Public Review Draft Remedial Investigation

Former Precision Engineering Property
1231 South Director Street
Seattle, Washington

for
Dick Morgan

November 11, 2024

Revised April 8, 2026

554 West Bakerview Road
Bellingham, Washington 98225
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GeoEngineers

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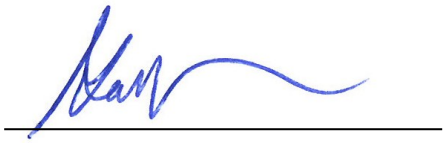
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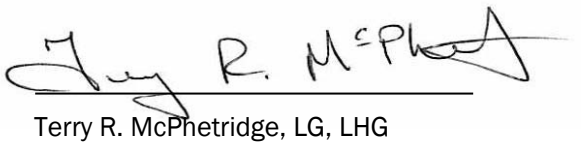
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Acronyms, Abbreviations, and Key Definitions

AO	Agreed Order
ARI	Analytical Resources, Inc.
AST	aboveground storage tank
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylene
CAP	Cleanup Action Plan
Chromium	All forms of chromium, unless noted otherwise
Cis-1,2-DCE	cis-1,2-dichloroethene
cPAH	carcinogenic polycyclic aromatic hydrocarbon
COC	Contaminant of concern
COPC	chemical of potential concern
CSID	cleanup site ID
CSM	conceptual site model
CUL	cleanup level
Ecology	Washington State Department of Ecology
EHD	Environmental Health Disparities
EIM	Environmental Information Management
EPA	United States Environmental Protection Agency
EPH	extractable petroleum hydrocarbon
FS	feasibility study
GPR	ground-penetrating radar
Kennedy Jenks	Kennedy Jenks Consultants
LDW	Lower Duwamish Waterway
LUST	leaking underground storage tank
MFA	Maul Foster & Alongi, Inc.
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
NFA	No Further Action

NPDES	National Pollutant Discharge Elimination System
Pacific Industrial Supply	Pacific Industrial Supply, Inc.
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCOCs	potential contaminants of concern
PCUL	preliminary cleanup level
PFAS	Per- and Polyfluoroalkyl substances
PID	photoionization detector
POC	point of compliance
Precision	Precision Engineering, Inc.
the Property	1231 S Director Street in Seattle, Washington
PVC	polyvinyl chloride
RI	remedial investigation
SAP/QAPP	sampling and analysis plan and quality assurance project
SGT	plan silica gel treatment
SIM	selected ion monitoring
the Site	The location where contamination is located
SVOC	semivolatile organic compound
SWPPP	Stormwater Pollution Prevention Plan
TEE	terrestrial ecological evaluation
TEQ	toxic equivalency quotient
TCE	trichloroethene
TOC	Total organic carbon
Total diesel+oil	the sum of diesel- and oil-range organics
TPH	total petroleum hydrocarbon
Trans-1,2-DCE	trans-1,2-dichloroethene
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
UST	underground storage tank

VCP	Voluntary Cleanup Program
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbon
VP/OC	vulnerable population or overburdened community
WAC	Washington Administrative Code
WBZ	water-bearing zone
WSDOT	Washington State Department of Transportation

Executive Summary

GeoEngineers, Inc. has prepared this Remedial Investigation (RI) report for the former Precision Engineering, Inc. site (the Site) in Seattle, Washington. The 3.5-acre industrial property contains one 62,000-square-foot building that was previously used for chromium plating and related industrial processes.

The property has undergone multiple investigative and remedial efforts since 1986 including the removal of contaminated soil and storage tanks in 2005. Contaminants at the Site are present in Site soil and groundwater that include chromium, trichloroethylene (TCE), and petroleum hydrocarbons. Residual contamination primarily remains in areas of the former plating tanks inside the building. Results from the environmental investigations conducted between 2005 and 2023 indicate that contaminants are predominantly confined to the property boundaries.

Groundwater monitoring well data and stormwater data indicate limited potential for contamination migration beyond the property boundary. Stormwater flows to a ditch that ultimately discharges to the Lower Duwamish Waterway (LDW). This and prior investigations confirm that contaminants are not migrating toward the LDW or into deeper groundwater zones, thus minimizing off-site risk to adjacent properties and the LDW. Additionally, analysis of chemicals of concern in soil and groundwater reveals that contamination hotspots are isolated within the property boundaries.

This RI (the third RI for the Site) synthesizes information from over 20 years of study including more than 100 investigation locations, 180 soil samples and 100 groundwater samples, as well as substantial analysis for soil vapor and air. This RI report concludes that contamination at the former Precision Engineering Site is adequately characterized to develop a Feasibility Study (FS) and prepare a draft Cleanup Action Plan (CAP) to address residual contamination

This Executive Summary should be used only in the context of the full report for which it is intended.

1.0 Introduction

GeoEngineers, Inc. (GeoEngineers) has prepared this remedial investigation (RI) report on behalf of Dick Morgan (the Client) for the former Precision Engineering, Inc. site ("Precision" or "the Site"). The Site is located at 1231 South Director Street in Seattle, Washington (the Precision Property). The Precision Property is south-southeast adjoining to the South Park neighborhood of Seattle (Figure 1-1).

Historically, the Property was used for industrial operations including "hard" chromium plating. CL Frazier Properties, LLC, currently owns the Precision Property, where Pacific Industrial Supply, Inc. (Pacific Industrial Supply) operates an industrial equipment manufacture and supply store.

1.1 CURRENT REGULATORY FRAMEWORK

The Site is listed by the Washington State Department of Ecology (Ecology) with cleanup site ID (CSID) 4532 and facility site ID (FSID) 2056. The Site is defined by the area where hazardous substances associated with Precision's historical operations on or off the Precision Property have come to be located in environmental media as a result of historical releases and subsequent environmental fate and transport mechanisms.

Agreed Order No. DE 18079 (AO) was negotiated between Ecology and the Client, with an effective date of December 18, 2020. This RI Report has been developed to characterize the Site including the distribution of hazardous substances and the threat these substances pose to human health and the environment and to enable cleanup standards to be established. Cleanup action alternatives will be developed and evaluated in a feasibility study (FS) following finalization of this RI Report. A Cleanup Action Plan (CAP) will then be prepared that documents the selected cleanup action. The RI Report, FS Report, and CAP are the deliverables required under this AO. This RI Report was developed in general accordance with the Model Toxics Control Act (MTCA) (Washington Administrative Code [WAC] 173-340). Regulatory history is discussed further in Section 2.3.

This public review draft RI report was prepared November 11, 2024. Ecology subsequently requested additional minor modifications to this report. The revised date of the public review draft RI report is April 8, 2026. Revisions include addition of a Terrestrial Ecological Evaluation form (Appendix N), arsenic soil background study (Appendix P), and an Ecology Preliminary Cleanup Level memorandum (Appendix Q).

1.2 PURPOSE AND OBJECTIVES

The purpose of this RI Report is to document the characterization of contamination at the Site, including the presence and potential release of hazardous substances and the threat these substances pose to human health and the environment, to establish appropriate Site cleanup standards, and to develop and evaluate cleanup action alternatives in a Feasibility Study (FS). The overall objective is to clean up the Site and achieve a No Further Action (NFA) with a potential environmental covenant recorded for the Precision Property.

2.0 Site Background and History

2.1 PROPERTY DESCRIPTION

The Precision Property is situated in the southeast quadrant of section 32, township 24 north, range 4 east of the Willamette Meridian, on King County tax parcel no. 0001600055. The approximately 3.5-acre Property is zoned for industrial use. One 62,000-square-foot building comprising three warehouse bays is currently located on the Property[1]. The western boundary of the Precision Property is a steep cut slope as discussed further below in the Property History (Section 2.2).

The surrounding area is a mix of industrial and residential properties (Figure 2-1). Since 1997, a towing and limousine service business has operated on the adjacent property to the east formerly identified as the Kaspac/Chiyoda property[2]. The former Kaspac/Chiyoda property is an Ecology cleanup site (CSID 2540). The former Kaspac/Chiyoda property was used for agriculture and agricultural-equipment storage prior to 1960; a car lot and gas station between 1960 and 1972; a road-striping paint company between 1972 and 1988; a transmission repair shop, construction contracting company, a roofing contractor between 1988 and 1997 (Ecology 2013), and a towing and limousine business until the present (2024). Seattle Refrigeration, a business that repairs and sells refrigerators, is located west of the Precision Property. Residential homes are located north of the Precision Property across South Director Street. A northbound onramp for State Route (SR) 99 is located south-adjacent to the Precision Engineering Property. The onramp is part of a larger "cloverleaf" (see Figure 2-1).

The Precision Property as well as nearby industrial properties are labeled in Figure 2-1. Past and present cleanup sites are highlighted in Figure 2-1 including the former Kaspac/Chiyoda property, Warner's Auto Repair, DBA & Airbus, KRS Marine, and Delta Marine Industries.

2.2 PROPERTY HISTORY

The Precision Property history is discussed below based on information provided in previous investigation reports (Maul Foster & Alongi, Inc. [MFA] 2005, 2006, 2008, 2011; Kennedy Jenks 2015) and a review of historical aerial photographs (Appendix A).

2.2.1 Aerial Photograph Review

The earliest available historical record reviewed for the Precision Property is a 1936 aerial photograph (Appendix A). The Precision Property and surroundings were generally developed as rural residential/agricultural properties in the 1936 aerial photograph. The Precision Property contained two residential-size structures, several smaller outbuildings, and an agricultural field including rows of vegetation and small trees. Bare soil is visible in areas of the Property including but not limited to the southeast and northeast portions. Roads were located adjacent to the Precision Property on the north and west sides. The properties north of the Precision Property were residential. The property to the west (later Seattle Refrigeration) appears to be used for agricultural purposes. The east-adjacent property (later the

[1] County assessor data lists the building as 62,000 square feet. It is not clear if this includes second-story areas. There are several thousand square feet of building footprint on the south side of Warehouse 1. The total building footprint (not including second story areas but including the south side of Warehouse 1) appears to be approximately 66,000 square feet. The phrase "the building" in this RI includes all these areas.

[2] The property has had various names in various historical reports including but not limited to Seattle Limousine.

Kaspac/Chiyoda cleanup site) and the south-adjacent property both appear to be rural residential properties.

The Precision Property and surroundings are little changed in the 1943, 1953 and 1956 aerial photographs except for vegetation changes and development of the former Kaspac/Chiyoda property from rural residential to apparent commercial use in the 1953 aerial photograph.

SR 99 and the interchange south-adjacent to Precision Engineering is visible in the 1965 aerial photograph. The creation of the highway and interchange significantly altered the general area south and east of the Precision Engineering Property. The south-adjacent rural residential property visible in the 1956 and earlier aerial photographs is no longer present having been replaced with the SR 99 on-ramp. The former Kaspac/Chiyoda property had been further redeveloped with several buildings removed that were visible in the 1956 aerial photograph and the addition of three new buildings. The Precision Engineering Property was little changed except for tree removal in the northwest portion of the Property and some ground clearing in the southeast portion of the Property.

Warehouse 1 of the Precision Engineering business is visible in a 1969 aerial photograph. Cars are parked to the north, east, and south of the building. The areas to the north and east appear to be paved although it is difficult to be certain. The remainder of the Precision Property and surrounding areas remained little changed with the exception of removal of agricultural buildings from the west-adjacent property (later Seattle Refrigeration).

The 1977 aerial photograph indicates that Warehouse 1 of Precision Engineering had been expanded to the south with an expanded building footprint. Cars were parked on the east side of Warehouse 1. One building on the former Kaspac/Chiyoda Property had an addition to the north. The last remaining building on the future Seattle Refrigeration property had been removed. Otherwise, the Precision Engineering Property and surrounding areas remained little changed compared to the 1969 aerial photograph.

The Precision Engineering Property and Seattle Refrigeration property were significantly changed in a 1980 aerial photograph. Warehouses 2 and 3 are visible at the Precision Engineering Property bringing the building footprint to its present shape (2024). The area was paved around the building with cars parked around the building. The western and northern portions of the Property had been excavated to provide the flat surface for construction of Warehouses 2 and 3. The present-day Seattle Refrigeration property had been cleared and a commercial building is visible on the property (i.e., the current, 2024, building).

The Precision Engineering and surrounding properties were little changed in aerial photographs dated 1985 and 1990.

There were no cars parked around the Precision Engineering building, and little or no equipment, dumpsters, etc. visible in the 2006 aerial photograph. Otherwise, there were few if any changes to the Property and surroundings.

Materials can be seen stored south of the Precision building in the 2009 aerial photograph. The materials appear to include Pacific Industrial Supply's wire spools and other equipment (i.e., potential dumpsters and/or shipping container-sized equipment).

