Duplicate and/or matrix spike duplicate results

- Post-digestion spike sample results
- Inductively coupled plasma serial dilution results.

7.7 Data Reduction

This section summarizes the procedures for ensuring the accuracy of the data reduction process. Both field and laboratory data reduction procedures are summarized. Responsibilities for the data reduction process are delegated as follows:

- Technical personnel will document and review their own work and are responsible for the accuracy of the work.
- Calculations will receive a method and calculation check by a secondary reviewer prior to reporting (peer review).
- The Laboratory PM will be responsible for ensuring that data reduction is completed according to protocols discussed in this QAPP.

The laboratories will follow the data reduction and calculation procedures set forth in EPA-approved methods and 40 CFR Part 136. Data reports and EDDs generated by the laboratory will undergo internal data approval in accordance with the laboratory's Quality Services Manual before being reported.

Automated data calculation and reduction, using instrument data system software or electronic spreadsheet software, will be used by the laboratory to the greatest extent practicable. Analyses will be programmed to allow for raw data entry and editing at the keyboard, with integrated software performing calculations and permanent database generation. Data-entry errors will be checked by comparing the raw data printouts to the chemist's original work, minimizing the common sources of error in data reduction.

The Laboratory PM must ensure that the EDD matches the laboratory hard copy data report. This data review must be completed before deliverables are reported by the laboratory. Raw and final data will be stored electronically, with regularly scheduled backups performed and maintained at the laboratory.

Logbooks will be maintained for each instrument. Computer record file identification will readily allow retrieval by the client name. Worksheets and spreadsheets will be prepared using an electronic spreadsheet or related software package.

Raw data from the chemists' notebooks or bench sheets will include all analytical variables compiled for samples, replicates, blanks, standards, and matrix spikes. The Laboratory PM will approve submittal of the final data report and EDD after internal review.

8.0 ASSESSMENT AND OVERSIGHT

This section describes assessment and oversight.

8.1 Assessment and Response Actions

Assessments during implementation of the project will include daily communication and updates during field work and data quality review by the Landau project manager/project coordinator and field staff. Response actions to assessed issues will be coordinated between the Landau PM, field staff, the PM for Snohomish County Public Works, and involved subcontractors, as appropriate.

If any project non-conformance is considered significant or requires special expertise, corrective action(s) may include the following:

- Reanalyzing the samples, if holding times can be met
- Resampling and analyzing
- Evaluating and amending sampling and analytical procedures
- Accepting data and acknowledging the level of uncertainty or inaccuracy by flagging the data.

8.2 Corrective Action

The corrective action process may be initiated by any project team member. The process consists of identifying a problem, acting to eliminate the problem, documenting the corrective action, monitoring the effectiveness of the corrective action, and verifying that the problem has been sufficiently addressed. The Landau field lead will be responsible for correcting and resolving situations in the field that may result in non-compliance with the QAPP. Corrective measures identified by the field lead will be immediately documented in the field notes. Examples of corrective actions for field measurements may include: repetition of a measurement to check the error, check for proper adjustments for ambient conditions, check of batteries, recalibration, replacement of instruments, revisions to COC forms, and (if necessary) stop work. Laboratory PMs are responsible for ensuring that corrective action processes as identified in their quality systems manuals, SOPs, and this QAPP are followed. The laboratory PM is responsible for notifying the Landau QA manager of any non-conformance. If a corrective action is initiated at the laboratory, it shall be narrated in the laboratory data package. Technical staff will be responsible for reporting any QA non-conformance or suspected deficiencies they identify to the Landau PM, who will in turn notify the Landau QA manager. The Landau QA manager is responsible for assessing the suspected deficiency or non-conformance and its potential to impact data quality.

If corrective actions are required, a copy of the documented corrective action taken will be maintained in the electronic project files. At the completion of the sampling event, the Landau QA officer and the Landau PM will ensure that all appropriate corrective actions have been taken and that the corrective action reports have been included in the electronic project files; if corrective actions have not been taken, the PM will ensure action is taken.

9.0 DATA VALIDATION AND USABILITY

The processes that will be used to verify and validate data are described in the subsections below.

9.1 Verification

Sample collection forms, field notes, and water-level measurements will be reviewed by Landau and placed in the electronic project files. Field data (groundwater field parameter data and water-level measurements) will be entered into an Excel spreadsheet and verified to determine that all entered data are correct and without omissions and errors.

Technical verification requires comparison of QC and instrument performance standard results to required control limits. Technical verification is conducted throughout the analytical process, first by analysts, and finally by the Laboratory PM or designee. Laboratory data packages will be verified internally by the laboratory performing the work for completeness and technical accuracy prior to submittal.

9.2 Validation

Data generated as part of the RI will undergo EPA Stage 2A validation to determine that the results are acceptable and meet the quality objectives described in this QAPP.

Validation of the data will be completed by a Landau data validator with guidance from applicable portions of the National Functional Guidelines for Organic Superfund Methods Data Review (EPA 2020b) and the National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA 2020a), analytical methods, and Landau SOPs.

EPA Stage 2A-equivalent verification and validation elements are provided in Table B-5 and will include the following:

- Verification that the laboratory data package contains all necessary documentation (including COC records; identification of samples received by the laboratory; date and time of receipt of the samples at the laboratory; sample conditions upon receipt at the laboratory; date and time of sample analysis; and, if applicable, date of extraction, definition of laboratory data qualifiers, all sample-related QC data, and QC acceptance criteria)
- Verification that all requested analyses, special cleanups, and special handling methods were conducted
- Verification that QC samples were analyzed per the method and frequency specified in the QAPP
- Evaluation of sample holding times
- Evaluation of QC data compared to acceptance criteria, including field QC samples (field duplicates, trip blanks, and/or equipment blanks) and laboratory QC samples (method blanks, surrogate recoveries, laboratory duplicate and/or replicate results, and LCS results)
- Verification that RLs for target analytes are at or below the target RLs specified in the QAPP.

Analytical data may be qualified based on the data validation review. Qualifiers will be consistent with applicable EPA national functional guidelines and will be used to provide data users with an estimate of the level of uncertainty associated with the qualified result. Data validation results will be evaluated with respect to assigned qualifiers to determine any data usability issues.

The following qualifiers may be assigned during the data validation process:

J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J–	The result is an estimated quantity, but the result may be biased low.
NJ	The analyte has been "tentatively identified" or "presumptively identified" as present and the associated numerical value is the estimated concentration in the sample.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

The objectives, evaluations, and actions employed during the data validation process will be guided by EPA national functional guidelines. Laboratories will be permitted to provide CLP-like forms in lieu of true CLP forms. The data validation criteria will not strictly adhere to national functional guidelines, but will also take into consideration method criteria for preservation and holding times; laboratory-specified criteria for surrogate, LCSs, laboratory duplicates, and MSs; and the data validator's professional judgment.

10.0 PROJECTS USING EXISTING DATA

Since the TECT Aerospace RI is an ongoing program, secondary data may be used to evaluate performance and concentration trends. Historical data will be considered usable for the decisions being made on this project, especially in light of the effort to identify and resolve data gaps.

11.0 USE OF THIS QUALITY ASSURANCE PROJECT PLAN

This Quality Assurance Project Plan has been prepared for the exclusive use of Snohomish County Public Works and applicable regulatory agencies for specific application to the former Paine Field TECT Aerospace Leasehold. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau, shall be at the user's sole risk. Landau warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. Landau makes no other warranty, either express or implied.

12.0 REFERENCES

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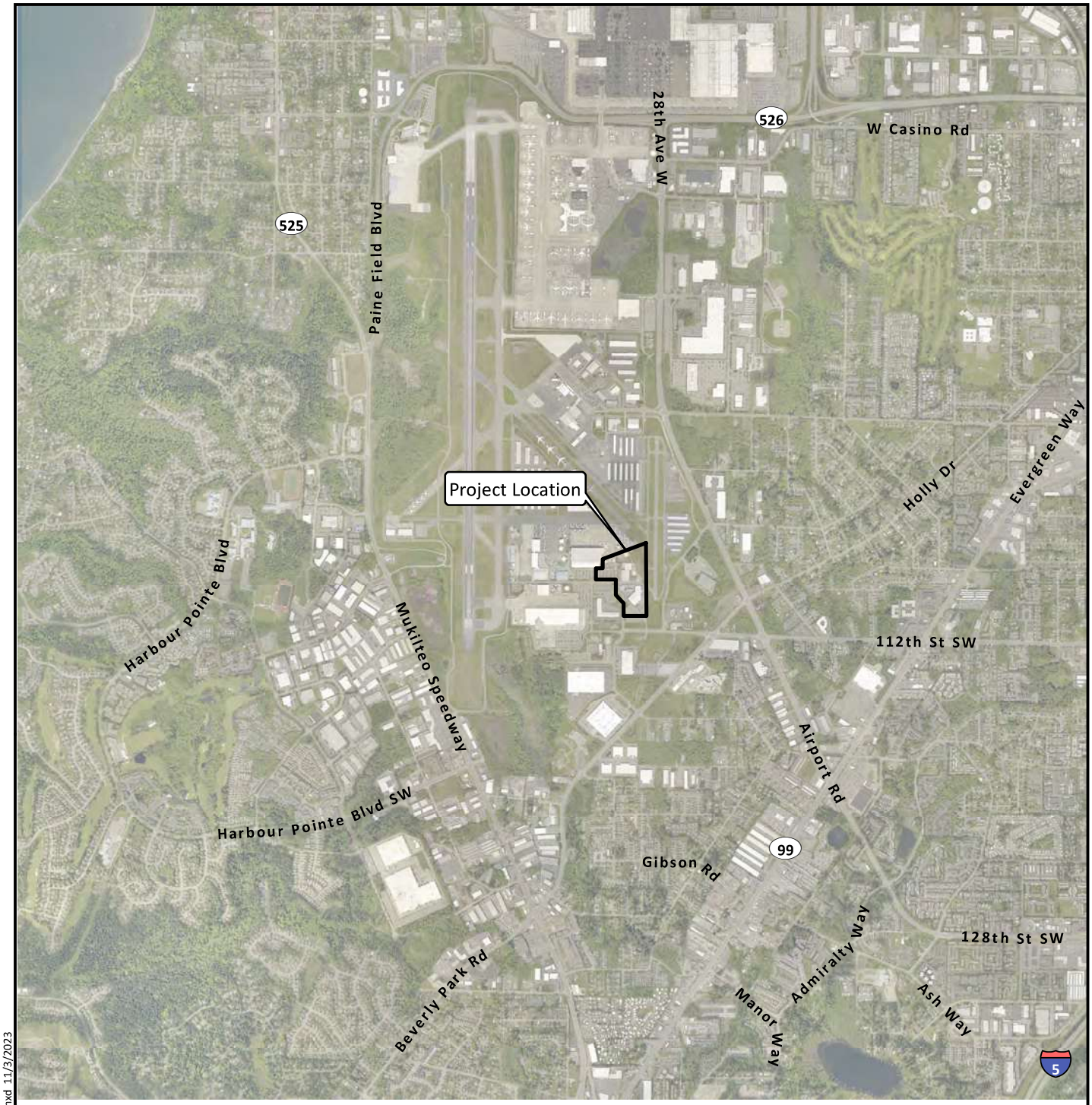
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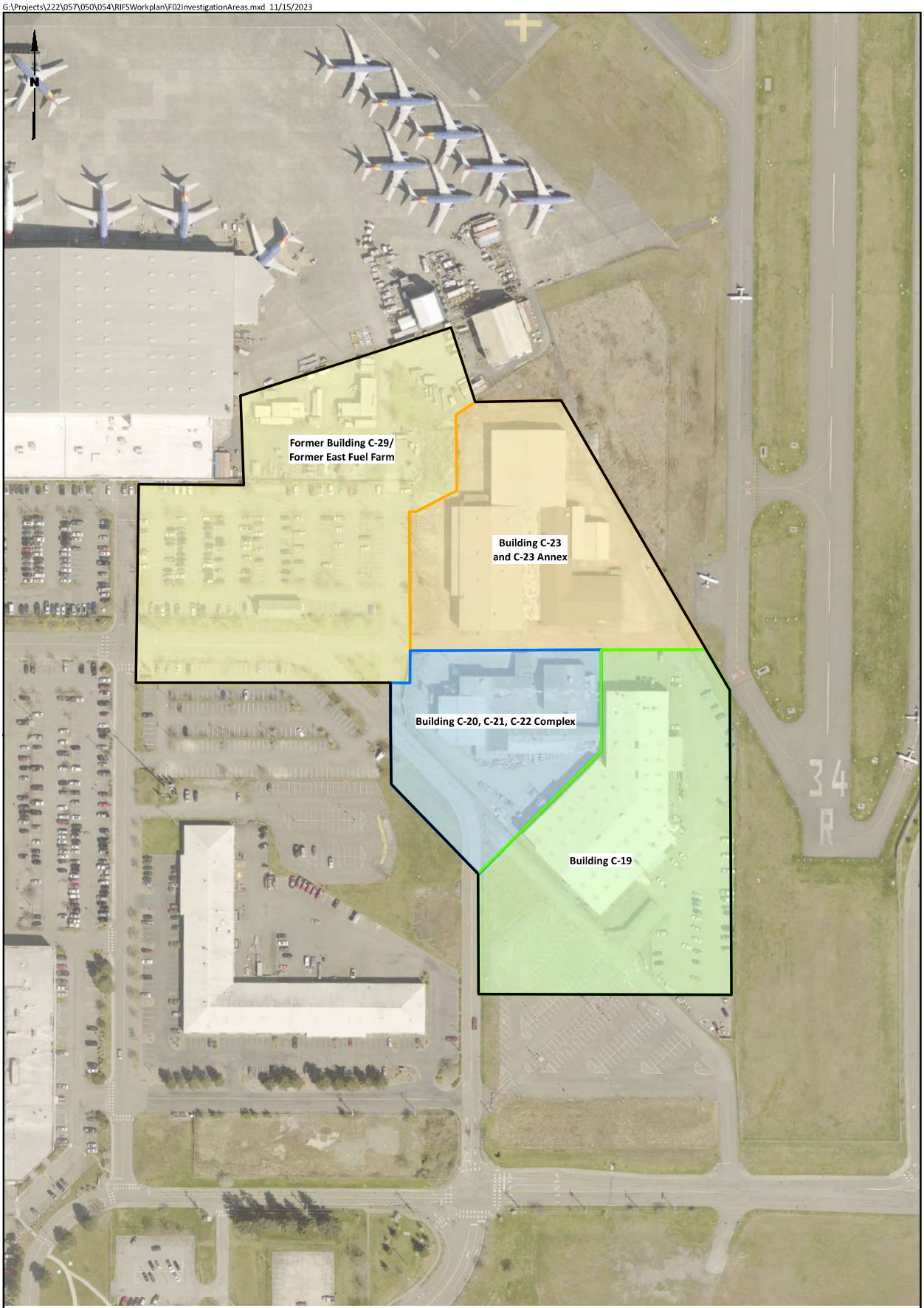
Data Sources: Snohomish County GIS; Esri.