The Precision Property and surroundings appeared little changed in aerial photographs dated 2013 and 2017.

2.2.2 Precision Engineering History

Precision operated an industrial manufacturing business on the Property from 1968 to March 1, 2005 (MFA 2008). The operation included manufacturing and repair of hydraulic cylinders, metal rolls used in the manufacturing of paper and sheet metal products, and other equipment. Services included grinding and polishing, honing, hard-chrome plating, milling, welding, and application of flame- and arc-applied metal coating, much of which involved the use of chromic acid. From 1985 to 2003, approximately 10,000 square feet of the west side of the building (i.e., Warehouse 3) was leased to Baszile Metals Service, an aluminum distributorship.

Historical areas of interest associated with Precision's operations, including former tanks used to contain process chemicals and wastes, are shown in Figure 2-2 and are summarized in Table 2-1. The equipment listed below was removed from the Property by 2005 at the end of Precision's operations/ownership. Potential historical chemical releases associated with the Site features are summarized below:

- **Chromic acid plating tanks**. Chromium[3] and trichloroethylene[4] (TCE) impacts to shallow soil, shallow groundwater, and vapor due to leaking plating tanks. Tanks included aboveground tanks 1 and 2, in-ground tanks 3 through 6, aboveground tanks 3a and 4a, in-ground tank 7, and aboveground tanks in a temporary plating area.
- **Parts washing**. TCE, methyl ethyl ketone, and Stoddard solvent impacts to shallow soil and shallow groundwater from parts washing and degreasing operations.
- **Trench drains and former sanitary sewer**. Chromium and TCE impacts to shallow soil and shallow groundwater from chrome-plating rinse water that was discharged to the King County METRO sanitary sewer system prior to 1986. Discharges could have occurred from leaky trenches and/or sewer pipes. Discharge was re-routed to containment vaults after 1986.
- **Scrubber Room**. Chromium impacts to shallow soil and shallow groundwater from equipment located in the scrubber room.
- **Steam cleaning areas**. Petroleum hydrocarbons and metals (copper, lead, nickel, zinc, and chromium) impacts to shallow soil and shallow groundwater from steam cleaning activities, or spills associated with a sodium hydroxide tank that was in the area. Fluids were discharged to an oil/water separator and then to the sewer until 1986. In 1986, steam cleaning operations were moved from a covered area located on the southeast corner of the building to inside the building.
- **Other building areas**. Chromium, TCE, petroleum hydrocarbons and/or metals from other areas within the building including south of Warehouse 1 (i.e., hazardous waste storage area; used oil aboveground storage tank (AST); boiler room and associated heating oil underground storage tank (UST); and compressor room).

[3] Chromium in this report refers to chromium in all its forms. Chromium exists in valence states ranging from -2 to +6. The most important and stable forms are 0, +3 (trivalent), and +6 (hexavalent).

[4] Potentially including TCE breakdown products cis- and trans-1,2-Dichloroethylene, 1,1-Dichloroethylene, and vinyl chloride.

- **Hydraulic Cylinder Test Vault**. Chromium and hydraulic oil impacts to soil and shallow groundwater from cracks and seams in former hydraulic cylinder test vault. The vault is still present but it is not in use.
- **Drainage ditch**. Impacts to shallow soil and water from impacted runoff into the ditch, potential groundwater intrusion through cracks in storm system piping with subsequent discharge to the ditch and/or groundwater seepage into the ditch.

Precision ceased operations on the Property by March 1, 2005. Equipment was removed and an environmental investigation was performed (MFA 2005). The Property was sold to CL Frazier Properties, LLC on March 29, 2007. The Property has been occupied by Pacific Industrial Supply, a wire rope and marine/industrial supply distributor, from 2007 to present (2024). Additional environmental investigations occurred between 2005 and 2021 as discussed further in Section 4 below.

Current (2024) Property features are shown in Figure 2-3. Pacific Industrial Supply has retail space in Warehouses 1 and 2, wire rope manufacture in Warehouse 2, and storage in Warehouse 3 and the building areas south of Warehouse 1. Figure 2-3 also shows the location of 23 monitoring wells installed between 1988 and 2023.

2.3 REGULATORY HISTORY

The Site regulatory history is discussed in this section and summarized in Table 2-2. Precision completed several corrective actions at the Site between 1986 and 2003 in response to a February 1986 compliance order issued by Municipality of Metropolitan Seattle and as required by Ecology in response to National Pollutant Discharge Elimination System (NPDES) permit and hazardous waste regulation violations identified during Ecology inspections (Ecology 2013). Corrective actions included measures to address sanitary sewer discharge, stormwater discharge and hazardous waste storage violations. Precision also conducted several environmental investigations and cleanup actions at the Site between 1988 and 1993.

Investigations completed between 1988 and 1990 were performed under the 1986 Ecology Administrative Order No. DE 86-307, an amendment to that order, and a 1987 Ecology compliance letter (Ecology 2013). Precision conducted an independent remedial action in 1993. Between 2005 and 2011, Precision conducted additional environmental investigation and cleanup actions at the Site, including an RI, risk assessment, and feasibility study under Ecology's Voluntary Cleanup Program (VCP) (MFA 2008, 2011). Ecology issued VCP opinion letters in 2009, 2011, and 2015 (Ecology 2009, 2011a, 2015) requesting further action based on its review of this work. Ecology performed an RI at the Site between 2013 and 2015 (Kennedy Jenks 2015) to evaluate the potential for impacts to Site media, focusing on potential impacts and/or contaminant migration pathways to the Lower Duwamish Waterway (LDW). Conclusions from Ecology's RI (Kennedy Jenks 2015, page 48) are excerpted as follows:

"The potential for significant off-property chromium impacts to soil or groundwater resulting from on-property sources, appears to be limited."

"Significant on-property or off-property migration of chromium in groundwater has not been identified."

"Concentrations of TCE in soil and groundwater appear to be confined to former use areas beneath the existing building and were not detected above the MTCA Method A soil or groundwater CULs in samples collected during the 2014/2015 RI."

"Vinyl chloride was detected in groundwater beneath the former chrome shop in 2005, suggesting biodegradation of TCE is occurring."

"Significant groundwater transport impacts to the LDW appear unlikely based on the available analytical data."

Despite the findings above, Ecology requested that Precision Engineering continue investigation activities for potential connections to the LDW. Precision conducted additional environmental investigation and cleanup activities at the Site between 2019 to 2020 that are discussed further in Section 4. Section 5 discusses further activities performed to present (2024).

Pacific Industrial Supply was issued NPDES Permit No. WAR125474 on December 9, 2011. Stormwater best management practices and corrective actions were identified during compliance inspections conducted by Ecology and King County in 2008 and 2009. Corrective actions included cleaning and maintenance actions as well as repairing cracks and holes around a storm drain manhole (Ecology 2013). Ecology determined that the facility complied with the corrective actions after a follow-up inspection in 2011, and that the potential for sediment recontamination to the LDW from Pacific Industrial Supply's current operations was low provided that the improvements and source control best management practices were maintained (Ecology 2013). However, additional violations and corrective actions were identified during a 2022 compliance inspection conducted by Ecology. The additional violations and corrective actions included an outdated Stormwater Pollution Prevention Plan (SWPPP), lack of required quarterly vacuum sweeping, lack of monthly inspections, lack of employee annual training, lack of required onsite documentation, dumpsters without lids, lack of sampling, and hazardous materials stored outdoors without secondary containment.

3.0 Environmental Setting

3.1 PHYSICAL SETTING

The Precision Property is relatively flat, aside from steep (approximately 50 degree) slopes along the northern and western perimeters. The western slope is approximately 30 feet high, and the northern slope ranges from 30 feet in the west to zero feet north of Warehouse 1 (see Figure 3-1). The hillslope was excavated in the late 1970s to obtain a level surface for construction of Warehouses 2 and 3 of the Precision Engineering Building.



Looking northwest at the Precision building. The 30-foot-high western slope is visible in background, with Seattle Refrigeration building atop. The red arrow points to the single Property catch basin.

The land surface at the Precision Engineering Property is almost entirely covered with impervious surfaces, including the building, surrounding asphalt paving, and the slopes on the north and west sides. There are narrow, vegetated landscape strips on the north, west, and south sides of the Property.

Subsurface utilities include a natural gas line along the eastern perimeter and a portion of the southern perimeter of the Precision Property, and water and sanitary sewer service lines extending from the Precision Building to South Director Street (see Figure 2-3). Historical trench drains that fed historical sanitary sewer lines have been disconnected and sealed (MFA 2008).

The equipment, tanks, and vaults associated with Precision's historical operations (see Figure 2-2) have been removed and/or sealed, except for a former hydraulic cylinder test vault that remains outside the building, to the west of Warehouse 3. The former evaporator pit was backfilled and sealed with concrete as part of a 2020 interim action implemented to remove contaminated groundwater seepage in the pit. The seepage was identified as containing chromium at hazardous waste concentrations including TCE at concentrations that posed a risk to indoor air (MFA 2020).

3.2 STORMWATER

Stormwater from the majority of the Precision Property flows to a single catch basin located south of Warehouse 2 (Figure 2-3; red arrow in photo above). This includes stormwater falling on the roofs of Warehouse 3, Warehouse 2, and the western portion of Warehouse 1, as well as paved areas north, south, and west of the building[5]. The catch basin discharges stormwater via a short section of underground stormwater pipe through a manhole and additional stormwater pipe to a ditch south of the Property. Stormwater from the paved area east of Precision Engineering also ultimately flows to this ditch.



Looking north along 14th Avenue South. Stormwater flows from roads to the ditch.

The ditch also receives stormwater from the former Kaspac/Chiyoda property, the western portion of 14th Avenue South and the northern portion of the Highway 99 on-ramp (see photo at right). The ditch consists of a shallow depression at its north and west ends, with a low point of about 6 feet below surrounding grades south of the Precision Engineering Property (Figure 3-1). The ditch discharges from the low point to the south through a 24-inch diameter concrete culvert to the Highway 99 cloverleaf stormwater pond system, and ultimately to the LDW via the stormwater system under South 95th Street. The stormwater flow path from the Precision Property to the LDW is more than 3,300 feet, passing through multiple pipes, ponds, ditches and culverts. A map of offsite stormwater infrastructure is shown in Appendix B. The map was provided by the Washington State Department of Transportation (WSDOT).

3.3 GEOLOGY

The Precision Property is located within the Puget Sound Lowlands in an alluvial valley of the LDW. The Precision Property is bordered by steep slopes on its western and northern boundaries but otherwise it is relatively flat. The Precision Property and vicinity is situated on Pleistocene-age glacial deposits on the southern side of a hillock underlain by Tertiary sedimentary bedrock (the Blakely Formation). A thin wedge of fill/recent alluvium is present beneath the eastern portion of the Property; the wedge thickens to the southeast towards the LDW river valley. According to the Geologic Map of Seattle (Troost et al. 2005), the Property and vicinity are underlain by Quaternary Vashon recessional outwash deposits consisting of "stratified sand and gravel, moderately sorted to well sorted, and less common silty sand and silt" and Quaternary alluvium consisting of "sand, silt, gravel, and cobbles deposited by streams and running water."

[5] Roof downspouts from Warehouses 1, 2, and 3 terminate at the paved ground surface surrounding the building. The building areas south of Warehouse 1 do not have downspouts; precipitation from the roofs flows off the roofs and falls to the paved surfaces below.

Quaternary Vashon recessional outwash thicknesses typically range from about 3 to 20 feet; Quaternary alluvium ranges from a few feet to 100 feet thick. Alluvium and peat are mapped between the Precision Property and LDW. A portion of the Geologic Map of Seattle including the Precision Property and vicinity is included in Appendix C.

The geologic interpretation at the Site is based on information provided in more than 90 borings and/or monitoring wells as shown in Figure 3-1. This figure includes an east-west cross section line (Cross Section A-A') and a north-south cross section (Cross Section B-B'), and the cross sections are depicted in Figure 3-2 and Figure 3-3, respectively. The geology at the Precision Property generally consists of the following units (see Figure 3-3):

- **Surficial unit** with anthropogenic fill and/or alluvium and/or outwash deposits. This unit is thickest on the east side of the Property and pinches out to the west underneath the Precision building.
  - Localized anthropogenic fill ranges from 2 feet thick in the west to up to 10 feet thick in the eastern portion of the Property.
  - Native alluvial and recessional outwash deposits consisting of silty sands and sandy silts with gravel and lenses of silt, clay, and organic materials (woody debris and peat) is present from the surface to a depth of approximately 20 feet in the eastern portion of the Property. The peat lenses are generally less than 1 foot thick and vary up to 2 feet in some locations.
- **Sand and silt** unit with shell fragments associated with and underlying the native alluvium is up to 10 feet thick in the eastern portion of the Property and extends beyond the neighboring former Kaspac/Chiyoda property to the east. To the west, this unit also appears to pinch out near the middle of the Precision building.
- **Glacial till unit** consisting of dense to very dense gravelly, sandy silt from the surface to approximately 20 feet below ground surface (bgs) in the western portion of the Property and from 20 to 40 feet bgs in the eastern portion of the Property.
- **Advance glacial outwash unit** consisting of sand and gravel observed to start about 30 to 40 feet bgs.

The maximum depth of exploration at the Property is approximately 50 feet bgs in boring SB15. Several other borings have been completed to greater than 40 feet bgs. Bedrock was not encountered in any borings. Boring logs are included in Appendix D.

3.4 HYDROGEOLOGY

The Site hydrogeology is informed by the more than 90 borings at and near the Site, including 23 monitoring wells. Monitoring well construction data is summarized in Table 3-1, and depth to water measurements from 2019 to 2023 are presented in Table 3-2. The horizontal and vertical locations of each monitoring well were surveyed by a licensed surveyor in 2022 and 2023 (Appendix E).

Two water-bearing zones (WBZs) are present beneath the Property as established by previous investigations (MFA 2008; Kennedy Jenks 2015) and supported by additional explorations performed during this RI. The WBZs include a shallow WBZ in the surficial unit and a deep WBZ in the advance outwash unit. The shallow WBZ is present in the eastern portion of the Property with saturated conditions observed from approximately 5 to 20 feet bgs. The shallow WBZ pinches out to the west underneath the Precision Engineering building. The top of the deep WBZ is present beginning at approximately 40 feet bgs in the

eastern portion of the Property and at approximately 30 feet bgs in the western portion of the Property. The deep WBZ is confined and hydraulically separated from the shallow WBZ by the glacial till unit.

The shallow WBZ is partially confined locally by low permeability layers. Static groundwater elevations in many shallow monitoring wells rose to higher elevations than where groundwater was initially encountered during drilling activities. This observation is consistent with a 1995 USGS water resources investigation report for southwestern King County that indicates the alluvium layer may include both confined and unconfined saturated conditions (USGS 1995).

Groundwater flow directions are to the east with occasional flow directions to the east-northeast or east-southeast in both the shallow and deep WBZs. Groundwater contours and inferred average groundwater flow directions for the shallow and deep WBZs between 2020 and 2023 are shown in Figures 3-4 through 3-11. The groundwater contours are based on depth to water measurements from the north side of the polyvinyl chloride (PVC) rim in each well within a short-time period (typically several hours) on the same day. Depth to water measurements were converted to NAVD88 elevations using the surveyed elevations of the monitoring well PVC rims' north sides.

The Site-specific hydrogeology described above is generally consistent with that described for the central Duwamish Valley in the shallow groundwater use designation report prepared by the Duwamish Coalition (Duwamish Coalition 1998).

4.0 Historical Investigations and Cleanups

Previous environmental investigation and cleanup activities at the Site and the adjacent former Kaspac/Chiyoda property are discussed below. Activities at Precision Engineering are summarized for soil and/or groundwater in Section 4.1 and for air in Section 4.2. Section 4.3 describes a geophysical investigation inside the Precision Engineering building. Activities at Kaspac/Chiyoda are summarized in Section 4.4. An investigation summary for Precision Engineering from 1988 to the most recent investigations (2023) is provided in Table 4-1.

4.1 PRECISION ENGINEERING – SOIL AND GROUNDWATER

Extensive investigations and cleanup actions focusing on soil and/or groundwater were conducted at the Site between 1986 and 2021. Activities were generally performed in association with regulatory involvement (Section 2.3). Historical soil and/or groundwater investigations are divided into two subsections below with time periods from 1986 to 2005 and 2005 to 2021.

4.1.1 1986 to 2005

Soil and/or groundwater investigations at Precision Engineering between 1986 and 2005 include those conducted in response to Ecology enforcement actions between 1986 and 1990, and investigation and cleanup conducted as independent actions in 1992/1993. Previous activities are described in detail in previous reports (MFA 2005, 2008, 2011; Ecology 2013; Kennedy Jenks 2015). Monitoring wells MW-1 through MW-4 were installed in 1988 (Sweet-Edwards/EMCON 1988).

Previous cleanup actions conducted at the Site include the following:

- 1990. Removal of former plating tanks 1 and 2, the tank containment vaults, and approximately 114 cubic yards of contaminated concrete and soil around the tanks with chromium concentrations at or greater than 80 milligrams per kilogram (mg/kg) to a maximum depth of 13 feet bgs (Precision Engineering 1993).
- 1992. Removal of former plating tanks 3 through 6, the tank containment vaults, a 35- by 40-foot section of concrete flooring from below the tanks, and soil visibly contaminated with chromium to a maximum depth of 28 inches bgs (Precision Engineering 1993).

Excavation boundaries for the tank excavations discussed above are shown in Figure 2-3. Contamination was left in place following the cleanup actions described above. This included hexavalent chromium in soil with concentrations up to 73 mg/kg and 7,470 mg/kg in the 1990 and 1993 soil excavations, respectively (Kennedy Jenks 2015).

Soil and/or groundwater data collected from 1989 to 2005 is included in Appendix F. This data is included for reference but is generally not used in evaluating the nature and extent of contamination[6]. There is sufficient soil data collected between 2005 and 2023 and groundwater data from 2019 to 2024 to characterize the Site.

4.1.2 2005 to 2021

Soil and/or groundwater investigations and cleanups were performed at Precision Engineering between 2005 and 2021 under the VCP. Activities are described in detail in previous reports (MFA 2005, 2008, 2011; 2020; Ecology 2013; Kennedy Jenks 2015). Investigations are summarized in Table 4-1. Figure 4-1 shows the exploration locations completed from 2005 to 2021; Figure 4-2 shows only the soil and/or groundwater locations, and Figure 4-3 shows only air-related sampling.

Investigations included the following:

- Monitoring wells MW1 through MW4 were installed in 1988 (Sweet-Edwards/EMCON 1988). No soil samples were submitted for chemical analysis.
- Soil and groundwater sampling performed in 2005 (MFA 2005) and 2006 (MFA 2006) from boring locations GP1 through GP33, monitoring wells MW5 through MW8, and hand auger locations HA1 through HA5 (in the ditch).
- Soil and air sampling was performed in 2006 (MFA 2006). Soil sampling was limited to hand-auger soil sampling performed in the ditch primarily for arsenic and lead. Air sampling is discussed below in Section 4.2.
- A cleanup action was conducted at the Site in 2007/2008 that included removal of approximately 100 cubic yards of soil with arsenic and lead concentrations greater than the respective MTCA Method A unrestricted land use cleanup levels (CULs) from the ditch (MFA 2008). The excavation area is shown in Figure 2-3.

[6] Data is not used due to the outdated types of tests performed (the EP Tox test); unknown sample locations for some samples; samples collected as composites; or samples that were collected from areas that were later over-excavated and therefore no longer present at the Site.

- Soil, groundwater, and air sampling were performed by Ecology in 2014/2015 (Remedial Investigation Report, Kennedy Jenks 2015) from boring locations SB1 through SB19, monitoring wells MW9 through MW11, and a one-time air sampling event.
- Four quarters of groundwater monitoring were conducted at the Site between July 2019 and April 2020 from the monitoring wells that existed at that time (MW1 through MW11).

Soil data collected from 2005 to 2021 (except soil excavated from the ditch in 2007) is used in this RI to evaluate the nature and extent of contamination as discussed further in Section 7. Recent groundwater data (from 2019 to present) is used as well. Groundwater data prior to 2019 is not used because it is outdated and superseded by multiple rounds of recent data as discussed with Ecology. The air data collected from 2005 to 2021 is used in the characterization of the Site.

4.2 PRECISION ENGINEERING – AIR

Indoor air and sub-slab soil vapor samples were collected in 2006 (MFA 2008) and 2015 (Kennedy Jenks 2015). Results indicated TCE was a potential contaminant of concern at the Site. No other chemicals were identified as a concern. Ecology requested that a vapor assessment be conducted to evaluate if TCE in indoor air at the Site exceeded the new action limits following Ecology's adoption of new indoor air TCE action limits as outlined in Ecology's Implementation Memorandum No. 22 (Ecology 2019).

A work plan was prepared (MFA 2020) identifying the indoor air assessment process followed by implementation of the indoor air assessment and an interim action. Selected pages from a resulting Vapor Report (MFA 2020) are included in Appendix G. The report discusses an initial vapor assessment, installation of air purifiers, and collection of a sample of the groundwater seepage from the former evaporator pit. Interim remedial actions included decommissioning, backfilling, and sealing the former evaporator pit, and sealing cracks and joints in the building concrete slab. Results of the post-interim remedial action indoor air sampling confirmed that TCE concentrations are less than the short-term action limit but remain greater than the MTCA Method B indoor air CULs. Air monitoring and slab inspections are ongoing. The data discussed in this section is used in this RI to evaluate the nature and extent of contamination and is discussed further in Section 7.

4.3 PRECISION ENGINEERING – GEOPHYSICAL INVESTIGATION

A geophysical survey was performed under subcontract to MFA in November 2021 to identify potential USTs in the boiler room area of Warehouse 1 (i.e., the southern portion of Warehouse 1). Small anomalies were identified during the geophysical survey. However, anomalies indicative of USTs were not definitively identified.

Survey activities also assessed the concrete thickness and potential presence of rebar in the building slab in other areas of the building to assist with planning drilling activities in the building (i.e., for drilling that occurred in 2022 and 2023; see Section 5). Concrete thickness ranged from 2.5 inches to 11 inches with most areas of concrete being 5 to 6 inches thick. Spacing between rebar was observed to be 6 to 12 inches apart.

The geophysical report is included as Appendix H.

4.4 FORMER KASPAC/CHIYODA PROPERTY

Petroleum hydrocarbon, solvent, and metals contamination have been documented in soil and groundwater at the former Kaspac/Chiyoda property, also known as the Seattle Limousine Property. Historical operations on that property were identified as the contamination source. Contaminants include gasoline-, diesel-, and oil-range hydrocarbons; benzene, toluene, ethylbenzene, and xylene (BTEX); arsenic, cadmium, chromium, copper, lead, silver, and zinc; and TCE (Ecology 2013).

Appendix I includes a figure showing previous sample locations, monitoring wells, and excavation boundaries on the former Seattle Limousine (Kaspac/Chiyoda) property, as well as tables summarizing soil and groundwater analytical results, excerpted from a Kennedy Jenks RI (2015).

The following contamination sources were identified at the former Kaspac/Chiyoda property (Kennedy Jenks 2015; Ecology 2013) (see Figure 8 included in Appendix I):

- An 8,000-gallon leaking underground storage tank (LUST) formerly containing leaded gasoline was removed in 1989 from the west side of a building.
- Soil contaminated with paint from improper disposal of waste paint to the west of Building 1.
- The Kaspac Corporation was cited by Ecology in April 1989 for discharge of oil, gas, diesel and hydraulic fluid to groundwater and/or surface water in the southwestern corner of the property.

Several independent cleanup actions were completed between 1989 and 1997 including decommissioning (removal) of the former LUST, excavation of petroleum-contaminated soil associated with the LUST and near the loading dock, excavation of paint-stained soils and groundwater treatment via pumping and discharge to the sanitary sewer (Kennedy Jenks 2015; Ecology 2013). Quarterly groundwater monitoring was conducted in monitoring wells on the Kaspac/Chiyoda property in 1997 following completion of the remedial actions (Ecology 2013). Ecology issued a VCP NFA determination for the site in 1998. Petroleum and BTEX constituents detected at concentrations below MTCA Method A CULs remain in soil and groundwater along the southern portion of the property and in soil near the former LUST area within the central portion of the property (Ecology 2013) (see Appendix I).

5.0 Field Investigations (2022 – 2023)

GeoEngineers and Ecology held a series of meetings in December 2021 through January 2022 to identify remaining data gaps and develop investigation activities to fill the data gaps and prepare this RI Report. Data gaps generally include the following:

- Analysis for chemicals of concern not previously analyzed at the Site, including Per- and Polyfluoroalkyl substances (PFAS); polychlorinated biphenyls (PCBs); full suite semivolatile organic compounds (SVOCs); and 1,4-dioxane.
- Further investigation to evaluate the potential for releases at the Site to contribute the contaminants to the LDW, including preferential pathways (former sanitary sewer lines and other utilities).
- Further investigation of arsenic in soil and groundwater to evaluate if the Site is a source of arsenic or if arsenic is elevated on an area-wide basis.