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TECT Aerospace Everett, Washington	**Vicinity Map**	Figure B-1

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Legend

Approximate Site Boundary

Investigation Areas

- Building C-19
- Building C-20, C-21, C-22 Complex
- Building C-23 and C-23 Annex
- Former Building C-29/ Former East Fuel Farm

0 150 300

Scale in Feet

Data Sources: AGI 1999; Landau Associates 2006; King County GIS.

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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TECT Aerospace Everett, Washington	**Site Plan**	Figure B-2

Table B-1
Data Quality Objectives
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

DQI	QC Sample or Activity Used to Assess MQO	MQO	Frequency	Sampling or Analytical DQI
Soil Samples Analyzed for Gasoline-Range Petroleum Hydrocarbons by Method NWTPH-Gx				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Bias	Surrogates	Recoveries within laboratory-specified control limits	All project and QA samples	A
Accuracy	LCS/LCSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS/LCSD and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/MSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Bias/Contamination	Method Blank, Trip Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Soil Samples Analyzed for Diesel- and Motor Oil-Range Petroleum Hydrocarbons, and Jet Fuel by Method NWTPH-Dx with SGC				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Bias	Surrogates	Recoveries within laboratory-specified control limits	All project and QA samples	A
Accuracy	LCS/LCSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS/LCSD and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/MSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Bias/Contamination	Method Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Soil Samples Analyzed for Total Metals by EPA Method 6020B				
Representativeness	Cooler Temperature	No requirement.	All project samples	S
Accuracy	ICAL	Minimum of a calibration blank plus a standard per manufacturing recommended procedures; RL standard may be included in multi-point calibration curve; linear curve fit with correlation coefficient >0.998.	Daily prior to sample analysis	A
Accuracy	Initial Calibration Verification	Separate-source from calibration standards; must contain all target analytes ICV: 90-110% recovery	Daily after calibration	A
Accuracy	CCV	Same source as calibration standards; concentration near mid-point of calibration curve; must contain all target analytes CCV: 90-110% recovery	1 every 10 samples and at end of run	A
Accuracy	LCS	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A

Table B-1
Data Quality Objectives
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

DQI	QC Sample or Activity Used to Assess MQO	MQO	Frequency	Sampling or Analytical DQI
Method performance for matrix, bias	MS/Laboratory Duplicate	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Bias/Contamination	Method Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Soil Samples Analyzed for Total Metals by EPA Method 7196A				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Accuracy	ICAL	Minimum of a calibration blank plus a standard per manufacturing recommended procedures; RL standard may be included in multi-point calibration curve; linear curve fit with correlation coefficient >0.998.	Daily prior to sample analysis	A
Accuracy	Initial Calibration Verification	Separate-source from calibration standards; must contain all target analytes ICV: 90-110% recovery	Daily after calibration	A
Accuracy	CCV	Same source as calibration standards; concentration near mid-point of calibration curve; must contain all target analytes CCV: 90-110% recovery	1 every 10 samples and at end of run	A
Accuracy	LCS	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/Laboratory Duplicate	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Bias/Contamination	Method Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Soil Samples Analyzed for Volatile Organic Compounds by EPA Method 8260D				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Accuracy	BFB Tune	Method tune criteria based on criteria in Table 3 of EPA's SW-846 Method 8260D	Every 12 hours	A
Accuracy	ICAL	Minimum five standards; must contain all targets and lowest standard ≤ RL; Full Scan: %RSD ≤20% for all compounds and minimum RF found in Table 4 or "r" ≥0.99; SIM: %RSD ≤20% and minimum RF found in Table 4 or "r" ≥0.99 for all compounds.	Initially and when CCV fails	A
Accuracy	CCV	Concentration level near mid-point of ICAL curve containing all target compounds; Full Scan and SIM: minimum RRF criteria met; %D or % Drift ≤20% for all compounds	1 every 12 hour prior to analysis of samples	

Table B-1
Data Quality Objectives
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

DQI	QC Sample or Activity Used to Assess MQO	MQO	Frequency	Sampling or Analytical DQI
Bias	Surrogates	Recoveries within laboratory-specified control limits	All project and QA samples	A
Accuracy	LCS/LCSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS/LCSD and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/MSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Bias/Contamination	Method Blank, Trip Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Water Samples Analyzed for Gasoline-Range Petroleum Hydrocarbons by Method NWTPH-Gx				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Bias	Surrogates	Recoveries within laboratory-specified control limits	All project and QA samples	A
Accuracy	LCS/LCSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS/LCSD and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/MSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Precision	Field Duplicates	RPD <20%	1 per 20 samples or one per analytical group	S&A
Bias/Contamination	Method Blank, Trip Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Water Samples Analyzed for Diesel- and Motor Oil-Range Petroleum Hydrocarbons, and Jet Fuel by Method NWTPH-Dx with and without SGC				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Bias	Surrogates	Recoveries within laboratory-specified control limits	All project and QA samples	A
Accuracy	LCS/LCSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS/LCSD and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/MSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Precision	Field Duplicates	RPD <20%	1 per 20 samples or one per analytical group	S&A
Bias/Contamination	Method Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S

Table B-1
Data Quality Objectives
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

DQI	QC Sample or Activity Used to Assess MQO	MQO	Frequency	Sampling or Analytical DQI
Water Samples Analyzed for Total or Dissolved Metals by EPA Methods 6020B and 7471A/7196				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Accuracy	LCS	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/Laboratory Duplicate	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Precision	Field Duplicates	RPD <20%	1 per 20 samples or one per analytical group	S&A
Bias/Contamination	Method Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Water Samples Analyzed for Volatile Organic Compounds by EPA Method 8260D				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Bias	Surrogates	Recoveries within laboratory-specified control limits	All project and QA samples	A
Accuracy	LCS/LCSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS/LCSD and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/MSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Bias/Contamination	Method Blank, Trip Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Water Samples Analyzed for cPAHs and 1,4-dioxane by EPA Method 8270E SIM				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Bias	Surrogates	Recoveries within laboratory-specified control limits	All project and QA samples	A
Accuracy	LCS/LCSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS/LCSD and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/MSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Precision	Field Duplicates	RPD <20%	1 per 20 samples or one per analytical group	S&A
Bias/Contamination	Method Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Water Samples Analyzed for PFAS by EPA Method 1668				
Representativeness	Cooler Temperature	<6°C	All project samples	S
Bias	Surrogates	Recoveries within laboratory-specified control limits	All project and QA samples	A

Table B-1
Data Quality Objectives
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

DQI	QC Sample or Activity Used to Assess MQO	MQO	Frequency	Sampling or Analytical DQI
Accuracy	LCS/LCSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS/LCSD and MS/MSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Method performance for matrix, bias	MS/MSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	S&A
Precision	Field Duplicates	RPD <20%	1 per 20 samples or one per analytical group	S&A
Bias/Contamination	Method Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S
Soil Gas and Air Samples Analyzed for Volatile Organic Compounds by EPA Method TO-15				
Accuracy	BFB Tune	Method tune criteria based on criteria in Table 3 of EPA's SW-846 Method 8260C	Every 12 hours	A
Accuracy	ICAL	Minimum five standards; must contain all targets and lowest standard ≤ RL; Full Scan: %RSD ≤20% for all compounds and minimum RF found in Table 4 or "r" ≥0.99; SIM: %RSD ≤20% and minimum RF found in Table 4 or "r" ≥0.99 for all compounds.	Initially and when CCV fails	A
Accuracy	CCV	Concentration level near mid-point of ICAL curve containing all target compounds; Full Scan and SIM: minimum RRF criteria met; %D or % Drift ≤20% for all compounds	1 every 12 hour prior to analysis of samples	
Bias	Surrogates	Recoveries within laboratory-specified control limits	All project and QA samples	A
Accuracy	LCS/LCSD	Recoveries within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Precision	LCS/LCSD	RPDs within laboratory-specified control limits	1 per 20 samples or one per analytical batch	A
Bias/Contamination	Method Blank	Target analytes not detected at concentrations >1/2 the RL	1 method blank per 20 samples, 1 every 12 hours, or 1 per analytical batch	S&A
Analytical Completeness	Number of usable (not rejected) results out of total number of results	90%	NA	S&A
Field Completeness	Number of samples collected out of planned samples	95%	NA	S

Abbreviations and Acronyms:
A = analytical
% = percent
°C = degrees Celsius
CCV = continuing calibration verification
DQI = data quality indicator
EPA = US Environmental Protection Agency
ICAL = initial calibration
LCS = laboratory control spike
LCSD = laboratory control spike duplicate
MQO = measurement quality objective
MS = matrix spike
MSD = matrix spike duplicate
NA = not applicable
NWTPH-Dx = Northwest total petroleum hydrocarbon extended-range diesel analytical method
NWTPH-Gx = Northwest total petroleum hydrocarbon extended-range gasoline analytical method
QA = quality assurance
QC = quality control
RL = reporting limit
RPD = relative percent difference
RSD = relative standard deviation
S = sampling
SIM = selected ion monitoring
SGC = silica-gel cleanup

Table B-2
Soil and Groundwater Targeted Reporting Limits
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte	Soil (a)			Groundwater		
	Screening Level	RLs	Units	Screening Level	RLs	Units
Total Petroleum Hydrocarbons	Method ECY 97-602 NWTPH-Gx			Method ECY 97-602 NWTPH-Gx		
Gasoline Range	30	3	mg/kg	800/1,000	50	µg/L
	Method ECY 97-602 NWTPH-Dx			Method ECY 97-602 NWTPH-Dx w/ and w/o SGC		
Diesel Range	2,000	25	mg/kg	500	130	µg/L
Motor Oil Range	2,000	50	mg/kg	500	250	µg/L
Total Metals	Method 6020B/7471A/7196					
Arsenic	7	0.5	mg/kg	--	--	--
Barium		0.5	mg/kg	--	--	--
Cadmium	1	0.5	mg/kg	--	--	--
Chromium, Total	42	0.5	mg/kg	--	--	--
Chromium III (calculated)	100	--	mg/kg	--	--	--
Chromium, Hexavalent	0.926	5	mg/kg	--	--	--
Lead	150	0.5	mg/kg	--	--	--
Mercury	0.105	0.02	mg/kg	--	--	--
Dissolved Metals				Method 6020B/7196A		
Arsenic	--	--	--	5	1	µg/L
Barium	--	--	--		5	µg/L
Cadmium	--	--	--	5	1	µg/L
Chromium, Total	--	--	--	100	2	µg/L
Chromium III (calculated)	--	--	--	100	--	µg/L
Chromium, Hexavalent	--	--	--	48	10	µg/L
Copper	--	--	--	640		µg/L
Lead	--	--	--	15	1	µg/L
Mercury	--	--	--	2	0.2	µg/L
Volatile Organic Compounds	Method EPA 8260D			Method EPA 8260D (b)		
1,1,1,2-Tetrachloroethane	38,000	10	µg/kg	1.68	2.0	µg/L
1,1,1-Trichloroethane	84.3	10	µg/kg	200	2.0	µg/L
1,1,2,2-Tetrachloroethane	0.080	1.5	µg/kg	0.5	2.0	µg/L
1,1,2-Trichloroethane	0.278	1.5	µg/kg	0.768	2.0	µg/L
1,1-Dichloroethane	2.61	1.5	µg/kg	7.68	2.0	µg/L
1,1-Dichloroethene	2.46	1.5	µg/kg	7	2.0	µg/L
1,2,4-Trimethylbenzene	--	10	µg/kg	--	2.0	µg/L

Table B-2
Soil and Groundwater Targeted Reporting Limits
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte	Soil (a)			Groundwater		
	Screening Level	RLs	Units	Screening Level	RLs	Units
1,2-Dichloroethane	1.5	1.5	µg/kg	0.481	2.0	µg/L
1,2-Dichloropropane	1.67	1.5	µg/kg	1.22	2.0	µg/L
1,3,5-Trimethylbenzene	800,000	10	µg/kg	80	2.0	µg/L
2-Butanone	48,000,000	50	µg/kg	4,800	10	µg/L
2-Hexanone	--	50	µg/kg	--	10	µg/L
4-Isopropyltoluene	--	10	µg/kg	--	2.0	µg/L
4-Methyl-2-Pentanone (MIBK)	6,400,000	50	µg/kg	640	10	µg/L
Acetone	2,070	50	µg/kg	7,200	25	µg/L
Benzene	0.277	1.5	µg/kg	0.795	2.0	µg/L
Carbon Disulfide	266	10	µg/kg	800	2.0	µg/L
Carbon Tetrachloride	0.274	1.5	µg/kg	0.625	2.0	µg/L
Chloroethane	--	10	µg/kg	--	2.0	µg/L
Chloroform	0.479	1.5	µg/kg	1.41	2.0	µg/L
cis-1,2-Dichloroethene	5.15	1.5	µg/kg	16	2.0	µg/L
Ethylbenzene	343	10	µg/kg	700	2.0	µg/L
Ethylene Dibromide (1,2-Dibromoethane)	500	5	µg/kg	0.02	0.01	µg/L
Isopropylbenzene	8,000,000	10	µg/kg	800	2.0	µg/L
Methyl T-Butyl Ether	7.23	1.5	µg/kg	24.3	2.0	µg/L
Methylene Chloride	1.48	1.5	µg/kg	5	5.0	µg/L
Naphthalene	236	10	µg/kg	160	2.0	µg/L
n-Propylbenzene	8,000,000	10	µg/kg	800	2.0	µg/L
sec-Butylbenzene	8,000,000	10	µg/kg	800	2.0	µg/L
Tetrachloroethene	2.76	1.5	µg/kg	5	2.0	µg/L
Toluene	273	10	µg/kg	640	2.0	µg/L
trans-1,2-Dichloroethene	32.5	10	µg/kg	100	2.0	µg/L
Trichloroethene	0.206	1.5	µg/kg	0.54	2.0	µg/L
Vinyl Chloride	0.009	0.05	µg/kg	0.029	0.2	µg/L
Total Xylenes	831	20	µg/kg	1,600	6.0	µg/L
Semivolatile Organic Compounds	Method EPA 8270 SIM			Method EPA 8270 SIM		
1,4-Dioxane	--	--	--	0.44	0.04	µg/L
Benzo(a)pyrene	0.19	0.02	mg/kg	0.04	0.02	µg/L
Benzo(a)anthracene	--	0.02	mg/kg	--	0.02	µg/L
Benzo(b)fluoranthene	--	0.02	mg/kg	--	0.02	µg/L

Table B-2
Soil and Groundwater Targeted Reporting Limits
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte	Soil (a)			Groundwater		
	Screening Level	RLs	Units	Screening Level	RLs	Units
Benzo(k)fluoranthene	--	0.02	mg/kg	--	0.02	µg/L
Chrysene	--	0.02	mg/kg	--	0.02	µg/L
Dibenz(a,h)anthracene	--	0.02	mg/kg	--	0.02	µg/L
Indeno(1,2,3-cd)pyrene	--	0.02	mg/kg	--	0.02	µg/L
Naphthalene	0.236	0.02	mg/kg	160	0.02	µg/L
PFAS		Method EPA 1633			Method EPA 1633	
11Cl-PF3OUdS	--	--	--	--	6	ng/L
3:3FTCA	--	--	--	--	8	ng/L
4:2FTS	--	--	--	--	6	ng/L
5:3FTCA	--	--	--	--	40	ng/L
6:2FTS	--	--	--	--	6.07	ng/L
7:3FTCA	--	--	--	--	40	ng/L
8:2FTS	--	--	--	--	6.14	ng/L
9Cl-PF3ONS	--	--	--	--	6.24	ng/L
ADONA	--	--	--	--	6.32	ng/L
EtFOSA	--	--	--	--	1.6	ng/L
EtFOSAA	--	--	--	--	1.6	ng/L
EtFOSE	--	--	--	--	16	ng/L
HFPO-DA	--	--	--	24	6.68	ng/L
MeFOSA	--	--	--	--	1.6	ng/L
MeFOSAA	--	--	--	--	1.6	ng/L
MeFOSE	--	--	--	--	16	ng/L
NFDHA	--	--	--	--	3.2	ng/L
PFBA	--	--	--	--	6.4	ng/L
PFBS	--	--	--	345	1.42	ng/L
PFDA	--	--	--	--	1.6	ng/L
PFDoA	--	--	--	--	1.6	ng/L
PFDoS	--	--	--	--	1.55	ng/L
PFDS	--	--	--	--	1.54	ng/L
PFEESA	--	--	--	--	2.85	ng/L
PFHpA	--	--	--	--	1.6	ng/L
PFHpS	--	--	--	--	1.52	ng/L
PFHxA	--	--	--	--	1.6	ng/L

Table B-2
Soil and Groundwater Targeted Reporting Limits
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte	Soil (a)			Groundwater		
	Screening Level	RLs	Units	Screening Level	RLs	Units
PFHxS	--	--	--	65	1.46	ng/L
PFMBA	--	--	--	--	3.2	ng/L
PFMPA	--	--	--	--	3.2	ng/L
PFNA	--	--	--	9	1.6	ng/L
PFNS	--	--	--	--	1.54	ng/L
PFOA	--	--	--	10	1.6	ng/L
PFOS	--	--	--	15	1.49	ng/L
PFOSA	--	--	--	--	1.6	ng/L
PFPeA	--	--	--	--	3.2	ng/L
PFPeS	--	--	--	--	1.5	ng/L
PFTeDA	--	--	--	--	1.6	ng/L
PFTrDA	--	--	--	--	1.6	ng/L
PFUnA	--	--	--	--	1.6	ng/L

Notes:

(a) Soil results and associated laboratory reporting limits will be reported on a dry weight basis.

(b) To achieve project screening limits, goundwater samples analyzed for VOCs by EPA 8260D will be reported to the MDL.

Abbreviations and Acronyms:

EPA = US Environmental Protection Agency
µg/kg = micrograms per kilogram
µg/L = micrograms per liter
MDL = method detection limit
mg/kg =milligrams per kilogram
mg/L = milligrams per liter
ng/L = nanograms per liter
w/ = with
w/o = without

Table B-3
Soil Gas Targeted Reporting Limits
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Analyte	CAS No.	Indoor Air Screening Level	Shallow Soil Gas Screening Level	RLs	Units
Volatile Organic Compounds				EPA TO-15	
1,1,1-Trichloroethane	71-55-6	2,290	76,200	1.4	$\mu g/m^3$
1,1-Dichloroethane	75-34-3	1.56	52.1	1.3	$\mu g/m^3$
Benzene	71-43-2	0.321	10.7	1.3	$\mu g/m^3$
Tetrachloroethene	127-18-4	9.62	321	1.3	$\mu g/m^3$
Trichloroethene	79-01-6	0.37	12.3	1.3	$\mu g/m^3$
Vinyl chloride	75-01-4	0.28	9.33	1.3	$\mu g/m^3$

Abbreviations and Acronyms:

CAS = Chemical Abstracts Services
EPA = US Environmental Protection Agency
$\mu g/m^3$ = micrograms per cubic meter
RL = reporting limit

Table B-4
Sample Containers, Preservatives, and Holding Times
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Matrix	Method	Container	Preservative	Holding Time (a)	Laboratory Performing Analyses
Soil	Gasoline-range Petroleum Hydrocarbons by NWTPH-Gx	4 oz + 5035 methanol vial	<6°C	14	ALS Global Everett
Soil	Diesel- and Oil-range Petroleum Hydrocarbons by NWTPH-Dx	4 oz	<6°C	14 days/40 days	ALS Global Everett
Soil	Total Metals by EPA 6020A (7471A for mercury)	4 oz amber glass	<6°C (mercury only)	180 (mercury 28 days)	ALS Global Everett
Soil	Hexavalent Chromium by EPA 7196	4 oz polyethylene or glass	<6°C	30 days to extraction then 24 hours for analysis	ALS Global Everett
Soil	VOCs by EPA Method 8260/	4 oz, + 5035 methanol vila and two stirbar vials	HCl to pH<2; <6°C	14 days freeze stirbar vials within 48 hours	ALS Global Everett
Soil	cPAHs by EPA Method 8270 SIM	4 oz	<6°C	14 days/40 days	ALS Global Everett
Groundwater	Gasoline-range Petroleum Hydrocarbons by NWTPH-Gx	2 x 40-mL glass	Add HCl to pH<2; <6°C	14	ALS Global Everett
Groundwater	Diesel- and Oil-range Petroleum Hydrocarbons by NWTPH-Dx	500-mL amber glass	<6°C	7 days/40 days	ALS Global Everett
Groundwater	Dissolved Metals by EPA Method 200.8	500 mL plastic	If field filtered, HNO_3 to pH <2; <6°C	180	ALS Global Everett
Groundwater	Total Metals by EPA Method 200.8 (245.1 for mercury)	500 mL plastic	HNO_3 to pH <2; <6°C	180 (mercury 28 days)	ALS Global Everett
Groundwater	Hexavalent Chromium by EPA 7196	500 mL polyethylene or glass	<6°C	24 hours	ALS Global Everett
Groundwater	VOCs by EPA Method 8260D	3 x 40-mL glass	HCl to pH<2; <6°C	14 days (7 days pH >2)	ALS Global Everett

Table B-4
Sample Containers, Preservatives, and Holding Times
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

Matrix	Method	Container	Preservative	Holding Time (a)	Laboratory Performing Analyses
Groundwater	cPAHs by EPA Method 8270 SIM	2 x 1-L amber glass	<6°C	7 days/40 days	ALS Global Everett
Groundwater	1,4-Dioxane by EPA Method 8270 SIM	2 x 1-L amber glass	<6°C	7 days/40 days	ALS Global Kelso
Groundwater	PFAS by EPA Method 1633	2 x 1-L amber glass	<6°C	7 days/40 days	Enthalpy
Soil Gas	TO-15	Summa Canister	NA		ALS-S

Notes:

(a) Time from sample collection to extraction/time from sample extraction to analysis.