- Additional investigation regarding areas of interest at and near Precision Engineering (hydraulic cylinder test vault, boiler room potential USTs, the ditch, etc.).

A draft and final Work Plan and a Work Plan Addendum (together identified in this report as the Work Plan) were prepared by GeoEngineers and reviewed and approved by Ecology to perform the work described in this section (GeoEngineers 2022, 2023). The Work Plan included a Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP). The work described below was performed in accordance with the Work Plan.

The following figures are provided for the discussions in this section: Figure 5-1 shows the exploration locations completed between 2005 and 2023; Figure 5-2 shows only the soil and/or groundwater investigation locations completed between 2005 and 2023; and Figure 5-3 shows only air-related sampling locations between 2005 and 2023.

5.1 SOIL INVESTIGATION

GeoEngineers implemented the additional site investigation activities at and near the Precision Property in two phases. The first phase of the investigation included advancing a total of 13 soil borings (SB20 through SB33) and installation of seven permanent groundwater monitoring wells (MW12 through MW18) located on and near the Precision Property in February and March 2022. An additional five soil borings (SB34 through SB37) and five permanent groundwater monitoring wells (MW19 through MW23) were advanced off-property along the 14th Avenue South and Northbound WA-99 on-ramp rights-of-way during the second phase of the investigation in May 2023. The second phase of investigation also included four shallow hand-auger soil borings (HA26 through HA29) located within the WA-99 on-ramp right-of-way. Boring logs are provided in Appendix D and monitoring well construction details are summarized in Table 3-1.

Soil samples were collected from the borings during drilling activities for lithologic description, field screening, and chemical analyses (Table 4-1). Soil samples were field screened for visual indications of contamination and headspace vapor analysis was conducted using a photoionization detector (PID). Additional soil samples were collected where soil exhibited visual and/or olfactory indications of impacts (i.e., high PID readings, staining, sheen, odor). Soil samples collected for chemical analysis were kept on ice in laboratory-provided glassware and subsequently delivered to Analytical Resources, Inc. (ARI), a Washington State-accredited laboratory, for chemical analysis under standard chain-of-custody procedures. At least one vadose soil sample and one saturated soil sample were collected from each soil and monitoring well boring for chemical analysis in accordance with the Work Plan.

Soil samples collected during drilling activities were submitted for a selection of the following chemical analysis:

- Metals including arsenic, cadmium, total chromium, copper, lead, mercury, nickel, selenium, thallium and zinc by EPA method 6020B and hexavalent chromium by method 7196A.
- TCE and degradation products (1,1- dichloroethene [DCE], cis- and trans-1,2-DCE, and vinyl chloride) by EPA 8260D.
- Petroleum hydrocarbons by NWTPH-HCID with follow up analysis by NWTPH-Gx and/or NWTPH-Dx when HCID indicated a detection(s).

- Extractable petroleum hydrocarbon/volatile petroleum hydrocarbon (EPH/VPH) by methods NWTPH-EPH and NWTPH-VPH if select samples had total petroleum hydrocarbon (TPH) concentrations exceeding 1,000 mg/kg. This analysis was not performed on any of the samples as no sample exceeded 1,000 mg/kg of TPH.
- SVOCs—PAHs by EPA 8270E selected ion monitoring (SIM).
- 1,2,4-trichlorobenzene; 1,2-, 1,3-, and 1,4-dichlorobenzene; and hexachlorobutadiene by EPA 8260D.
- Full suite VOCs by EPA 8260D.
- Full suite SVOCs by EPA 8270E.
- 1,4-dioxane by EPA 8270D.
- PCB Aroclors by EPA 8082A.
- PFAS by EPA 537.1 Modified.

5.2 GROUNDWATER SAMPLING

The monitoring wells were developed followed by a total of three groundwater sampling events at the Site between April 2022 and December 2023. The first sampling event was performed in April 2022 following the first phase of investigation activities. Two additional sampling events were performed in July-August 2023 and December 2023 following the second phase of investigation activities.

Groundwater sampling was performed using low-flow techniques using a peristaltic pump and disposable high-density polyethylene (HDPE) tubing. Purging was performed at a low flow rate (e.g., 0.1 to 0.5 liter per minute) until a minimum of one well volume was removed, and water quality field parameters stabilized (e.g., temperature, specific conductance, pH, turbidity) (Table 5-1). Depth to water measurements were collected in the wells on the same day as sampling during the April 2022 and August 2023 sampling events to prepare groundwater contour maps[7] (Section 3.3) (Table 3-2).

Groundwater samples collected for analysis of dissolved metals were filtered in the field using a disposable 0.45-micron filter before being transferred into laboratory-supplied containers. The remaining groundwater samples were transferred directly into laboratory-supplied containers. The sample containers were kept on ice in laboratory-provided glassware and subsequently delivered to ARI for chemical analysis under standard chain-of-custody procedures.

Groundwater samples were analyzed for a selection of the following:

- Metals including arsenic, cadmium, total chromium, copper, lead, nickel, selenium, thallium and zinc by EPA methods 6020, hexavalent chromium by 7196A and mercury by 1631E. Dissolved metals were field filtered.
- Petroleum hydrocarbons. Samples were analyzed by HCID and NWTPH-Dx. The samples were analyzed without silica gel treatment (SGT). Selected samples were also analyzed with SGT.

[7] A depth to water snapshot was inadvertently not performed in December 2023. This is not considered a data gap given that multiple prior snapshots show a generally easterly groundwater flow direction.

- EPH/VPH by methods NWTPH-EPH and/or NWTPH-VPH.
- TCE and degradation products (1,1-DCE, cis- and trans-1,2-DCE, and vinyl chloride) by EPA 8260D.
- Full suite VOCs by EPA 8260D.
- PAHs-SIM by EPA 8270E-SIM.
- PCBs by EPA 8082A.
- 1,4-dioxane by EPA 8270D
- Full suite SVOCs by EPA 8270E.
- PFAS by 537.1 Modified.
- Total organic carbon (TOC) by EPA 5310.
- Nitrate as nitrogen and sulfate by EPA 300.0.
- Dissolved manganese by EPA 6020.

5.3 DITCH WATER SAMPLING

The Work Plan included at least two ditch water sampling events at up to four locations within the ditch located south of the Precision Engineering Property and east of the former Kaspac/Chiyoda property. Two sampling events were performed. GeoEngineers observed the ditch during multiple site visits in 2022 and 2023 to evaluate if water was present and to collect water samples if present. The ditch was observed to be dry during most site visits except during two rain events on March 28 and December 4, 2023. This suggests that the ditch only contains water during rain events and groundwater does not typically discharge directly to the ditch. This is consistent with the depth-to-water measurements in monitoring wells that indicate the seasonal high groundwater table is below the lowest point in the ditch. The seasonal high groundwater table in the shallow WBZ occurs in the wet winter season, as expected and as shown by inspection of the NAVD88 water elevations in shallow WBZ wells in Table 3-2. Table 3-2 indicates the highest water levels occurred during the December 2023 sampling event. The deepest portion of the ditch is approximately elevation 16 NAVD88, and the groundwater table between MW18 and MW19 is approximately one foot lower; this is illustrated in cross section B-B' in Figure 3-3. It should be noted the ditch was also reported to be dry as far back as 2005 when a staff gauge was installed in the ditch and checked for water (MFA 2006).

Water samples were collected from the ditch during two rain events. Sufficient water was present in the ditch during these events to collect samples although the water was very shallow (less than one inch deep). Therefore, water samples were collected using a peristaltic pump and tubing. Water was pumped directly into laboratory-supplied containers. Sampling events included the following days/locations during rain events:

- **March 28, 2023:** One sample was collected at a location designated as SW1. SW1 is located at the lowest portion of the ditch, just north of the inlet to the 24-inch diameter concrete culvert that discharges stormwater south to the WSDOT ponds (Figure 5-1). The sample represents stormwater runoff from Precision Engineering, Kaspac/Chiyoda, 14th Avenue South, and Highway 99 on-ramp. The other planned locations (SW2 through SW4) were observed to be dry, or there was saturated soil with a thin film of overlying water but insufficient standing water and no flowing water).

- **December 4, 2023:** Two samples were collected during this event. One sample was collected at SW1 and one sample was collected at SW2 located west of SW1. Water collected at SW2 is representative of stormwater runoff from Precision Engineering and the Highway 99 on-ramp.

The sample containers were kept on ice in laboratory-provided glassware and subsequently delivered to ARI for chemical analysis under standard chain-of-custody procedures.

Ditch water samples were analyzed for the following:

- Metals. The samples were analyzed for the following metals: arsenic, cadmium, total chromium, copper, lead, nickel, selenium, thallium and zinc by EPA methods 6020; hexavalent chromium by 7196A; and mercury by 1631E. Metals were analyzed as total and dissolved metals. Samples for dissolved metals analysis were field filtered through 0.45 micrometer filters.
- Petroleum hydrocarbons. The samples were analyzed by HCID and NWTPH-Dx. The samples were analyzed without SGT. Samples were to be analyzed by NWTPH-Gx if there were gasoline-range detections by HCID. Sample SW1 collected on March 28, 2023 was inadvertently analyzed for NWTPH-Gx although there were no detections by HCID.
- TCE and degradation products (1,1-DCE, cis- and trans-1,2-DCE, and vinyl chloride) by EPA 8260D.
- Methylene chloride.
- 1,4-dioxane by EPA 8270D.
- PAHs-SIM by EPA 8270E-SIM.

5.4 INDOOR AIR

Previous investigations identified TCE as the only contaminant of concern in indoor air (Section 4.2). Interim actions were implemented to address the TCE indoor air concerns in 2020. Thereafter, GeoEngineers continued periodic indoor air sampling at locations RAD-1 through RAD-5 (Figure 5-3) per a 2020 Work Plan (MFA 2020).

5.5 WORK PLAN DEVIATIONS

There were several minor deviations from the work plan that included the following:

- While greater than 95% of requested analyses were performed, groundwater field parameters were not collected during one sampling round at MW2, and TPH and cPAHs were not analyzed during one sampling round at MW22, due to insufficient groundwater recharge rate.
- Dissolved mercury was not analyzed in MW10 during one sampling event due to a lack of low-level mercury laboratory containers.
- Monitoring well MW14 was planned to be installed as a deep monitoring well to investigate TCE impacts to the deep WBZ. However, deep groundwater was not encountered at the time of drilling (to 50 feet bgs), and MW14 was therefore installed as a shallow monitoring well. Note that TCE was not detected in deep soil samples from MW14 nor from downgradient deep monitoring wells MW16 or MW17.

The Work Plan deviations above do not negatively impact Site evaluation in our opinion.

6.0 Cleanup Standards

This section discusses the cleanup standards including cleanup levels, points of compliance, and additional requirements per WAC 173-340-700(3). Appendix Q (Development of PCULs [Ecology]) provides additional details relevant to the discussion in this section.

6.1 CLEANUP LEVELS

Cleanup levels (CULs) are the concentration of hazardous substances in Site soil, groundwater, surface water, and air that are protective of human health and the environment. Ecology provided preliminary cleanup levels (PCULs) to GeoEngineers during Work Plan development (Ecology 2022). The PCULs were developed by Ecology as screening levels specific to protection of the LDW.

The PCULs for vadose and saturated soil, groundwater, and air are summarized in Table 6-1. The complete set of tables provided by Ecology including the various cleanup levels considered for each media are provided in Appendix J.

The PCULs shown in Table 6-1 are considered conservative preliminary cleanup levels to identify potential contaminants of concern (PCOCs) for the Site. PCULs will be further refined in the FS and/or CAP where the PCULs will be considered cleanup levels for the Site.

6.2 POINTS OF COMPLIANCE

The points of compliance are the locations where cleanup levels must be met. Points of compliance are established for the Precision Engineering Site for soil, groundwater, surface water, and air.

6.2.1 Soil

The point of compliance for soil protective of drinking water is considered throughout the Site. Groundwater beneath and downgradient of Precision Engineering is currently not considered potable and unlikely to be considered potable in the future as demonstrated in reports for the LDW in general (Duwamish Coalition 1998) as well as investigations specific to Precision Engineering (MFA 2008, 2011). However, groundwater is considered potable as an environmentally conservative approach for the purposes of the RI PCULs. This preliminary potability determination may be revisited in the FS.

The point of compliance for soil protective of indoor air (i.e., protective of vapors) is from the ground surface to the uppermost saturated zone. The uppermost saturated zone at Precision Engineering is approximately 5 feet bgs.

The point of compliance for soil protective of human exposure via direct contact is throughout the Site from the ground surface to 15 feet below the ground surface. This represents a reasonable estimate of the depth of soil that could be excavated and distributed at the soil surface as a result of site development activities.