Acronyms and Abbreviations:

°C = degrees Celsius
EPA = US Environmental Protection Agency
g = gram
H_3PO_4 = Phosphoric acid
HCL = Hydrochloric acid
HNO_3 = nitric acid
L = liter
mL = milliliter
oz = ounces
cPAH = carcinogenic polycyclic aromatic hydrocarbon
PFAS = perfluoroalkyl and polyfluoroalkyl substances
SIM = selected ion monitoring
VOC = volatile organic compound
TO = toxic organics

Table B-5
Data Validation Elements
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

QC Element	Evaluation Criteria	Qualification	Comments
Case Narrative	A case narrative shall be included with all laboratory packages.	Depending on issues presented in case narrative, additional qualification to the data may be warranted.	
Chain of Custody	A COC shall be included with all laboratory packages.	If discrepancies are noted on the COC, then the laboratory report may be revised to correct any issues.	
Preservation	Preservation conditions as noted in laboratory report are compared to method-specified requirements.	Depending on the preservation issue, data may be qualified as estimated (J/UJ) or rejected.	
Headspace	VOA vials should be free of headspace and air bubbles.	If sample was analyzed from a vial that contained headspace or bubbles, data may be qualified as estimated (J/UJ) or rejected (R).	Applicable only to VOAs.
Sample Filtration	Samples that are field-filtered shall be identified as such on the COC. Filtered metals will be reported as dissolved fraction.	If discrepancies are identified or problems with filtration are noted, then a revised lab report may be issued.	Applicable only to dissolved metals.
Holding Times	Holding times are compared to method-specified hold times.	If hold times are exceeded, then all detected results for the method are qualified as estimated (J) and all non detected results are rejected (R).	
Method Blanks	Detections of target analytes should be < RL for the analyte or < level of acceptable blank contamination specified in the QAPP.	If sample result is <5x contaminant concentration (10x for common laboratory contaminants) and between MDL and RL, raise result to RL and flag “U.” If sample result is <5x contaminant concentration (10x for common laboratory contaminants) and RL, flag “U.” Apply method blank results to all samples in the same analytical batch.	

Table B-5
Data Validation Elements
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

QC Element	Evaluation Criteria	Qualification	Comments
Field/Equipment Blanks	Detections of target analytes should be < RL for the analyte or < level of acceptable blank contamination specified in the QAPP.	If sample result is <5x contaminant concentration (10x for common laboratory contaminants) and between MDL and RL, raise result to RL and flag "U." If sample result is <5x contaminant concentration (10x for common laboratory contaminants) and RL, flag "U." Apply field blank results to samples with same collection date; apply equipment blank results to samples associated with equipment.	
Trip Blanks	Detections of target analytes should be < RL for the analyte or < level of acceptable blank contamination specified in the QAPP.	If sample result is <5x contaminant concentration (10x for common laboratory contaminants) and between MDL and RL, raise result to RL and flag "U." If sample result is <5x contaminant concentration (10x for common laboratory contaminants) and RL, flag "U." Apply trip blank results to samples shipped in the same cooler.	
LCS	Recoveries are compared to laboratory-specified QC limits.	If % is <10%, qualify detected results as estimated (J) and reject nondetected results. If %R is < laboratory-specified QC limits, qualify results as estimated (J/UJ). If %R is > laboratory-specified QC limits, qualify detected results as estimated (J).	
Surrogates	Recoveries are compared to laboratory-specified QC limits.	If % is <10%, qualify detected results as estimated (J) and reject nondetected results. If %R is < laboratory-specified QC limits, qualify results as estimated (J/UJ). If %R is > laboratory-specified QC limits, qualify detected results as estimated (J).	Not applicable for inorganics

Table B-5
Data Validation Elements
Quality Assurance Project Plan
TECT Aerospace Cleanup Site
Paine Field – Everett, Washington

QC Element	Evaluation Criteria	Qualification	Comments
MS	Recoveries are compared to laboratory-specified QC limits.	If % is <10%, qualify detected results as estimated (J) and reject nondetected results. If %R is < laboratory-specified QC limits, qualify results as estimated (J/UJ). If %R is > laboratory-specified QC limits, qualify detected results as estimated (J).	
Laboratory Duplicate or MSD or LCSD	RPDs are compared to laboratory-specified QC limits.	If RPDs exceed laboratory-specified QC limits, then results for the sample that was analyzed in duplicate will be qualified as estimated (J/UJ).	
Dilutions	Results shall be reported within the calibration range of the instrument.	Results reported by the laboratory that are outside the calibration range of the instrument (E-qualified) will be marked as not reportable during data validation. The detected result that is within the calibration range is the reportable result. Nondetected results will be reported from the lowest dilution run.	
Field duplicates	RPDs should be <20% for aqueous samples. For detected results <5 times their RLs, results should be within +- the RL.	RPD >20% waters, flag detected results "J." Differences in concentrations > the RL, flag detected results "J."	Field duplicates will only be collected for groundwater samples.

Notes:

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J+ and J- qualifiers may also be used to indicate high bias (+) or low bias (-).

Abbreviations and Acronyms:

% = percent	LCSD = laboratory control sample duplicate	MSD = matrix spike duplicate	RL = reporting limit
COC = chain of custody	MDL = maximum detection limit	QAPP = Quality Assurance Project Plan	RPD = relative percent difference
LCS = laboratory control sample	MS = matrix spike	QC = quality control	VOA = volatile organic analysis

ATTACHMENT B-1

Laboratory Standard Operating Procedures

ATTACHMENT B-2

Example Field Forms

LANDAU ASSOCIATES

☐ Seattle/Edmonds (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

Chain-of-Custody Record

Date _____

Page _____ of _____

Project Name _____ Project No. _____

Project Location/Event _____

Sampler's Name _____

Project Contact _____

Send Results To _____

Testing Parameters

Turnaround Time
☐ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Observations/Comments
					X Allow water samples to settle, collect aliquot from clear portion
					___ NWTPH-Dx - run acid wash silica gel cleanup
					___ Analyze for EPH if no specific product identified
					VOC/BTEX/VPH (soil):
					___ non-preserved
					___ preserved w/methanol
					___ preserved w/sodium bisulfate
					___ Freeze upon receipt
					___ Dissolved metal water samples field filtered
					Other _____

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name	Printed Name	Printed Name	Printed Name
Company	Company	Company	Company
Date Time	Date Time	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

12/2014

LANDAU ASSOCIATES

TECT Aerospace
Everett, Washington

Sample Chain-of-Custody Form

Figure
1

LANDAU ASSOCIATES

Field Report

Project No.: _____ Report No.: _____

Client: _____ Date: _____

Project Name: _____ DPD Permit No.: _____

Location: _____

Weather Conditions: _____

Prepared By: _____

Visitors: _____

Unsatisfactory Conditions & Recommended Correction: _____

Attachments: _____

Signed: _____

LANDAU ASSOCIATES

// GROUNDWATER ELEVATION RECORD

Project Name: _____ Project Number: _____

Event: _____ Date: _____

Client: _____ Weather: _____

Landau Representative: _____

Water Level Indicator No.: _____ **Sensitivity Setting:** _____

Well ID	Screen Interval	Under Pressure?	1st Measurement		2nd Measurement		3rd Measurement		TOC El. (ft)**	GW El. (ft)	Comments/Observations
			Time	DTW*	Time	DTW*	Time	DTW*			

* If well screen is not saturated and well cap not under pressure, only one depth to water measurement required.

** Record relative positions of ground surface, well casing, and protective casing (monument cover) if elevation of well casing is unknown. Record Datum if known.

LANDAU ASSOCIATES

Groundwater Low-Flow Sample Collection Form

Project Name: _____ Project Number: _____

Event: _____ Date/Time: _____

Sample Number: _____ Weather: _____

Landau Representative: _____

WATER LEVEL/WELL/PURGE DATA

Well Condition: Secure (YES or NO) Damaged (YES or NO) Describe: _____

DTW Before Purging (ft) _____ Time: _____ Flow through cell vol. _____ GW Meter No.(s) _____

Begin Purge: Date/Time: _____ End Purge: Date/Time: _____ Gallons Purged: _____

Purge water disposed to: ☐ 55-gal Drum ☐ Storage Tank ☐ Ground ☐ Other _____

Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pH	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
Purge Goals: Stablization of Parameters for three consecutive readings within the following limits								**>/= 1 flow through cell**	
	+/- 3%	**+/- 3%**	**+/- 10%**	**+/- 0.1 units**	**+/- 10 mV**	**+/- 10%**	**< 0.3 ft**		

SAMPLE COLLECTION DATA

Sample Collected With: ☐ Bailer ☐ Pump/Pump Type _____

Made of: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☐ Dedicated

Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated

(By Numerical Order) ☐ Other _____

Sample Description (color, turbidity, odor, sheen, etc.): _____

Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pH	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1									
2									
3									
4									
Average:									

QUANTITY	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)		
	(8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX)	WA ☐	OR ☐
	(8270) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease)	WA ☐	OR ☐
	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F)		
	(COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)		
	(Total Cyanide) (WAD Cyanide) (Free Cyanide)		
	(Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)		
	(Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic		
	VOC (Boeing short list)		
	Methane Ethane Ethene Acetylene		
	others		

Duplicate Sample No(s): _____

Comments: _____

Signature: _____ Date: _____

LANDAU ASSOCIATES

Exploration No. _____
Date _____ Hour _____

Log of Exploration

Project Name _____ Project No. _____

Client/owner _____ Exploration Operator _____

Exploration Method _____

_____

Logged by _____ Exploration Completed _____

Ground Surface Conditions _____

Weather Conditions _____

Location Sketch (show dimensions to mapped features)

North Arrow

(East) (North)

Coordinates: "x" _____ "y" _____ Method _____

Elevations _____ Datum _____

Sampler and Hammer Information

a = 3.25-in. O.D. – D&M	1 = 300-lb./30-in. Drop
b = 2.0-in. O.D. – SPT	2 = 140-lb./30-in. Drop
c = Shelby Tube	3 = Pushed
d = Grab Sample	4 = Vibrocore
g = 2.5-in. O.D.– WSDOT	5 = _____
h = 3.0-in. O.D. – M.Calif.	
i = _____	

Water Level Information

Date		
Time		
Depth to Water		
Hole Depth		
Casing Depth		

Sample Depth (top) (ft.)	Sample Length (ft.)	Recovery Length (ft.)	Retained Depth (top) (ft.)	Retained Length (ft.)	Sample Number	Sampler/Hammer Codes	Blow Counts	Other Test Data) _____	USCS Symbol / Unit Contact	Depth Scale (ft)	Sample Description Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit)	Comments on Heave, Water Conditions, & Drilling Action
										0		
										1		
										2		
										3		
										4		
										5		
										6		
										7		
										8		
										9		
										0		
										1		
										2		
										3		
										4		
										5		
										6		
										7		
										8		
										9		
										0		

Total Depth _____ Finish Date _____ Hour _____ Continued

Exploration No._____

Date _____ Hour_____

LANDAU ASSOCIATES

Log of Test Pit

Project Name _____ Project No. _____

Client/owner _____ Exploration Operator _____

Logged by _____ Exploration Completed _____

Ground Surface Conditions _____

Weather Conditions _____

Location Sketch (show dimensions to mapped features)

North Arrow

Groundwater seepage:
none slow moderate rapid
@ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) ____	USCS Symbol	Depth Scale (ft)	Sample Description Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit) Length of Test Pit (ft.) (View Direction) _____
					0	

Total Depth _____ Finish Date _____ Hour _____

Comments/Field Notes: _____

LANDAU ASSOCIATES

PROJECT _____ PROJECT NO. _____

EVENT _____

SAMPLE NO. _____

DATE COLLECTED _____ TIME _____

Soil/Sediment Sample Collection Form

Weather _____ Collector(s) _____

SAMPLE LOCATION/COMPOSITE DATA

Sample Type: O Soil O Sediment O Other _____

Sample Location: _____

Sample Composited: O Horizontally Locations: _____

O Vertically Depth Ranges: _____

O Not Composited O Other: _____

Elevation and Reference: _____

SAMPLE COLLECTION DATA

Sample Collected From: O Hand-Dug Hole O Test Pit O Boring O Catch Basin/Manhole O Other _____

Sample Collected With: O Bowl O Spoon O Split Barrel O Shovel O Auger O Other _____

Made of: O Stainless Steel O Steel O Other _____

Decon Procedure: *(By Numerical Order)* O Alconox Wash O Tap Rinse O DI Water Rinse O Other _____ O Other _____

O Other _____

SAMPLE DESCRIPTION (color, grain size, density, moisture, etc.): _____

SIZE	QUANTITY	TYPE	LABORATORY ANALYSIS
_____	_____	O Glass O Plastic O Other _____	_____
_____	_____	O Glass O Plastic O Other _____	_____
_____	_____	O Glass O Plastic O Other _____	_____

Co-Located/Duplicate Sample No(s). _____

Photo No. _____ Roll No. _____

Comments: _____

O *Continued on Back*

Signature _____ Date _____

LANDAU ASSOCIATES

Survey Field Notes Form

Project Name: _____ Project Number: _____

Location: _____ Date: _____

Client: _____ Landau Rep: _____

Station	$B^{(+)}$ s	H I	$F^{(-)}$ s	Elevation	Description/Comments

LANDAU ASSOCIATES

As-Built Well Completion Form

Exploration No.: _____

Well No. (If different than Expl. No.): _____

Client/Owner: _____ Project No.: _____

Project Name: _____

Drilling Co.: _____

LAI Rep(s): _____

Installation Start Date: _____ Hour: _____

Installation Finish Date: _____ Hour: _____

Well Type: ☐ Single ☐ Nested ☐ Clustered

BORING AND WELL DIMENSIONS AND INSTALLATION DETAILS

DOE Unique Well No.: _____

Number of Pipes in Boring: _____

Boring Diameter at Top of Hole: _____

Does Diameter of Hole Change? _____

Boring Diameter at First Step Down: _____

Depth of First Step Down: _____

Boring Diameter at Second Step Down: _____

Depth of Second Step Down: _____

Well Completion Date: _____

Elevation of Well Cover: _____

Elevation of Top of Well Pipe: _____

Depth to Water: _____

Date: _____ Time: _____

_____

_____

MATERIALS USED

_____ Sacks of _____ Sand

_____ Sacks of _____ Concrete/Cement

_____ Sacks of _____ Grout Mix Used

_____ Sacks of Bentonite Chips

_____ Feet of _____-inch PVC Blank Casing

_____ Feet of _____-inch PVC Slotted Screen

_____ Threaded End Cap

_____ Waterproof Well Seal/Slip Cap

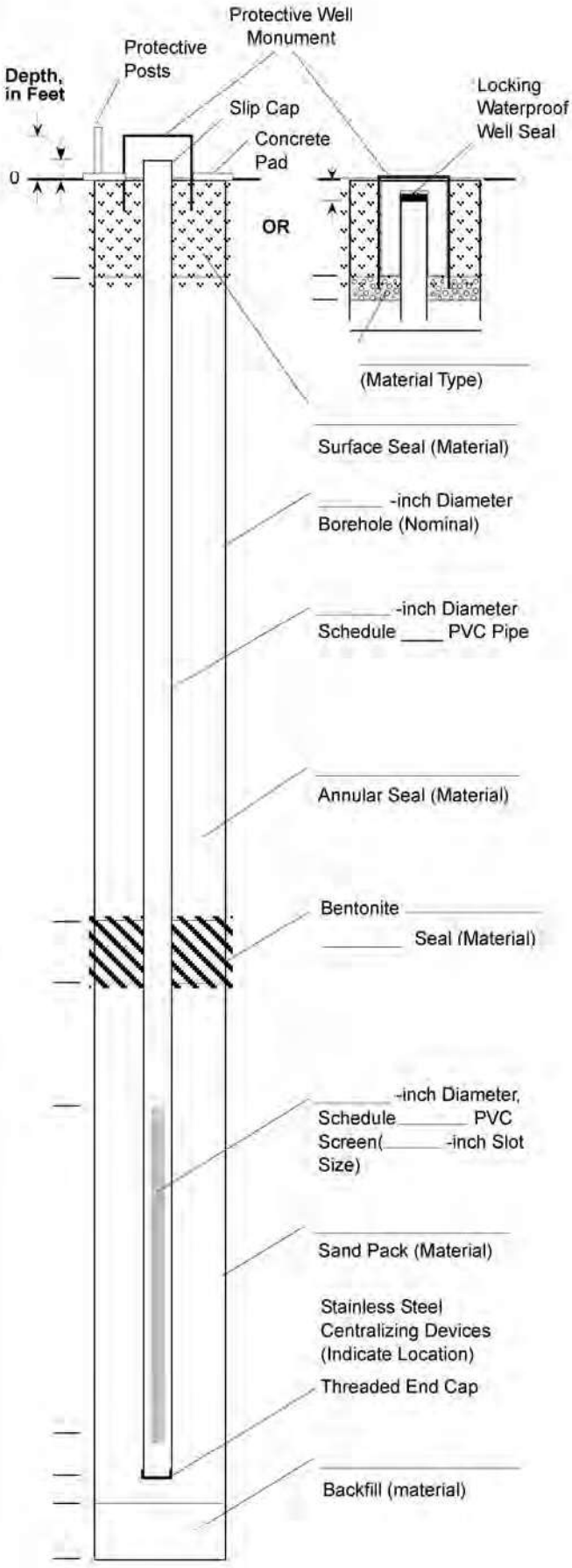
_____ Flush Mount/Aboveground Protective Monument

_____ Protective Posts

_____

_____

_____



\\Edmdata\wproc\000\MasterForms\Field\Well As-Built Form.cdr

LANDAU ASSOCIATES

Well Development Record

Project Name: _____ Project No. _____
Location: _____ Date: _____
Client: _____ Landau Representative: _____

Well Number: _____ Time: _____

Depth to Water: _____
Well Depth: _____
Casing Diameter: _____
Casing Volume: _____

Volume of Schedule 40 PVC Pipe

Diameter (inch)	O.D. (inch)	I.D. (inch)	Volume (gal/ln ft)	Wt. Water (lbs/ln ft)
1.25	1.660	1.380	0.08	0.64
2	2.375	2.067	0.17	1.45
4	4.500	4.026	0.66	5.51
6			1.47	12.24

Est. Purge Volume: _____

Method of Development: _____ Surge Block: Yes _____ No _____

Begin Development: Time: _____ Final Volume Purged: _____
Finish Development: Time: _____ Water Disposal: ☐ 55-gal drum ☐ Storage Tank ☐ Ground ☐ Other _____

Initial Water Quality: (Turbidity, Color, Odor, Other) _____ Initial Yield: _____
pH: _____ Temp: _____ Conductivity: _____ Turbidity: ___
Notes: _____

Water Quality Notes: _____

Gallons	pH	Temperature	Conductivity	Turbidity	Comments

Final Water Quality: (Turbidity, Color, Odor, Other) _____
Final Yield: _____
pH: _____ Temperature: _____ Conductivity: _____ Turbidity: _____

Depth to Water After Development: _____ Well Depth After Development: _____

APPENDIX C

Health and Safety Plan

Work Location Personnel Protection and Safety Evaluation Form

Attach Pertinent Documents/Data
Fill in Blanks As Appropriate

Project Number:	222057.050.051	Reviewed by:	Ken Reid
Prepared by:	K. Prasad & S. Renando	Date:	November 8, 2023
Date:	October 19, 2023		

A. Work Location Description

1. **Project Name:** TECT Aerospace AO RI/FS
2. **Location:** Everett, Washington
3. **Anticipated Activities** Well installations by direct-push drilling, rotosonic drilling, or hollow-stem auger drilling; soil gas sampling; soil sampling; groundwater sampling; sub-slab vapor pin installations with rotohammer, and sampling locating and investigating around underground storage tanks (USTs).
4. **Size:** Approximately 8.2 acres.
5. **Surrounding Population:** Commercial and industrial
6. **Buildings/Homes /Industry:** Commercial and industrial buildings, roadways, parking areas, airline runways.
7. **Topography:** The subject property and surrounding area are fairly flat. The vicinity of the subject property slopes very slightly downhill to the south and east. Land slopes very slightly downhill to the north and west beginning approximately ¼ mile north and west of the subject property.
8. **Anticipated Weather:** 25 - 75°F with wind, rain, and possibly snow
9. **Unusual Features:** Close proximity to airport hangars and runways; at an active aerospace manufacturing facility; high traffic times during shift changes at nearby aerospace facility
10. **Site History:** The subject property includes Buildings C-19, C-20, C-21, C-22, C-23 and Annex, former Building C-29, and the former East Fuel Farm. The Building C-20, C-21, C-22 complex was constructed in stages beginning in the 1950s and Building C-19 was constructed in 1979 replacing military barracks. Since its construction, Building C-19 was operated along with Buildings C-20, C-21, C-22, and C-23 for aerospace parts manufacturing. General operations have reportedly remained relatively unchanged, although the business names and ownership have changed over time. In approximately 2013 or 2014, TECT Aerospace vacated Building C-19 and

the building is currently occupied by Vector Industries, Inc., a metal fabrication company, and a sign company. TECT Aerospace consolidated its operations in Building C-23 in late 2017 and the Building C-20, C-21, C-22 complex is currently unoccupied.

Former Building C-29 (also referred to as the Meiers Building) was a chemical storage shed that was located west of the northwest corner of Building C-23. The building was removed in January 1996 and contamination was discovered beneath the building at the time of demolition.

The former East Fuel Farm is located northwest of Building C-23, and north of former Building C-29. The fuel farm was developed in the 1940s and was used by the US Army Air Corps during World War II and was later used by Alaska Airlines, Revolution Airlines, and Flightline Services to supply aviation fuel for general aviation, military, and commercial aircraft.

Records regarding the number, size, contents, and locations of USTs associated with the fuel farm are inconsistent. Based on a review of available records, there were two registered USTs, one containing Jet-A fuel that was abandoned in place in 1996 and one containing aviation fuel that was removed in 1992 along with impacted soil. Two more unregistered USTs with unknown contents were identified in a 1994 geophysical survey. The three in-place tanks are not currently in use and have reportedly had their contents removed and been rinsed clean. Based on subsurface investigations completed at the former East Fuel Farm, subsurface contamination by petroleum hydrocarbons has been identified in this area.

B. Hazard Description

1. Background Review: ☒ Complete ☐ Partial
If partial, why?

2. Hazardous Level: ☐ B ☐ C ☒ D ☐ Unknown
Justification: Existing data regarding site conditions

3. Types of Hazards: (Attach additional sheets as necessary)

A. ☒ Chemical ☒ Inhalation ☐ Explosive
☐ Biological ☒ Ingestion ☐ O_2 Def. ☒ Skin Contact

Describe: Sampling of soil, soil gas, and groundwater potentially impacted by volatile organic compounds (VOCs) and/or cutting fluids.

B. ☒ Physical ☒ Cold Stress ☐ Noise ☐ Heat Stress ☐ Other
Describe: Noise and physical hazards associated with working around a drill rig, pumps and hoses, and other heavy equipment at the site. Potential for cold and wet weather or hot weather.