In summary, this RI preliminarily assumes a soil point of compliance as throughout the Site.

6.2.2 Groundwater

The standard point of compliance for groundwater is throughout the Site from the uppermost level of the saturated zone extending to the lowest depth which could potentially be affected by the Site. This would

include the shallow WBZ and potentially the deep WBZ. A conditional point of compliance may be established by Ecology when it is not practicable to meet the cleanup level throughout the Site within a reasonable restoration time frame. The conditional point of compliance is as close as practicable to the source of hazardous substances and not to exceed the property boundary. A conditional point of compliance will likely be proposed in the CAP and could include selected wells at or within the downgradient property boundary. Wells could include a representative set from MW11, MW6, MW2, MW7, MW9, MW10, MW18.

6.2.3 Surface Water

The point of compliance for surface water is the point or points where hazardous substances are released to surface waters of the state unless Ecology authorizes a mixing zone. A mixing zone is not allowed where hazardous substances are released to surface water from groundwater discharge. Groundwater does not appear to discharge to surface water on or near the Precision Property including within the ditch (see Section 5.3). The ditch receives stormwater from the impermeable surfaces of the Precision Engineering Property, as well as all of the Kaspac/Chiyoda property and adjacent roadways. Stormwater discharges from the Precision Engineering Property are covered by Pacific Industrial Supply's Industrial Stormwater General Permit.

6.2.4 Air

The point of compliance for air is the ambient outdoor air and air within any building, utility vault, manhole or other structure large enough for a person to fit into, throughout the site.

6.3 ADDITIONAL REQUIREMENTS

Cleanup standards must comply with additional requirements including state and federal laws. The PCULs provided by Ecology shown in Table 6-1 incorporate these state and federal laws, as well as other laws and regulations. The FS will discuss other state and federal laws applicable to the cleanup that is selected for the Site.

7.0 Nature and Extent of Contamination

This section describes the nature and extent of contamination in Site media of concern including soil, groundwater, ditch water and air. Summary tables of chemicals of concern that exceeded screening levels in soil, groundwater, and ditch water are presented in Tables 7-1 through 7-4. Complete data tables including non-exceedances are provided in Appendix K. Laboratory reports and data validation reports are in Appendix L. The results of data validation included adding estimated ("J") to selected data and changing five soil methylene chloride results from detected to not detected ("UB") based on method blank contamination. Otherwise, all data were considered usable for their intended purpose.

Table 7-5 evaluates the PCOCs that exceeded PCULs in soil or groundwater to determine the chemicals of concern (COCs). Air contaminants of concern are limited to TCE as discussed in Section 7.6. Arsenic was ruled out as a COC as discussed in Appendix P.

The COCs for the Site include chromium and mercury, diesel- and lube-oil range petroleum hydrocarbons, TCE, 1,4-dioxane and total cPAH toxic equivalency quotient (TEQ) as shown in Table 7-5. Chromium is a primary COC for the Site. Mercury exceeds PCULs in soil and groundwater although there are no specific associations between chromium plating and mercury. Petroleum hydrocarbons were used onsite and there

are two soil "hotspots" as discussed below. TCE is a primary COC and was used onsite and is present in soil, two monitoring wells, and sub-slab soil gas. 1,4-dioxane is generally known to have been used as a solvent stabilizer and therefore could potentially be due to onsite solvent use. cPAHs could be associated with petroleum use, although they could be due to background conditions[8]. Other PCOCs are not COCs as discussed in Table 7-5, typically for multiple lines of reasoning for any individual PCOC.

The COCs are discussed for each media below. The nature and extent of these COCs are illustrated in the following figures grouped by media and contaminant type:

- Vadose soil: Figures 7-1A (chromium and mercury), 7-1B (TCE and 1,4-dioxane) and 7-1C (TPH and cPAHs)
- Saturated soil: Figures 7-2A (chromium and mercury), 7-2B (TCE and 1,4-dioxane) and 7-2C (TPH and cPAHs)
- Shallow groundwater: Figures 7-3A (chromium and mercury), 7-3B (TCE and 1,4-dioxane) and 7-3C (TPH and cPAHs).
- Deep groundwater: Figures 7-4A (chromium and mercury), 7-4B (TCE and 1,4-dioxane) and 7-4C (TPH and cPAHs)

Chromium and mercury are grouped together because both are metals. TCE and 1,4-dioxane are grouped because 1,4-dioxane is generally known to have been added to solvents as a stabilizer. TPH and cPAHs are grouped because cPAHs can be associated with heavy oils and/or used oil. Each figure indicates exceedance factors of the PCULs using colors that range from non-detect (or detected below PCUL) in green, to detected at greater than 100 times the PCUL in purple.

7.1 VADOSE SOIL

Vadose soil samples were collected in the upper 5 feet bgs from multiple locations in and around the Precision Engineering Property (Figure 5-2). Vadose soil COC exceedances are summarized in Table 7-1 and shown in Figures 7-1A through 7-1C. The COCs that exceeded PCULs are discussed below.

7.1.1 Chromium and Hexavalent Chromium

Chromium and/or hexavalent chromium exceeded PCULs in numerous vadose soil samples collected only in Warehouse 1 and the southern portion of Warehouse 2 (GP1 through GP4, GP6 through GP11, GP18, GP22, GP32, and SB33) (Table 7-1). The highest chromium concentration of 6,750 mg/kg was at GP32 which is near former chromic acid tanks 3 and 4a (Figure 7-1A). Hexavalent chromium also exceeded the screening level although at lower concentrations (0.074 mg/kg to 89 mg/kg) in ditch samples HA1 through HA6. Hexavalent chromium did not exceed the PCUL in ditch samples collected further to the south at HA26 through HA29. Neither chromium nor hexavalent chromium exceeded the PCULs outside the building aside from HA1 through HA6.

[8] PAHs, including cPAHs, are also released from non-Precision Engineering, "background" sources, including wood burning and vehicle emissions (Ecology 2012).

7.1.2 Mercury

Mercury exceeded the vadose PCUL of 0.07 mg/kg in soil samples including inside Warehouse 1, east of the building, and in selected ditch vadose soil samples. Maximum mercury (1.1 mg/kg) occurred in GP18 near which is near former chromic acid tanks 3 and 4a (Figure 7-1A).

7.1.3 Trichloroethylene

TCE exceeded the vadose soil PCUL of 0.0044 mg/kg only inside Warehouse 1 at locations GP6, GP11, GP14, SB24, SB25, and SB33. These borings are located within former chromic acid plating tank areas as well as the former grinding shop (Figure 7-1B; see Figure 2-2 for grinding shop location).

7.1.4 1,4-Dioxane

1,4-dioxane did not exceed the PCUL of 0.11 mg/kg in any vadose soil sample.

7.1.5 Petroleum Hydrocarbons

Diesel- and lube oil-range petroleum hydrocarbons exceeded the PCUL (2,000 mg/kg) in vadose soil with concentrations of 10,000 mg/kg and 12,000 mg/kg, respectively, at the SB3 location. The sum of petroleum hydrocarbons was 22,000 mg/kg. Petroleum hydrocarbons did not exceed in any samples immediately surrounding SB3, indicating SB3 likely represents an isolated hot spot of petroleum hydrocarbons. One other isolated hot spot on the Site is GP21 discussed in Section 7.2.4 below (saturated soil).

Lube-oil range petroleum hydrocarbons were detected slightly greater than the PCUL in HA2 at a depth of 0.5 feet bgs (collected in 2005) with a concentration of 3,170 mg/kg that slightly exceeds the PCUL of 2,000 mg/kg. There were no exceedances in HA2 in the next deepest sample at 1.5 feet bgs. Samples collected in boring SB36 in 2023 (adjacent to HA2) did not exceed petroleum hydrocarbons PCUL in vadose soil.

7.1.6 cPAH TEQ

The cPAH TEQ exceeded the PCUL of 0.00031 mg/kg at numerous locations inside and outside the building. It should be noted that the median detected vadose soil cPAH TEQ of 0.0139 mg/kg is lower than the median cPAH TEQ of 0.084 mg/kg in 120 shallow soil samples collected as part of an Ecology study of six Seattle neighborhoods (Ecology 2011b). Furthermore, the cPAH TEQ concentrations increase away from the Precision Property, with the highest concentrations adjacent to the Highway 99 on-ramp and 14th Avenue South (i.e., HA26 through HA28, and MW20 through MW23) (Table 7-1 and Figure 7-1C).

7.2 SATURATED SOIL

Saturated soil samples were collected between 5 feet bgs and 50 feet bgs. Saturated soil COC exceedances are summarized in Table 7-2 and shown in Figures 7-2A through 7-2C. The COCs that exceeded PCULs are discussed below.

7.2.1 Chromium and Hexavalent Chromium

Chromium and/or hexavalent chromium exceeded PCULs in numerous saturated soil samples only in Warehouse 1, with one exception discussed below. The highest chromium concentration of 1,870 mg/kg was at MW15 which is near former chromic acid tank 4 (Figure 7-1A). The one exception is a reported

hexavalent chromium concentration of 1.78 mg/kg in sample SB17-43 adjacent to 14th Avenue South, at a depth of 43 feet bgs. The detection is limited in nature in that there were no PCUL exceedances of chromium or hexavalent chromium in any of the following:

- Soil samples SB17-26 and SB17-40, which were collected above SB17-43.
- Soil samples collected in nearby borings and at multiple depths including SB13-9, MW21-17, and MW22-46. MW22 is 10 feet east of SB17, and sample MW22-46 was collected at a similar depth to SB17-43.
- Groundwater samples from multiple monitoring wells located between SB17 and the Precision building including shallow monitoring wells MW2, MW6, and MW10, and deep groundwater wells MW7, MW9, and MW16 (Sections 7.3 and 7.4).

7.2.2 Mercury

Mercury only slightly exceeded the PCUL of 0.07 mg/kg in two samples, SB30-7.5-8.5 and SB32-4-5. The borings are located in, and near, the southeast corner of Warehouse 1. In both cases, deeper saturated soil samples did not exceed PCUL.

7.2.3 Trichloroethylene

Trichloroethylene exceeded the PCUL of 0.00027 mg/kg at several locations in Warehouse 1 including GP6, GP11, MW14, MW15, SB24, SB25 and SB33. TCE did not exceed the PCUL outside Warehouse 1. The deepest TCE exceedances were up to 18 feet bgs, however deeper samples were below PCUL at MW14-35, MW14-45, MW15-29, and MW15-36.

7.2.4 1,4-Dioxane

1,4-dioxane only exceeded in one saturated soil sample at MW22-11 at 11 feet bgs. 1,4-dioxane did not exceed in three other soil samples above and below MW22-11 in the same boring, including MW22-2.5-4, MW22-30-31, and MW22-45-45.5. Nor did 1,4-dioxane exceed in the south-adjacent sample MW21-15-16.5. 1,4-dioxane was also not detected in groundwater in MW21 or MW22 (Sections 7.3 and 7.4).

7.2.5 Petroleum Hydrocarbons

Petroleum hydrocarbons exceeded the PCUL (2,000 mg/kg) at GP21 located in the former boiler room, at a depth of 6.5 feet bgs. Diesel- and lube oil-range petroleum hydrocarbons were detected at concentrations of 5,270 and 19,900 mg/kg, respectively, for a sum petroleum hydrocarbon concentration of 25,170 mg/kg. There were no surrounding soil samples with exceedances of petroleum hydrocarbons (Figure 7-2C). A geophysical survey was performed in 2021 to identify potential USTs in the boiler room; none were identified (Section 4.3).

The sum of diesel- and lube oil-range petroleum hydrocarbons slightly exceeded the PCUL (2,000 mg/kg) at SB5-11 with a concentration of 2,320 mg/kg. The SB5 boring log indicates the sample was collected just below “wood debris and clay” (likely peat; see boring log in Appendix D) The boring log noted no odor or sheen at all depths in the boring. The laboratory noted there were quality control issues with the associated batch of soil samples analyzed by NWTPH-Dx, and that the results of organics or additional hydrocarbons were not identifiable (i.e. did not resemble petroleum products). The results for SB5-11 may be related to naturally occurring organics in this sample rather than spilled petroleum.

7.2.6 cPAH TEQ

The cPAH TEQ exceeded the PCUL of 0.000016 mg/kg at numerous locations inside and outside the building. Exceedances occurred at multiple depths up to 45 feet bgs. The median cPAH TEQ is 0.0048 mg/kg, much lower than the 0.084 mg/kg calculated for typical Seattle neighborhoods (Ecology 2011b). Carcinogenic PAHs are not correlated with petroleum hydrocarbons in any of the samples. All samples with cPAH exceedances were either non-detect for petroleum hydrocarbons or below PCUL for petroleum hydrocarbons. It appears the exceedances in off-property locations such as MW-19 through MW-23 are not related to site releases of petroleum. Review of boring logs for MW-19 through MW-23 indicates no petroleum staining or odors. One piece of suspected treated wood was observed at 5 feet bgs in MW-20. However, the wood is likely related to old fill along 14th Avenue South given that no such treated wood was observed in any of the other borings for the project.