C. ☐ Radiation
Describe:

4. Nature of Hazards:

☒ Air	Describe: Potential for volatile constituents to be released from contaminated soil or soil gas. Dust generated during concreted coring.
☒ Soil	Describe: Potential for contact with or ingestion of contaminated soil
☒ Surface Water	Describe: Potential for contact with or ingestion of contaminated water
☒ Groundwater	Describe: Potential for contact with or ingestion of contaminated water
☐ Other	Describe:

5. Chemical Contaminants of Concern ☐ N/A

Contaminant	NIOSH REL (ppm)	WISHA TWA (ppm)	NIOSH IDLH (ppm)	Source/Quantity Characteristics	Route of Exposure	Symptoms of Acute Exposure	Instruments Used to Monitor Contaminant
Tetrachloroethene (PCE)	NV	100	150	Present in soil and/or soil gas	Inhalation, ingestion, dermal contact	Eye, nose, skin and throat irritation; nausea; flushed face and neck; dizziness, incoherence; drowsiness	PID
Trichloroethene	2	50	1,000	Present in soil and/or soil gas	Inhalation, ingestion, dermal contact	Eye, nose, and throat irritation; headache; nausea	PID
Vinyl Chloride	NV	1	400 (carcinogen)	Present in groundwater (very low)	Inhalation, ingestion, dermal contact	Weakness, abdominal pain	Colorimetric Tubes
1,1,1-Trichloroethane	350	350	700	Present in soil and/or soil gas	Inhalation, ingestion, dermal contact	Eye, nose, and throat irritation; headache; liver damage	PID
Diesel	100	NV	NV	Present in soil and/or soil gas	Inhalation, ingestion, dermal contact	Eye irritation, pulmonary function changes	PID
Total Petroleum Hydrocarbons	100	300	400	Present in soil and/or soil gas	Inhalation, ingestion, dermal contact	Eye, nose, and throat irritation; dizziness, nausea; chemical pneumonia	PID
Dry Ice (CO_2)	5,000		40,000	Present in sample holding coolers for unpreserved soil vials	Inhalation, skin and/or eye contact (liquid/solid)	Headache, dizziness, restlessness, paresthesia; difficulty breathing; sweating, overall discomfort; increased heart rate, cardiac output, blood pressure; coma; asphyxia; convulsions; frostbite (liquid/dry ice)	Known presence in coolers (visual)

Abbreviations and Acronyms:

GW = groundwater
IDLH = immediately dangerous to life and health
NIOSH = National Institute for Occupational Safety and Health
NV = No value
WISHA = Washington Industrial Safety and Health Act
PID = photoionization detector
ppm = parts per million
REL = recommended exposure limit
TWA = time-weighted average

6. Physical Hazards of Concern ☐ N/A

Hazard	Description	Location	Procedures Used to Monitor Hazard
Moving parts of drill rig, falling and flying objects	While drilling	Near drill rig	Remain alert of surroundings; minimize time spent near drill rig and get driller's attention before approaching drill head; no loose clothing; tie back long hair; use of safety glasses, hard hat, safety vest, and steel-toed boots.
Vehicles and heavy equipment used at the site	At all times	All areas of the site	Remain alert of surroundings, use of brightly colored safety vest. Stand clear of equipment and avoid pinch points. Make eye contact with operator prior to advancing. Verify working backup alarms on equipment.
Weather Stress	Exposure to hot or cold temperatures, wind, and/or rain	All areas of the site	Have drinking water accessible, wear appropriate clothing (light for heat, warm for cold), wear sunscreen protection, avoid caffeine, and take short breaks as needed.
Slips, Trips, and Falls	Uneven terrain, drilling equipment, and active manufacturing facility	All areas of the site	Visual observations of terrain and hazards. Keep work area clear of debris and remove tripping hazards. Flag or mark hazards that cannot be removed.
Overhead and Underground Utilities	Damage to utilities through drilling and excavations	In work area	Client to provide utility maps and both public and private utility locating service will be used. No raised towers within 20 feet of overhead power lines.
Travel to and from site	Operating motor vehicle in traffic on highways and rural roads	Route to and from site from Landau Associates office	Operate motor vehicle while well rested and physically able to drive safely. Conduct pre-trip vehicle inspection, all vehicles to be maintained and in good working order. Obey all traffic laws including no cell phone use while driving. Secure all cargo properly to avoid shifting. Allow sufficient time for travel to site at safe speeds. Engage emergency brake when parking vehicles. Establish a planned route prior to departure.

7. Work Location Instrument Readings ☒ N/A

Location:	
Percent O_2:	Percent LEL:
Radioactivity:	PID:
FID:	Other:
Other:	Other:
Other:	Other:
Location:	
Percent O_2:	Percent LEL:
Radioactivity:	PID:
FID:	Other:
Other:	Other:
Other:	Other:
Location:	
Percent O_2:	Percent LEL:
Radioactivity:	PID:
FID:	Other:
Other:	Other:
Other:	Other:
Location:	
Percent O_2:	Percent LEL:
Radioactivity:	PID:
FID:	Other:
Other:	Other:
Other:	Other:

8. Hazards Expected in Preparation for Work Assignment: Not Applicable
Describe:

C. Personal Protective Equipment

1. Level of Protection

☐ A ☐ B ☐ C ☒ D

Location/Activity: All areas. Upgrade to Level C if ambient air conditions meet target monitoring level.

2. Protective Equipment (specify probable quantity required)

Respirator ☒ N/A
- ☐ SCBA, Airline
- ☐ Full-Face Respirator
- ☒ Half-Face Respirator (Cart. organic vapor) (Only if upgrade to Level C)
- ☐ Escape mask
- ☐ None
- ☐ Other:
- ☐ Other:

Clothing ☐ N/A
- ☐ Fully Encapsulating Suit
- ☐ Chemically Resistant Splash Suit
- ☐ Apron, Specify:
- ☒ Tyvek Coverall (Only if upgrade to Level C)
- ☐ Saranex Coverall
- ☐ Coverall, Specify
- ☒ Other: 100% cotton clothes.*

Head & Eye ☐ N/A
- ☒ Hard Hat
- ☐ Goggles
- ☐ Face Shield
- ☒ Safety Eyeglasses*
- ☒ Other: Hearing protection

Hand Protection ☐ N/A
- ☐ Undergloves; Type:
- ☒ Gloves; Type: Nitrile*
- ☒ Overgloves; Type: Solvex when handling dry ice
- ☐ None
- ☐ Other:

Foot Protection ☐ N/A
- ☒ Neoprene Safety Boots with Steel Toe/Shank
- ☐ Disposable Overboots
- ☒ Other: Steel Toe Boots*

*Follow Landau's PFAS Sampling Protocol Checklist for all field equipment (Attachment C).

3. Monitoring Equipment ☐ N/A

0 CGI
0 O2 Meter
0 Rad Survey
1 Detector Tubes (optional)
Type: Vinyl chloride and/or benzene

1 PID
0 FID
0 Other

Draeger tubes when PID readings are elevated or heavy sheen or odors are present.

D. Decontamination

Personal Decontamination ☒ Required ☐ Not Required

If required, describe: Avoid hand-to-mouth contact, no eating or drinking in the exclusion zone. Wash hands and face after work shift and prior to breaks.

Equipment Decontamination ☒ Required ☐ Not Required

If required, describe: Decontamination of non-dedicated sampling equipment with Alconox or Liquinox/tap water solution followed by tap water rinse and de-ionized water rinse. Drill rig tooling will be decontaminated before and between borings by using a high-pressure hot water or steam washer. All drill rig tooling will be decontaminated before leaving the job site.

E. Activities Covered Under This Plan

Task No.	Description	Preliminary Schedule
1	Groundwater Monitoring and Sampling	February 2024 through January 2025
2	Drilling: temporary borings, well and soil gas installation	May 2024 through October 2024
3	Well development	May 2024 through October 2024
4	Soil Gas Sampling	August 2024 through October 2024

F. Subcontractor's Health and Safety Program Evaluation

☒ **N/A**

Name and Address of Subcontractor: Subcontractors have not yet been identified

Item	Evaluation Criteria: Adequate	Inadequate	Comments
Medical Surveillance Program	☐	☐	
Personal Protective Equipment Availability	☐	☐	
Onsite Monitoring Equipment Availability	☐	☐	
Safe Working Procedures Specification	☐	☐	
Training Protocols	☐	☐	
Ancillary Support Procedures (if any)	☐	☐	
Emergency Procedures	☐	☐	
Evacuation Procedures Contingency Plan	☐	☐	
Decontamination Procedures Equipment	☐	☐	
Decontamination Procedures Personnel	☐	☐	

General Health and Safety Program Evaluation: ☐ Adequate ☐ Inadequate

Additional Comments:

Evaluation Conducted by: Date:

Emergency Facilities and Numbers

Hospital: Swedish Emergency Room – Mill Creek
13020 Meridian Avenue South
Everett, WA 98208

Directions: See Attachment B

Telephone: (425) 357-3900

Emergency Transportation Systems (Fire, Police, Ambulance) -- 911

Emergency Routes – Map (Attachment B)

Emergency Contacts:

Name	Offsite	Onsite
Stephanie Renando	(509) 863-3900	
Chris Kimmel	(206) 786-3801	
Ken Reid	(206) 786-3804	
Jerry Ninteman	(425) 329-0272	

In the event of an emergency, do the following:

1. Call for help as soon as possible. Call 911. Give the following information:
    - WHERE the emergency is – use cross streets or landmarks
    - PHONE NUMBER you are calling from
    - WHAT HAPPENED – type of injury
    - WHAT is being done for the victim(s)
    - YOU HANG UP LAST – let the person you called hang up first.
2. If the victim can be moved, paramedics will transport to the hospital. If the injury or exposure is not life-threatening, decontaminate the individual first. If decontamination is not feasible, wrap the individual in a blanket or sheet of plastic prior to transport.

Health and Safety Plan
Approval/Sign Off Form

I have read, understood, and agreed with the information set forth in this Health and Safety Plan (and attachments) and discussed in the Personnel Health and Safety briefing.

Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Site Safety Coordinator	Signature	Date
Ken Reid for Christine Kimmel	Ken Reid	11/8/23
LAI Health and Safety Manager	Signature	Date
Stephanie Renando for Jerry Ninteman	Stephanie Renando	12/6/23
Project Manager	Signature	Date

Personnel Health and Safety Briefing Conducted by:

Name	Signature	Date

Attachment A
Procedures and Action Levels for Respiratory Protection

Procedures

During drilling, exposure monitoring for volatile organic compounds (VOCs) will be conducted in the workers' breathing zone before beginning work and every 15 minutes thereafter, using a calibrated photoionization detector (PID) equipped with a 10.6-electron volt detector lamp. Monitoring of the breathing zone will consist of collecting PID readings from the approximate elevation and position of the most exposed workers' faces. While PID readings above background are not expected at this site, action levels and safety steps are presented below in the event that VOCs are detected in the worker breathing zone. All PID readings will be recorded in a field notebook.

All air monitoring equipment used at this site must be calibrated daily and operated by trained personnel. The PID will be calibrated using a 100 parts per million (ppm) concentration of isobutylene gas. A contaminant-specific correction factor will not be entered into the PID during calibration, as these correction factors are accounted for in the action levels. The calibration of the equipment should be recorded on a calibration log.

Action Levels

Due to the low permissible exposure limit (PEL) for vinyl chloride (VC; 1 ppm), if PID readings for VOCs in the breathing zone are more than 1 ppm above background VOC concentrations (e.g., upwind, rig exhaust, ambient levels) for 1 minute, workers will be required to leave the area until the situation is adequately characterized. This can be accomplished using either chemical-specific colorimetric detector tubes or a PID capable of detecting VC down to the parts per billion (ppb) range. [Note: The lower detection limit of colorimetric gas detection tube to be used for VC must be below the VC action level of 1 ppm. The recommended colorimetric tube for this application is Dräeger No. 810721 (Vinyl Chloride 0.5/b 0.5 to 30 ppm)].