7.3 SHALLOW GROUNDWATER

Shallow groundwater samples were collected from 15 shallow monitoring wells at the Site. The data from 2019 to 2023 is being evaluated in this RI, with most wells having seven rounds of data from multiple wet and dry seasons. Data from prior to 2019 is not used since it is outdated (2005 to 2015) and superseded by up to seven rounds of more recent monitoring[9]. Shallow groundwater COC exceedances are summarized in Table 7-3 and shown in Figures 7-2A through 7-2C. The COCs that exceeded PCULs are discussed below.

Note that the analytical method for hexavalent chromium in water includes laboratory filtration of the sample through a 0.45-micron filter. Therefore, there are no total (unfiltered) hexavalent chromium results or total (unfiltered) trivalent chromium results. The hexavalent and trivalent results are therefore included under dissolved metals in Table 7-3.

7.3.1 Chromium and Hexavalent Chromium

Chromium and hexavalent chromium always exceeded the groundwater PCULs of 100 µg/L and 0.046 µg/L, respectively, in MW-5 (Figure 7-2A). MW5 is a shallow well located in the former chromic acid plating area in Warehouse 1 and frequently contains high concentrations of chromium (ranging from 38,900 µg/L to 133,000 µg/L). The chromium is predominantly in the form of hexavalent chromium (Table 7-3). There are no other chromium or hexavalent chromium exceedances in shallow wells at the Site, with three exceptions:

- MW8. Hexavalent chromium was reported at an estimated concentration of 16 µg/L during only one out of six sampling events (July 14, 2023). Hexavalent chromium was not detected in sampling events before or after the July 14, 2023 sampling event. The result is estimated (J) and only slightly greater than the laboratory's reporting limit of 13 µg/L. Furthermore, the unfiltered chromium result in the same sample was only detected at 8.5 µg/L[10]. Finally, crossgradient and downgradient nearby shallow

[9] Groundwater "grab" sampling from temporary direct push borings are also not used in the RI evaluation. The data are in Appendix F for reference. The data were historically used to guide subsequent sampling investigations but are considered non-representative and outdated for characterizing the nature and extent of contamination.

[10] In theory one of the results is incorrect because it is not possible to have any form of a metal at a higher concentration than the total (sum) concentration. A likely cause of the discrepancy is the very low concentrations of both results, which are less than 2 times their respective reporting

wells MW19, MW20, and MW21 never exceeded the PCUL for chromium or hexavalent chromium including during the dry and wet season sampling events (Figure 7-2A).

- MW18. Hexavalent chromium was reported at 19 µg/L during an initial sampling event on April 21, 2022, but not during two subsequent sampling events. Crossgradient and downgradient nearby shallow wells MW19 and MW20 never exceeded the PCUL for chromium or hexavalent chromium including during the dry and wet season sampling events (Figure 7-2A).
- MW23. Hexavalent chromium was reported at an estimated concentration of 13 µg/L during an initial sampling event on July 25, 2023, but not during a subsequent sampling event performed on December 6, 2023. It is noted that the result is estimated (J) and at the laboratory's reporting limit of 13 µg/L. Furthermore, the unfiltered chromium result in the same sample was only detected at 3.51 µg/L.

7.3.2 Mercury

Total and dissolved mercury slightly exceeded the groundwater PCUL of 0.025 mg/L once in MW5 (0.0283 µg/L total and 0.0252 µg/L dissolved) in 2022, but not during two follow up sampling events in 2023. Total mercury exceeded the PCUL in MW18 during all three sampling events, however total mercury trended downward through the three sampling events. Dissolved mercury in the same samples were below the PCUL and several orders of magnitude lower than total mercury concentrations. Dissolved mercury only exceeded the PCUL during the first sampling event.

7.3.3 Trichloroethylene

TCE exceeded the groundwater PCUL of 0.70 µg/L during each sampling event in MW5 and MW14. These wells are shallow wells located within the former Warehouse 1. There were no other exceedances of TCE in groundwater.

7.3.4 1,4-Dioxane

1,4-dioxane exceeded the groundwater PCUL of 0.44 µg/L once in MW2, each sampling event at MW5, and each sampling event at MW8, MW10, and MW11. There were no exceedances of 1,4-dioxane in shallow wells along the ditch including at MW19, MW20, MW21, and MW23.

7.3.5 Petroleum Hydrocarbons

Petroleum hydrocarbons exceeded the PCUL of 500 µg/L in the following shallow monitoring wells.

- MW2. TPH exceeded the PCUL during three out of seven sampling events, with total TPH concentrations ranging from 700 µg/L to 1,240 µg/L.
- MW6. TPH exceeded the PCL during six out of seven sampling events, with total TPH concentrations ranging from 523 µg/L to 1,180 µg/L.

limits and therefore near the end of the calibration curve. It is also possible hexavalent chromium was introduced by the lab filters, though no lab filter blanks were analyzed, as is the practice for hexavalent chromium analysis.

- MW8. TPH slightly exceeded the PCUL during only one out of seven sampling events, with a total TPH concentration of 523 µg/L. The exceedance occurred in 2019, and the PCUL was not exceeded during the subsequent five sampling events in 2020 through 2023.
- MW10. TPH exceeded the PCUL during three out of seven sampling events, with total TPH concentrations ranging from 800 µg/L to 1,290 µg/L.
- MW11. TPH slightly exceeded the PCUL during only one out of seven sampling events, with a total TPH concentration of 680 µg/L. The exceedance occurred in 2019, and the PCUL was not exceeded during the subsequent five sampling events in 2020 through 2023.
- MW18. TPH exceeded the PCUL during the first two out of three sampling events, with total TPH concentrations of 754 µg/L and 1,110 µg/L.

Petroleum hydrocarbons in shallow groundwater at the Site could be related to historical spills. However, it is suspected that the petroleum hydrocarbons detections and/or exceedances at the Site could be due to the presence of naturally occurring organics in shallow groundwater from peat deposits known to be in the subsurface. The wells described above except for MW8 have well screen intervals screened across or within several feet of layers of peat as noted on the boring logs (Appendix D). Additional evidence that TPH exceedances may be due to natural organics as opposed to petroleum products include the following.:

- No odors were present while sampling any of the wells. Purge water from numerous wells exhibited a slight yellow color indicative of decaying organics. No sheen was present in well purge water with the exception of one well, MW10. There were no PCUL exceedances of other chemicals typically associated with petroleum releases (BETX, naphthalene, etc.).
- Three groundwater samples that contained detectable TPH by method NWTPH-Dx were analyzed for VPH and/or EPH and the results were that none were detected. The three groundwater samples were collected from MW2 and MW18. The data are shown in Appendix K.
- One groundwater sample was collected as a split and analyzed by NWTPH-Dx with and without silica gel cleanup (SGC). The sample (MW18-230713) yielded the following results: diesel-range petroleum hydrocarbons were detected at 876 mg/L without SGC (greater than the PCUL of 500 mg/L) and 169 mg/L with SGC (less than the PCUL); and lube-oil range petroleum hydrocarbons were detected at 234 mg/L without SGC and 200 mg/L with SGC. The data are shown in Appendix K.

7.3.6 cPAH TEQ

The cPAH TEQ PCUL of 0.0097 µg/L was only exceeded in one sample (MW18-220421) at an estimated concentration slightly greater than the PCUL of 0.0132 µg/L. The detected concentration is less than two times the PCUL.

7.4 DEEP GROUNDWATER

Deep groundwater samples were collected from eight deep monitoring wells at the Site. As with shallow groundwater, data from 2019 to 2022 is used to determine the nature and extent of contamination. There were few exceedances of COCs in deep groundwater, and only in MW7 and MW9. Deep groundwater exceedances are summarized in Table 7-3.

There were no exceedances of chromium, hexavalent chromium, TCE, or cPAH TEQ in any deep wells. Total and dissolved mercury exceeded the PCUL of 0.025 µg/L in MW7 in three out of three sampling events. Total mercury exceeded the PCUL in MW9 in two out of three sampling events. 1,4-dioxane exceeded the PCUL of 0.44 µg/L in MW7 in one out of three sampling events, and in MW9 in three out of three sampling events. Total TPH slightly exceeded the PCUL of 500 µg/L in MW9 in one out of seven sampling events (530 mg/L). None of these chemicals exceeded in MW22, which is a deep monitoring well located downgradient of the Site.

7.5 DITCH WATER SAMPLES

Samples of water present in the ditch were collected during two rain events, March 28, 2023 and December 4, 2023. The ditch was observed to be dry during multiple other site visits. Samples were collected at SW1 which is located at the north end of the 24-inch diameter concrete culvert that discharges stormwater south to the WSDOT ponds (Figure 5-1). SW2 is located west of SW1. Data are compared to the groundwater PCULs as a reference comparison. Chemical exceedances are summarized in Table 7-4.

Chromium and hexavalent chromium did not exceed PCULs in any samples. Total and dissolved mercury exceeded the PCUL of 0.025 µg/L in SW1 during the first sampling event only on March 28, 2023. It is noted that other metals and cPAHs were elevated in that same sample as compared to the sample collected on December 4, 2023. It is possible that elevated turbidity in the sample collected on March 28th contributed to the higher concentrations because metals and cPAHs will sorb to soil. TCE and 1,4-dioxane did not exceed PCULs in any of the samples. TPH was not detected in the samples. cPAHs slightly exceeded the PCUL of 0.0097 µg/L in SW1 sample collected on March 28, 2023, as noted above, but not in SW1 or SW2 in December 2023.

7.6 AIR

Air impacts are limited to TCE in sub-slab soil gas and historically in indoor air as described in the 2020 Vapor Report (MFA 2020) and as confirmed by ongoing indoor air Priority Monitoring performed between 2020 and 2023 (GeoEngineers 2023). Selected pages from the Vapor Report are included in Appendix G-1, and the Priority Monitoring results are included in Appendix G-2.

Results from an investigation performed in February 2020 indicated TCE exceeded PCULs in sub-slab soil gas and indoor air samples. Table 4-4 of the report indicates TCE exceeded the air PCUL of 11 micrograms per cubic meter (µg/m^3) in sub-slab soil gas, with the highest concentration (sample A9) near the former TCE tank. Table 4-5 indicates that most indoor air samples exceeded the TCE MTCA Method B CUL of 0.33 µg/m^3, with many exceeding the short-term action level of 7.5 µg/m^3. Interim remedial actions were performed in April 2020 including sealing the concrete slab of the building and decommissioning the former evaporator pit and filling it with concrete (Appendix G-1). Priority Monitoring for TCE in indoor air is ongoing with these results indicating a steady decline in TCE concentrations to less than the MTCA Method B CUL since the interim remedial actions as shown in Table 1 of Appendix G-2.

7.7 NATURE AND EXTENT SUMMARY

This section presents a summary of the nature and extent of contamination (i.e., a summary of Sections 7.1 through 7.6). This section discusses each COC group individually including chromium and mercury; TCE

and 1,4-dioxane; and TPH and cPAHs. Lateral and vertical extent of contamination are discussed at the end of this section.

7.7.1 Chromium and Mercury

Chromium and/or hexavalent chromium are present at relatively high concentrations in soil primarily in Warehouse 1 and in shallow groundwater at MW5. Chromium and hexavalent chromium do not appear to be mobilizing in groundwater based on results in the other shallow and deep groundwater monitoring wells: Wells downgradient of MW5 (east through southeast of MW5) including shallow wells MW2, MW6, MW10, and MW21 and deep wells MW7, MW9, MW16, and MW22 never exceed the PCUL for chromium or hexavalent chromium. Shallow wells MW8 and MW18 each had one anomalous exceedance of hexavalent chromium, with no exceedances during numerous other sampling events. Shallow wells MW19, MW20, and MW21 that are downgradient of MW8 and MW18 did not exceed the PCUL for hexavalent chromium. Shallow well MW23 exceeded the groundwater PCUL for hexavalent chromium during an initial sampling event and only detected at a very low concentration (at the laboratory reporting limit of 13 µg/L) and not detected during a subsequent sampling event. Chromium and hexavalent chromium do not exceed PCULs in any of the ditch water samples.

Mercury slightly exceeds the soil PCULs primarily in vadose soil inside and outside the building with no clear pattern. Mercury exceeds the groundwater PCUL in shallow well MW18 but not in downgradient wells MW19 or MW20. Mercury exceeds the groundwater PCUL in deep wells MW7 and MW9 but not in downgradient deep well MW22.