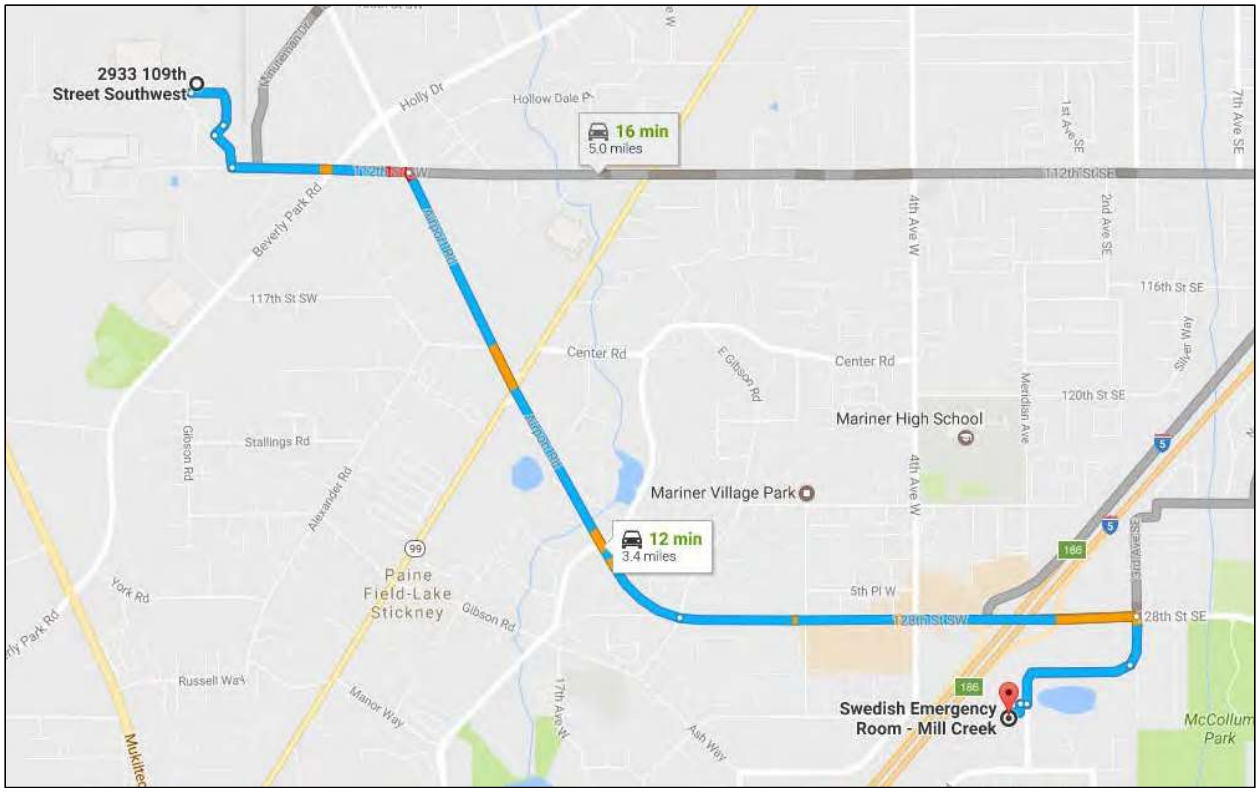
ACTION LEVELS FOR RESPIRATORY PROTECTION		
Monitoring Parameter	**Reading**	**Level of Protection**
VOC ACTION LEVEL #1		
PID Screening		
VOCs	PID reading 0.3 to 0.9 ppm in breathing zone for more than 1 minute	Employ fans or engineering controls to reduce VOCs in work area if possible. Collect colorimetric tube VC readings and refer to action levels below.
ppb PID/Colorimetric Tubes		
VC	VC reading 0.1 to 1 ppm	Establish 25-ft-diameter exclusion zone around work area and upgrade to Level C-half face respirator with organic vapor/HEPA cartridge.

Monitoring Parameter	Reading	Level of Protection
VC	VC reading > 1 ppm	Evacuate area and move upwind. Establish 50-ft-diameter exclusion zone around work area. Notify onsite contact and Landau Associates Project manager. Do not return to area of detection until VC < 1 ppm.
VOC ACTION LEVEL #2		
PID Screening		
VOCs	PID reading >1 ppm in breathing zone for more than 1 minute	Establish 25-ft-diameter exclusion zone around work area and upgrade to Level C-half face respirator with organic vapor/HEPA cartridge. Collect colorimetric tube VC and PCE readings and refer to action levels below.
ppb PID/Colorimetric Tubes		
VC	Follow ACTION LEVEL #1	Follow ACTION LEVEL #1
PCE	PCE reading 1 to 15 ppm	Establish 25-ft-diameter exclusion zone around work area and upgrade to Level C-half face respirator with organic vapor/HEPA cartridge.
PCE	PCE reading >15 ppm	Evacuate area and move upwind. Establish 50-ft-diameter exclusion zone around work area. Notify onsite contact and Landau Associates Project manager. Do not return to area of detection until PCE <15 ppm.
VOC ACTION LEVEL #3		
VOCs (PID)	PID reading >25 ppm **instantaneous** reading	Evacuate area and move upwind. Establish 50-ft-diameter exclusion zone around work area. Notify onsite contact and Landau Associates Project manager. Do not return to area of detection until VOCs <25 ppm.

Attachment B
Directions to Hospital

Swedish Emergency Room – Mill Creek
13020 Meridian Avenue South
Everett, WA 98208

Turn left onto 29th Avenue West
Turn left onto 112th Street SW
Turn right onto Airport Road
Continue onto 128th Street SW
Turn right onto 3rd Avenue SE
Continue onto 130th Street SE
Continue onto Meridian Avenue South
0.3 miles turn right
79 ft turn left
Destination is on the left



APPENDIX D

Inadvertent Discovery Plan

INADVERTENT DISCOVERY PLAN

PLAN AND PROCEDURES FOR THE DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS

To request ADA accommodation, including materials in a format for the visually impaired, call Ecology at 360-407-6000 or visit https://ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with a speech disability may call TTY at 877-833-6341.

Site Name(s): Former TECT Aerospace Everett Location: Snohomish County Airport

Project Lead/Organization: Snohomish County Airport County: Snohomish

If this Inadvertent Discovery Plan (IDP) is for multiple (batched) projects, ensure the location information covers all project areas.

1. INTRODUCTION

The IDP outlines procedures to perform in the event of a discovery of archaeological materials or human remains, in accordance with applicable state and federal laws. An IDP is required, as part of Agency Terms and Conditions for all grants and loans, for any project that creates disturbance above or below the ground. An IDP is not a substitute for a formal cultural resource review (Executive 21-02 or Section 106).

Once completed, **the IDP should always be kept at the project site** during all project activities. All staff, contractors, and volunteers should be familiar with its contents and know where to find it.

2. CULTURAL RESOURCE DISCOVERIES

A cultural resource discovery could be prehistoric or historic. Examples include (see images for further examples):

- An accumulation of shell, burned rocks, or other food related materials.
- Bones, intact or in small pieces.
- An area of charcoal or very dark stained soil with artifacts.
- Stone tools or waste flakes (for example, an arrowhead or stone chips).
- Modified or stripped trees, often cedar or aspen, or other modified natural features, such as rock drawings.
- Agricultural or logging materials that appear older than 50 years. These could include equipment, fencing, canals, spillways, chutes, derelict sawmills, tools, and many other items.
- Clusters of tin cans or bottles, or other debris that appear older than 50 years.
- Old munitions casings. ***Always assume these are live and never touch or move.***
- Buried railroad tracks, decking, foundations, or other industrial materials.
- Remnants of homesteading. These could include bricks, nails, household items, toys, food containers, and other items associated with homes or farming sites.

The above list does not cover every possible cultural resource. When in doubt, assume the material is a cultural resource.

3. ON-SITE RESPONSIBILITIES

If any employee, contractor, or subcontractor believes that they have uncovered cultural resources or human remains at any point in the project, take the following steps to ***Stop-Protect-Notify***. **If you suspect that the discovery includes human remains, also follow Sections 5 and 6.**

STEP A: Stop Work.

All work must stop immediately in the vicinity of the discovery.

STEP B: Protect the Discovery.

Leave the discovery and the surrounding area untouched and create a clear, identifiable, and wide boundary (30 feet or larger) with temporary fencing, flagging, stakes, or other clear markings. Provide protection and ensure integrity of the discovery until cleared by the Department of Archaeological and Historical Preservation (DAHP) or a licensed, professional archaeologist.

Do not permit vehicles, equipment, or unauthorized personnel to traverse the discovery site. Do not allow work to resume within the boundary until the requirements of this IDP are met.

STEP C: Notify Project Archaeologist (if applicable).

If the project has an archaeologist, notify that person. If there is a monitoring plan in place, the archaeologist will follow the outlined procedure.

STEP D: Notify Project and Washington Department of Ecology (Ecology) contacts.

Project Lead Contacts

Primary Contact		Alternate Contact	
Name:	Andrew C. Rardin	Name:	Jerry Ninteman
Organization:	Snohomish County Airpor	Organization:	Landau Associates
Phone:	425-508-7472	Phone:	425-329-0272
Email:	andrew.rardin@snoco.org	Email:	JNinteman@landauinc.com

Ecology Contacts (completed by Ecology Project Manager)

Ecology Project Manager		Alternate or Cultural Resource Contact	
Name:	David Unruh	Name:	Jon Klem
Program:	Toxics Cleanup Program	Program:	Toxics Cleanup Program
Phone:	206.459.6287	Phone:	(206) 556-5584
Email:	david.unruh@ecy.wa.gov	Email:	jon.klem@ecy.wa.gov

STEP E: Ecology will notify DAHP.

Once notified, the Ecology Cultural Resource Contact or the Ecology Project Manager will contact DAHP to report and confirm the discovery. To avoid delay, the Project Lead/Organization will contact DAHP if they are not able to reach Ecology.

DAHP will provide the steps to assist with identification. DAHP, Ecology, and Tribal representatives may coordinate a site visit following any necessary safety protocols. DAHP may also inform the Project Lead/Organization and Ecology of additional steps to further protect the site.

Do not continue work until DAHP has issued an approval for work to proceed in the area of, or near, the discovery.

DAHP Contacts:

Name: Rob Whitlam, PhD
Title: State Archaeologist
Cell: 360-890-2615
Email: Rob.Whitlam@dahp.wa.gov
Main Office: 360-586-3065

Human Remains/Bones:

Name: Guy Tasa, PhD
Title: State Anthropologist
Cell: 360-790-1633 (24/7)
Email: Guy.Tasa@dahp.wa.gov

4. TRIBAL CONTACTS

In the event cultural resources are discovered, the following tribes will be contacted. See Section 10 for Additional Resources.

Tribe:	Tulalip Tribes	Tribe:	Stillaguamish Tribe of Indians
Name:	Richard Young	Name:	Kerry Lyste
Title:	Cultural Resources Manager	Title:	THPO, Cultural Resources
Phone:	360-716-2652	Phone:	360-652-7362 ext. 226
Email:	ryoung@tulaliptribes-nsn.gov	Email:	klyste@stillaguamish.com
Tribe:	Muckleshoot Indian Tribe	Tribe:	Samish Indian Nation
Name:	Laura Murphy	Name:	Jackie Ferry
Title:	Archaeologist Cultural Resources	Title:	THPO
Phone:	253-876-3272	Phone:	360-293-6404 ext. 126
Email:	laura.murphy@muckleshoot.nsn.us	Email:	jferry@samishtribe.nsn.us

Please provide contact information for additional tribes within your project area, if needed, in Section 11.

5. FURTHER CONTACTS (if applicable)

If the discovery is confirmed by DAHP as a cultural or archaeological resource, or as human remains, and there is a partnering federal or state agency, Ecology or the Project Lead/Organization will ensure the partnering agency is immediately notified.

Federal Agency:		State Agency:	
Agency:	NA	Agency:	NA
Name:		Name:	
Title:		Title:	
Phone:		Phone:	
Email:		Email:	

6. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL MATERIAL

Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect. Follow the steps under ***Stop-Protect-Notify.*** For specific instructions on how to handle a human remains discovery, see: *RCW 68.50.645: Skeletal human remains—Duty to notify—Ground disturbing activities—Coroner determination—Definitions*.

Suggestion: If you are unsure whether the discovery is human bone or not, contact Guy Tasa with DAHP, for identification and next steps. Do not pick up the discovery.

Guy Tasa, PhD State Physical Anthropologist
Guy.Tasa@dahp.wa.gov
(360) 790-1633 (Cell/Office)

For discoveries that are confirmed or suspected human remains, follow these steps:

1. Notify law enforcement and the Medical Examiner/Coroner using the contacts below. **Do not call 911** unless it is the only number available to you.