7.7.2 TCE and 1,4-Dioxane

TCE is present primarily only in Warehouse 1 soils and soil gas, and in shallow groundwater in MW5 and MW14 (both inside Warehouse 1) only. TCE is not mobilizing in groundwater as it is not detected in any groundwater monitoring wells except shallow wells MW5 and MW14. TCE concentrations in indoor air are less than the MTCA Method B CUL and continue to decline since interim remedial actions were performed in 2020. 1,4-dioxane is only detected in one out of 33 soil samples, at MW22 which is located far from any known source. 1,4-dioxane is not collocated with Site TCE exceedances (as would be expected given that 1,4-dioxane is generally known to have been used as a solvent stabilizer). 1,4-dioxane exceeds the groundwater PCUL in shallow monitoring wells in Warehouse 1 and in wells adjacent to the building but does not exceed PCULs in the wells located further downgradient (i.e., MW18 through MW23 located along Highway 99 on-ramp and 14th Avenue South). 1,4-dioxane does not exceed the groundwater PCUL in the ditch water samples.

7.7.3 Petroleum Hydrocarbons and cPAHs

Petroleum hydrocarbons exceed the PCULs primarily in two soil hotspots (SB3 south of the building and GP21 near the boiler room). The two hotspots are each surrounded by soil sample locations that do not exceed PCULs. Petroleum hydrocarbons slightly exceed PCULs in several shallow groundwater monitoring wells, but the apparent exceedances are more likely due to naturally occurring organic material (peat) as discussed in Section 7.3.5. Petroleum hydrocarbons do not exceed PCULs in any of the wells MW18 through MW23 located along Highway 99 on-ramp and 14th Avenue South. Petroleum hydrocarbons do not exceed groundwater PCULs in any of the ditch water samples.

cPAH TEQ is not collocated with locations of petroleum hydrocarbon PCUL exceedances as would be expected. Rather, cPAH TEQ is present at low concentrations that tend to increase away from the Precision Engineering Property towards roadways. This suggests cPAHs are potentially present as a background condition and/or from adjacent roadways rather than sourced from Precision Engineering. cPAH TEQ only slightly exceeds the groundwater PCUL in one out of 106 samples (MW18-220421) and by less than two times the PCUL. cPAHs were detected in one ditch water sample at a concentration less than 2 times the PCUL that may have been related to excessive turbidity in the sample. cPAH TEQ was not detected in two other ditch water samples.

7.7.4 Vertical and Lateral Extent

The vertical and lateral extent of contamination has been defined. One of the objectives of drilling monitoring wells MW14 and MW15 was to assess vertical extent of impacts in Warehouse 1 where the most significant contaminant source area is located (multiple chromic acid tanks and TCE use). Soil samples collected from those borings at depth do not exceed PCULs for COCs (see Table 7-2, samples MW14-44-45[11] and MW15-28-29). Groundwater samples collected from deep monitoring well MW15 also did not exceed PCULs for COCs (see Table 7-3, MW15 [total of three samples]).

The lateral extent of soil contamination is generally defined by the Property boundaries with Warehouse 1 as the boundary for some COCs; the lateral extent of soil PCUL exceedances of chromium, TCE, 1,4-dioxane, and petroleum hydrocarbons are generally within these boundaries[12] (Figures 7-1A, 7-1B, 7-1C, 7-2A, 7-2B, and 7-2C). Mercury and cPAHs exceed PCULs in some soil samples at or past the Property boundaries. However, it is unlikely that additional soil sampling further from the Property would result in delineation. The soil cPAH TEQ PCULs of 0.00031 mg/kg for vadose soil and 0.000016 mg/kg for saturated soil would likely frequently exceed in many samples beyond the Property given the highly urbanized/commercialized environment and given the PCULs are far lower than urban "background" concentrations. As noted previously, soil cPAH TEQ concentrations appear to increase away from Precision Engineering, and cPAH TEQ is not collocated with petroleum hydrocarbon exceedances on the Site. Where mercury exceeds PCULs in Site soils, the concentrations are often only slightly above 0.07 mg/kg (Washington State background soil concentration) and may also be elevated due to non-Precision Engineering sources.

The lateral extent of groundwater contamination is defined as generally within Warehouse 1 and, for some COCs downgradient to, but not past, the Kaspac/Chiyoda property. Shallow and deep monitoring wells MW18 through MW23 do not exceed PCULs for any COCs except for 1 aberrant result at MW23 as discussed in Section 7.3.1.

[11] A single detection of chrysene at an estimated concentration of 0.00173 mg/kg technically means the cPAH TEQ was "exceeded," however this is considered insignificant because chrysene is not a Site COC, and the concentration is far lower than urban "background" chrysene concentrations (Ecology 2011b).

[12] Hexavalent chromium and/or TPH exceed in soil slightly south of the southern property line (e.g. HA2) but are bounded by "clean" samples further to the south (e.g. HA28).

8.0 Conceptual Site Model

The CSM describes primary sources and release mechanisms, fate and transport processes, exposure pathways, and receptors. A preliminary CSM was developed in the Work Plan (GeoEngineers 2022). This section presents the refined CSM based on review of all data and information collected up to and including the RI.

The primary purpose of the CSM is to describe pathways by which human and ecological receptors could be exposed to site-related chemicals. A complete exposure pathway consists of four necessary elements: (1) a source and mechanism of chemical release to the environment, (2) an environmental transport medium for a released chemical, (3) a point of potential contact with the impacted medium (referred to as the exposure point), and (4) an exposure route (e.g., direct contact) at the exposure point. The CSM has been refined based on the current understanding of physical conditions, historical operations, and investigation results. The CSM is described below and is illustrated in Figure 8-1. Environmental transport and exposure pathways were evaluated based on the CSM, as discussed below.

8.1 PRIMARY SOURCES AND RELEASE MECHANISMS

Potential sources of contamination associated with historical operations at the Site were identified during previous environmental investigations. Leaks and spills of process chemicals, fuels, solvents, and wastes associated with former Precision operations. The following former features and associated activities may have contributed to contamination at the Site (see Figure 2-2 for historical site features and Figure 2-3 for current site features).

- Tanks and vaults associated with chrome-plating activities: plating tanks and plating tank vaults; caustics, acids, and wastewater tanks; and evaporator tanks and vaults.
- Solvent use and storage associated with parts-cleaning and -degreasing activities, including a steam cleaning pit and a TCE tank in the chrome-plating/steam cleaning area, an oil/water separator that received steam cleaning liquids, and a degreaser system in the cylinder shop.
- A waste-oil AST.
- Leaks of hydraulic oil associated with general equipment use.
- Grinding and machining of metal parts.
- Hydraulic cylinder test vault. The vault was checked twice in 2022 for volume of water to potentially allow for sample collection but was found to be dry and empty on both events.
- A previously suspected abandoned-in-place UST in the boiler room (see Figure 2-2). A geophysical survey was performed in the boiler room in 2021 and no USTs were found (Appendix H).

These potential sources may have released contamination to the soil, groundwater, indoor air, and ambient air via direct releases to surface and subsurface soil or groundwater; or via leaks or discharges from vaults, trenches, and drainage features.

8.2 FATE AND TRANSPORT PROCESSES

The preliminary CSM developed in the Work Plan (GeoEngineers 2023) identified the following eight potential mechanisms with the potential to influence the fate and transport of chemicals at the Site:

1. Natural biodegradation
2. Sorption to soil
3. Advection and dispersion in groundwater
4. Volatilization of chemicals from soil or groundwater to indoor air
5. Leaching of chemicals from soil to groundwater
6. Stormwater entrainment and discharge to the drainage ditch
7. Infiltration of chemicals in into stormwater features (e.g., stormwater pipes and/or the Site manhole) and subsequent discharge to the drainage ditch, and
8. Direct discharge of groundwater seepage to the drainage ditch.

The CSM is refined following the RI investigation (Section 5) to eliminate from consideration mechanism #8. Direct discharge of groundwater seepage to the ditch appears unlikely given that groundwater seepage to the ditch does not appear to be occurring based on the following: the ditch was observed to be dry during multiple site visits except during rain events (Section 5.3); the seasonal high groundwater elevation is below the deepest portion of the ditch (Figure 3-3); and COCs generally do not exceed PCULs in ditch water samples (Table 7-4)[13].

Contaminant releases to the surface or subsurface have the potential to migrate vertically downward to the water table, resulting in impacts to shallow soil and dissolved-phase impacts to groundwater in the shallow WBZ beneath the Site. Volatile contaminants in surface and subsurface soil and/or groundwater may also partition to the vapor phase, resulting in impacts to indoor or ambient air quality.

The preliminary CSM identified that dissolved-phase contamination has the potential to migrate via groundwater flow potentially resulting in downgradient groundwater or surface water impacts via discharge to the drainage ditch and subsequent stormwater transport and discharge to the LDW. The discharge of contaminants to the drainage ditch via groundwater appears unlikely as discussed above. Furthermore, dissolved-phase contaminant migration in groundwater to the LDW appears very unlikely based on the limited impacts observed in downgradient groundwater wells as discussed in Section 7.3 and 7.4, and as reiterated herein: Chromium and hexavalent chromium are present in MW5 groundwater at relatively high concentrations (maximum 163,000 µg/L hexavalent chromium), yet chromium and hexavalent chromium do not exceed PCULs in MW2 or MW6 just east of the building, nor do they exceed PCULs in MW21 and MW23 along 14th Avenue South. TCE and 1,4-dioxane also exceed PCULs in MW5 groundwater, yet they do not exceed PCULs in MW2 or MW6 except for one slight exceedance of 1,4-dioxane in MW2 during one sampling event only; 1,4-dioxane does not exceed further downgradient at MW21 or MW23.

Groundwater contaminant transport modeling was performed during a prior investigation, and a memorandum with the modeling results is included as Appendix M. The contaminants addressed by the modeling included the current (2024) COCs chromium, TCE, petroleum hydrocarbons, and selected PAHs, and also two COCs that have since been eliminated (copper and vinyl chloride). Model inputs were

[13] The March 28, 2023 sample contained elevated mercury and cPAHs that may have been associated with elevated turbidity, but it is noteworthy that chromium, hexavalent chromium, TCE, 1,4-dioxane, and TPH did not exceed PCULs in any ditch water samples.

considered environmentally conservative. Results indicated that the off-Property extent of Site groundwater impacts would not reach the LDW. Ecology accepted the modeling work as a reasonable indicator that Site groundwater would not directly discharge to the LDW but noted that the conclusions must be supported with data (Ecology 2009). The general lack of PCUL exceedances of COCs in wells MW19 through MW23 and ditch water samples SW1 and SW2 confirm the previous modeling work.

The Property is almost entirely covered with impervious surfaces except the vegetated strip along the southern border of the Property, north of the State Route 99 on-ramp. Therefore, stormwater runoff and discharge and wind entrainment and transport of surface soil are not currently complete environmental transport pathways for contamination associated with former Precision operations.

Potential mechanisms for transport of Site contamination to the portion of the ditch to the south of the Property include soil or groundwater infiltration into stormwater pipes or vaults through cracks with subsequent discharge through the outfall to the south of the Property (see Figure 2-3), or erosion and stormwater entrainment of contaminated shallow soil along the embankments of the ditch to the south. The only potential mechanism previously identified for Site contamination to be transported to the portion of the ditch located to the east of the Property was via groundwater transport and discharge. However, the groundwater table elevation is below that portion of the ditch thus confirming this pathway is incomplete (See Figure 3-2).

Historical stormwater runoff to the southern portion of the ditch during Precision's operations may have contributed contamination to the ditch. However, impacts appear to be limited to low concentrations of a single COC in vadose soil only - hexavalent chromium exceeded the PCUL in vadose soil samples in HA1, HA2, and HA6-11 in 2005/2006 (Figure 7-1A). However, hexavalent chromium does not exceed in vadose soil to the south in HA26 through HA29 (Figure 7-1A), nor does it exceed PCULs in saturated soils in borings SB34 through SB37 located in the ditch (Figure 7-2A). TCE and 1,4-dioxane do not exceed PCULs in vadose or saturated ditch soil (Figures 7-1B and 7-2B).

Petroleum hydrocarbons generally do not exceed in soil within the ditch except in one vadose soil sample (HA2 at 0.5 feet bgs) that is very limited in nature (Section 7.1.5). Chromium, hexavalent chromium, TCE, 1,4-dioxane and petroleum hydrocarbons do not exceed PCULs in the ditch water samples. Mercury and cPAH TEQ exceed PCULs in soil within the ditch but the cPAH TEQ exceedances appear unlikely to be related to former Precision Engineering operations. There is also no strong connection between site operations and the slightly elevated mercury concentrations in limited locations.