   Enter contact information below (required):
   - Local Medical Examiner or Coroner name and phone: J. Matthew Lacy, M.D. 425-438-6205
   - Local Law Enforcement main name and phone: Adam Fortney, 425-388-3026
   - Local Non-Emergency phone number (911 if without a non-emergency number): Snohomish County Sheriff's Office, 425-407-3999
2. The Medical Examiner/Coroner (with assistance of law enforcement personnel) will determine if the remains are human or if the discovery site constitutes a crime scene and will notify DAHP.
3. **DO NOT speak with the media, allow photography or disturbance of the remains, or release any information about the discovery on social media.**
4. If the remains are determined to be non-forensic, Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection and to shield them from being photographed by others or disturbed.

Further activities:

- Per RCW 27.44.055, RCW 68.50, and RCW 68.60, DAHP will have jurisdiction over non-forensic human remains. Ecology staff will participate in consultation. Organizations may also participate in consultation.
- Documentation of human skeletal remains and funerary objects will be agreed upon through the consultation process described in RCW 27.44.055, RCW 68.50, and RCW 68.60.
- When consultation and documentation activities are complete, work in the discovery area may resume as described in Section 8.

If the project occurs on federal lands (such as a national forest or park or a military reservation) the provisions of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) apply and the responsible federal agency will follow its provisions. Note that state highways that cross federal lands are on an easement and are not owned by the state.

If the project occurs on non-federal lands, the Project Lead/Organization will comply with applicable state and federal laws, and the above protocol.

7. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

Archaeological resources discovered during construction are protected by state law RCW 27.53 and assumed eligible for inclusion in the National Register of Historic Places under Criterion D until a formal Determination of Eligibility is made.

The Project Lead/Organization must ensure that proper documentation and field assessment are made of all discovered cultural resources in cooperation with all parties: the federal agencies (if any), DAHP, Ecology, affected tribes, and the archaeologist.

The archaeologist will record all prehistoric and historic cultural material discovered during project construction on a standard DAHP archaeological site or isolate inventory form. They will photograph site overviews, features, and artifacts and prepare stratigraphic profiles and soil/sediment descriptions for minimal subsurface exposures. They will document discovery locations on scaled site plans and site location maps.

Cultural features, horizons, and artifacts detected in buried sediments may require the archaeologist to conduct further evaluation using hand-dug test units. They will excavate units in a controlled fashion to expose features, collect samples from undisturbed contexts, or to interpret complex stratigraphy. They may also use a test unit or trench excavation to determine if an intact occupation surface is present. They will only use test units when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. They will conduct excavations using standard archaeological techniques to precisely document the location of cultural deposits, artifacts, and features.

The archaeologist will record spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock for each unit on a standard form. They will complete test excavation unit level forms, which will include plan maps for each excavation level and artifact counts and material types, number, and vertical provenience (depth below

surface and stratum association where applicable) for all recovered artifacts. They will draw a stratigraphic profile for at least one wall of each test excavation unit.

The archaeologist will screen sediments excavated for purposes of cultural resources investigation through 1/8-inch mesh, unless soil conditions warrant 1/4-inch mesh.

The archaeologist will analyze, catalogue, and temporarily curate all prehistoric and historic artifacts collected from the surface and from probes and excavation units. The ultimate disposition of cultural materials will be determined in consultation with the federal agencies (if any), DAHP, Ecology, and the affected tribe(s).

Within 90 days of concluding fieldwork, the archaeologist will provide a technical report describing any and all monitoring and resultant archaeological excavations to the Project Lead/Organization, who will forward the report to Ecology, the federal agencies (if any), DAHP, and the affected tribe(s) for review and comment.

If assessment activities expose human remains (burials, isolated teeth, or bones), the archaeologist and Project Lead/Organization will follow the process described in **Section 6**.

8. PROCEEDING WITH WORK

The Project Lead/Organization shall work with the archaeologist, DAHP, and affected tribe(s) to determine the appropriate discovery boundary and where work can continue.

Work may continue at the discovery location only after the process outlined in this plan is followed and the Project Lead/Organization, DAHP, any affected tribe(s), Ecology, and the federal agencies (if any) determine that compliance with state and federal laws is complete.

9. ORGANIZATION RESPONSIBILITY

The Project Lead/Organization is responsible for ensuring:

- This IDP has complete and accurate information.
- This IDP is immediately available to all field staff at the sites and available by request to any party.
- This IDP is implemented to address any discovery at the site.
- That all field staff, contractors, and volunteers are instructed on how to implement this IDP.

10. ADDITIONAL RESOURCES

Informative Video

Ecology recommends that all project staff, contractors, and volunteers view this informative video explaining the value of IDP protocol and what to do in the event of a discovery. The target audience is anyone working on the project who could unexpectedly find cultural resources or human remains while excavating or digging. The video is also posted on DAHP's inadvertent discovery language website.

Ecology's IDP Video (https://www.youtube.com/watch?v=ioX-4cXfbDY)

Informational Resources

DAHP (https://dahp.wa.gov)

Washington State Archeology (DAHP 2003)
(https://dahp.wa.gov/sites/default/files/Field%20Guide%20to%20WA%20Arch_0.pdf)

Association of Washington Archaeologists (https://www.archaeologyinwashington.com)

Potentially Interested Tribes

Interactive Map of Tribes by Area
(https://dahp.wa.gov/archaeology/tribal-consultation-information)

WSDOT Tribal Contact Website
(https://wsdot.wa.gov/tribal/TribalContacts.htm)

11. ADDITIONAL INFORMATION

Please add any additional contact information or other information needed within this IDP.

Sauk-Suiattle Indian Tribe
Kevin Joseph, THPO
kJoseph@sauk-suiattle.com
Phone: 360-436-0333
Cultural Resources
thpo@sauk-suiattle.com

Snoqualmie Tribe
Steven Mullen-Moses, Director
Archaeology and Historic Preservation
425-292-0249x2010
steve@snoqualmietribe.us

Suquamish Tribe
Dennis Lewarch, THPO
Phone: 360-394-8529
dlewarch@Suquamish.nsn.us

Swinomish Indian Tribal Community
Josephine Jefferson, CR Technician
jpeters@swinomish.nsn.us
Phone: 360-466-7352

Implement the IDP if you see…

Chipped stone artifacts.

Examples are:

- Glass-like material.
- Angular material.
- "Unusual" material or shape for the area.
- Regularity of flaking.
- Variability of size.



Stone artifacts from Oregon.



Stone artifacts from Washington.



Biface-knife, scraper, or pre-form found in NE Washington. Thought to be a well knapped object of great antiquity. Courtesy of Methow Salmon Rec. Foundation.

Implement the IDP if you see…

Ground stone artifacts.

Examples are:

- Unusual or unnatural shapes or unusual stone.
- Striations or scratching.
- Etching, perforations, or pecking.
- Regularity in modifications.
- Variability of size, function, or complexity.



Above: Fishing Weight - credit CRITFC Treaty Fishing Rights website.



Artifacts from unknown locations (left and right images).



Implement the IDP if you see…

Bone or shell artifacts, tools, or beads.

Examples are:

- Smooth or carved materials.
- Unusual shape.
- Pointed as if used as a tool.
- Wedge shaped like a “shoehorn”.
- Variability of size.
- Beads from shell (dentalium) or tusk.









Upper Left:*Bone Awls from Oregon.*

Upper Center: *Bone Wedge from California.*

Upper Right: *Plateau dentalium choker and bracelet, from Nez Perce National Historical Park, 19th century, made using Antalis pretiosa shells Credit: Nez Perce - Nez Perce National Historical Park, NEPE 8762, Public Domain.*

Above: *Tooth Pendants. Right: Bone Pendants. Both from Oregon and Washington.*



Implement the IDP if you see…

Culturally modified trees, fiber, or wood artifacts.

Examples are:

- Trees with bark stripped or peeled, carvings, axe cuts, de-limbing, wood removal, and other human modifications.
- Fiber or wood artifacts in a wet environment.
- Variability of size, function, and complexity.











Left and Below: *Culturally modified tree and an old carving on an aspen (Courtesy of DAHP).*

Right, Top to Bottom: *Artifacts from Mud Bay, Olympia: Toy war club, two strand cedar rope, wet basketry*.

Implement the IDP if you see…

Strange, different, or interesting looking dirt, rocks, or shells.

Human activities leave traces in the ground that may or may not have artifacts associated with them. Examples are:

- "Unusual" accumulations of rock (especially fire-cracked rock).
- "Unusual" shaped accumulations of rock (such as a shape similar to a fire ring).
- Charcoal or charcoal-stained soils, burnt-looking soils, or soil that has a "layer cake" appearance.
- Accumulations of shell, bones, or artifacts. Shells may be crushed.
- Look for the "unusual" or out of place (for example, rock piles in areas with otherwise few rocks).



Shell Midden pocket in modern fill discovered in sewer trench.



Underground oven. Courtesy of DAHP.

Shell midden with fire cracked rock.





Hearth excavated near Hamilton, WA.

Implement the IDP if you see…

Historic period artifacts (historic archaeology considered older than 50 years).

Examples are:

- Agricultural or logging equipment. May include equipment, fencing, canals, spillways, chutes, derelict sawmills, tools, etc.
- Domestic items including square or wire nails, amethyst colored glass, or painted stoneware.





Left: Top to Bottom: *Willow pattern serving bowl and slip joint pocket knife discovered during Seattle Smith Cove shantytown (45-KI-1200) excavation.*

Right: *Collections of historic artifacts discovered during excavations in eastern Washington cities.*





Implement the IDP if you see…

Historic period artifacts (historic archaeology considered older than 50 years).

Examples are:

- Railway tokens, coins, and buttons.
- Spectacles, toys, clothing, and personal items.
- Items helping to understand a culture or identity.
- Food containers and dishware.



Main Image: *Dishes, bottles, workboot found at the North Shore Japanese bath house (ofuro) site, Courtesy Bob Muckle, Archaeologist, Capilano University, B.C. This is an example of an above ground resource.*





Right, from Top to Bottom: *Coins, token, spectacles and Montgomery Ward pitchfork toy discovered during Seattle Smith Cove shantytown (45-KI-1200) excavation.*





Implement the IDP if you see…

- Old munition casings – if you see ammunition of any type – ***always assume they are live and never touch or move!***
- Tin cans or glass bottles with an older manufacturer's technique – maker's mark, distinct colors such as turquoise, or an older method of opening the container.



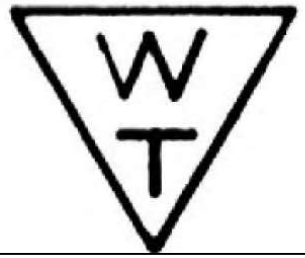


Far Left: .303 British cartridge found by a WCC planting crew on Skagit River. Don't ever touch something like this!
Left: Maker's mark on bottom of old bottle.



Right: *Old beer can found in Oregon. ACME was owned by Olympia Brewery. Courtesy of Heather Simmons.*





Logo employed by Whithall Tatum & Co. between 1924 to 1938 (Lockhart et al. 2016).



Can opening dates, courtesy of W.M. Schroeder.

Implement the IDP if you see…

You see historic foundations or buried structures.

Examples are:

- Foundations.
- Railroad and trolley tracks.
- Remnants of structures.









Counter Clockwise, Left to Right: *Historic structure 45KI924, in WSDOT right of way for SR99 tunnel. Remnants of Smith Cove shantytown (45-KI-1200) discovered during Ecology CSO excavation, City of Spokane historic trolley tracks uncovered during stormwater project, intact foundation of historic home that survived the Great Ellensburg Fire of July 4, 1889, uncovered beneath parking lot in Ellensburg.*

Implement the IDP if you see...

Potential human remains.

Examples are:

- Grave headstones that appear to be older than 50 years.
- Bones or bone tools--intact or in small pieces. It can be difficult to differentiate animal from human so they must be identified by an expert.
- These are all examples of animal bones and are not human.



Center: *Bone wedge tool, courtesy of Smith Cove Shantytown excavation (45KI1200).*

Other images (Top Right, Bottom Left, and Bottom) Center: Courtesy of DAHP.









Directly Above: This is a real discovery at an Ecology sewer project site.

What would you do if you found these items at a site? Who would be the first person you would call?

Hint: *Read the plan!*