8.3 POTENTIAL EXPOSURE PATHWAYS

The following are potentially complete current or future exposure pathways (Figure 8-1).

- Dermal contact with, and/or incidental ingestion of chemicals in soil at the Property. This pathway is currently incomplete due to buildings and pavement; however, it could be a complete exposure pathway in the future if soils on the Property were exposed for any reason (e.g. utility work, Property redevelopment).
- Inhalation of airborne particles (dust) generated from soil on the Property. This is also only a future pathway if soils on the Property were exposed.

- Inhalation of air vapors emanating from soil and/or groundwater via vapor intrusion into the building or outdoors. TCE is the only air COC. This pathway is incomplete following the interim remedial actions performed in 2020 that is confirmed by the results from the six rounds of subsequent indoor air sampling that shows that TCE concentrations are less than the cleanup levels and falling with each sampling round (Appendices G-1 and G-2). The pathway could be a complete exposure pathway in the future if soil under Warehouse 1 was exposed.
- Dermal contact with or ingestion of chemicals in groundwater. This pathway is currently incomplete. Groundwater is currently not used for drinking water at or downgradient of the Site. It should be noted groundwater is likely non-potable as discussed in Section 6.2.1. Potential future pathways could include dermal contact by construction workers, by future property users if buildings or pavement were altered or replaced, and/or future (but unlikely) drinking water use.
- Dermal contact with or incidental ingestion of ditch soils or stormwater, or inhalation of soil dust, in the ditch south of the property. This pathway could be complete in the future if soil was disturbed. The pathway is currently a complete pathway but one that is considered minor/unlikely due to the following:
  - The limited area of contaminated soil in the ditch related to Precision's operations. The area is estimated to be less than 0.1 acres (i.e., in the vicinity of the stormwater outfall into the ditch).
  - The limited use of the ditch. People do not regularly use or enter the ditch, and the ditch is low quality habitat for terrestrial biota and surrounded on all sides by developed commercial businesses and highways.

The following pathways were considered to have inadequate data in the preliminary CSM in the Work Plan and can now be refined (Figure 8-1).

- Incidental ingestion of and dermal contact with chemicals in surface water and/or sediment in the LDW. These pathways are now incomplete. Site contaminants are not impacting the LDW via groundwater discharge, nor by stormwater discharge from the ditch.
- Consumption of aquatic organisms that have bioaccumulated chemicals in their tissues in the LDW. This pathway is now incomplete. The Site contaminants are not impacting aquatic organisms in the LDW.

8.4 POTENTIAL RECEPTORS

The following current and/or future human and ecological receptors may potentially be exposed to chemicals originating from the Site.

- Occupational workers or general public visitors at industrial businesses located within the Site boundaries (i.e., the Precision Property and, to a lesser extent, the ditch to the south).
- Construction and trench workers working within the Site boundaries.
- Terrestrial biota within the ditch (or on the Property if soils were exposed in the future).

8.5 TERRESTRIAL ECOLOGICAL EVALUATION

The terrestrial ecological evaluation (TEE) process is required at all MTCA sites where there has been a release or a threatened release of a hazardous substance that may pose a threat to the terrestrial environment. The TEE procedure is structured with the intent of protecting terrestrial wildlife at industrial

and commercial sites and protecting terrestrial plants, soil biota, and terrestrial wildlife at other sites, as provided under WAC 173-340-7490(3)(b). A simplified TEE was conducted for the Site to present sufficient information to evaluate the ecological protectiveness of current and future conditions at the Site (see WAC 173-340-7490[1][b]).

The Site does not meet the TEE exclusionary criteria. However, the Site qualifies for a simplified TEE because the site-specific TEE criteria outlined in WAC 173-340-7491(a) do not apply. The Site does not pose a threat to ecological receptors and the TEE evaluation is ended (Appendix N) based on the simplified TEE evaluation criteria (MTCA Table 749-1).

8.6 ENVIRONMENTAL JUSTICE CONSIDERATIONS

Effective January 1, 2024, WAC 173-340-380(5)(c) requires that persons assess impacts to likely vulnerable populations and overburdened communities during a Remedial Investigation. Ecology Publication No. 24-09-044 (Ecology 2024) defines criteria for whether a potentially exposed population includes a likely vulnerable population or overburdened community (VP/OC). These criteria were evaluated by comparing factors on the Washington State Department of Health's Environmental Health Disparities (EHD) Map with the criteria in Ecology Publication No. 24-09-044, which indicates VP/OCs are indicated by EHD ranks of 9 or 10. The Site and surroundings have an EHD Index rank of 10 (Appendix O). The communities are therefore vulnerable and/or overburdened. This will be taken into consideration during the feasibility study.

8.7 CLIMATE CHANGE RESILIENCY

WAC 173-340-360 requires that cleanup actions provide resilience to climate change impacts that have a high likelihood of occurring and severely compromising the long-term effectiveness of the cleanup. Sufficient data has been collected during this RI to inform cleanup decisions insofar as climate change resiliency is concerned and the data will be considered in the feasibility study. The Site is not located along or near a shoreline nor is it located within a current floodplain or flood hazard boundary based on King County iMap data. The only location of potential soil erosion would be the ditch area. However, the ditch area is heavily vegetated and not prone to high volume stormwater runoff events. The drainage basin to the ditch is estimated to be less than 6 acres in size.

9.0 Summary, Recommendations, and Conclusion

This Remedial Investigation report has been prepared for the former Precision Engineering, Inc. site in Seattle, Washington. The RI was prepared in accordance with Agreed Order No. DE 18079, and in accordance with the Work Plan (GeoEngineers 2021) and Work Plan Addendum (GeoEngineers 2022). The purpose of the RI is to characterize the Site to enable cleanup standards to be established and to develop and evaluate cleanup action alternatives in a feasibility study. This RI (third RI for the Site) synthesizes information from over 20 years of studies including more than 100 investigation locations, 180 soil samples and 100 groundwater samples for primary COCs (e.g. chromium, hexavalent chromium, TCE), as well as substantial analysis for soil vapor and air. Results indicate that soil contamination is generally limited to the Property and, for some COCs, within Warehouse 1. Groundwater contamination is generally limited to the Property and, for some COCs, to, but not past, the Kaspac/Chiyoda property. Indoor air COC (TCE) is currently less than the cleanup level following the 2020 Interim Actions. The results of the 2015 RI

for the Site preliminarily established that the Site is not contributing contamination to the LDW. The results of the current (2024) RI for the Site fills data gaps identified in the 2015 RI. Based on this further assessment, the Site is not contributing contamination to the LDW. In our opinion, this RI adequately characterizes the Site and is sufficient to prepare a Feasibility Study and draft Cleanup Action Plan.

10.0 References

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11.0 Limitations

We have prepared this report for the exclusive use of Dick Morgan for the Former Precision Engineering Property, located at 1231 South Director Street, Seattle, Washington. Dick Morgan may distribute copies of this report to authorized agents and regulatory agencies as may be required for the Project.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty, express or implied, applies to this report.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Tables

Table 2-1

Historical Site Features

Precision Engineering, Inc.
Seattle, Washington

Site Feature[1]	Description	Investigation History	Remediation History	Pre-RI Conditions (Through 2021)
Chromic Acid Plating Tanks 1 and 2	Both tanks were installed in 1968 within an in-ground containment vault located in the plating shop along the southern wall of warehouse 1. Tanks were removed and reconstructed in early 1990s during remedial actions, and tanks were removed from the Site in 2005.	Sweet Edwards/EMCON in 1988 and 1989. Yellow-stained soil was observed in an opening in the concrete floor. Thirteen hand-auger borings and borings B-1 through B-5 were completed adjacent to former Plating Tanks 1 and 2. Additional investigation was conducted in 2005 & 2006 by MFA to characterize soils near Plating Tanks 1 and 2.	Tanks were removed and reconstructed during remedial actions in 1990. Contaminated soil was excavated. Approximately 114 CY of soil and concrete removed - soils excavated up to 13 feet below ground surface (bgs). Groundwater was encountered in base of excavation.	Hexavalent chromium detected in four of five confirmation samples up to 73 milligrams per kilogram (mg/kg).
Chromic Acid Plating Tanks 3 through 6	Aboveground tanks with a concrete curb surrounding them. Tanks were located in the plating shop, northwest of former plating tanks 1 and 2. Concrete-lined trench drains were located to the east and west of these tanks. Tanks 3 through 6 were removed in 1992 during remedial action and replaced with Tanks 3a and 4a (see next row below).[2]	Plating Tanks 3, 4, 5 and 6 were removed in 1992 including a 35-foot by 40-foot section of concrete below the tanks. Visibly contaminated soils were removed within the excavation that extended up to 28 inches bgs. Chromium [Toxicity Characteristic Leaching Procedure (TCLP)] was detected in soils and concrete, and soil and concrete with low detections was used as excavation backfill. Additional geoprobe drilling was conducted in 2005 by MFA for soil and groundwater analysis. TCE and hexavalent chromium concentrations exceeded the respective MTCA Method A cleanup levels.	Tanks were removed in 1992. A portion of the soil was excavated. Concrete below the tanks was also removed. Excavation was backfilled with a portion of the excavated material.	Soil sampling results suggest that hexavalent chromium is present in soils including isolated TCE in soils.
Chromic Acid Plating Tanks 3a and 4a	Aboveground tanks installed in 1992 as replacement tanks for former plating tanks 3 through 6. Tank 3a was located west of former plating tanks 1 and 2, and Tank 4a was located north of former Tanks 3-6. All tanks were removed in 2005.[3]	Former plating tank 3a was located just west of tanks 1 and 2; see discussion for tanks 1 and 2 above. Former plating tank 4a was just north of tanks 3-6; see discussion of tanks 3-6 above.	Tanks 3a and 3b were removed in 2005.	Soil sampling results suggest that hexavalent chromium is present in soils including isolated TCE in soils.
Deep Vault (Chromic Acid Tank 7 and Other Tanks)	A containment vault with dimensions of 24 feet long, 8 feet wide, and 16 feet deep was installed in 1980 with three tanks placed within the vault. These tanks included Tank 7 (chromic acid), a sodium hydroxide strip tank and a sodium bicarbonate strip tank.[4] Tank 7 was 9 feet long, 7.5 feet wide, and 16 feet deep. All tanks in the deep vault were removed in 2005.	One 20-foot soil boring was drilled northeast of Tank 7 in 1989. Groundwater was encountered at 9 feet bgs. Soil was sampled for pH and metals. Chromium was not detected in leachate above the Extraction Procedure Toxicity Test (EP Tox) Method reporting limit of 0.005 milligrams per liter (mg/L). Three additional soil borings, GP-7, GP-9, and GP-10 were drilled north of the Tank 7 vault during MFA's 2005 investigation.	In 1989 groundwater was sampled from within the vault, concrete repaired, a liner installed at the base, and a new concrete slab was poured at the base of the vault.	The tanks were removed in 2005. The vault has been filled in and concrete poured to match the surrounding floor.
Temporary Plating Area	Temporary aboveground chromic acid plating tanks were used in the area north of Tank 7 in warehouse 2. The general area is labeled in Figure 2-2.	Several soil borings were advanced in 2005 near the temporary plating area (GP10, GP23, GP24). Soil samples were analyzed for chromium and hexavalent chromium, and concentrations were detected at concentrations less than the MTCA Method A cleanup level.	NA	No plating activities since 2005.
TCE Tank / Parts Washing	Parts washing and degreasing was conducted at the facility. Solvents used included trichloroethylene (TCE). Methyl ethyl ketone (MEK) and Stoddard solvent may also have been used. Prior to 1986, a closed-loop vapor degreaser system in the cylinder shop used TCE. A TCE tank was located in the chrome plating area near Tanks 3 through 6.	Explorations were performed near the former TCE tank. Exact locations not specified. Parts washing areas may have been investigated in conjunction with sampling at other areas of concern.	The area where the TCE tank was located was excavated; see discussion under Former Plating Tanks 3 through 6.	The former equipment has all been removed since 2005.
Trench Drains and Former Sanitary Sewer	Four trench drains located inside the plating shop discharged to the sanitary sewer prior to 1986. Two trench drains were located in the grinding shop, and two trench drains were located east and west of chromium plating tanks 3 through 6[5]. The trench drains were connected to the former sanitary sewer lines in warehouse 1. A former sanitary sewer line was also present in warehouse 2 although there were no floor drains shown connected to it. After July 1986, the trench drains were re-routed to drain to the containment vaults. The floor drains were filled with concrete in 2005.	Multiple soil borings and/or monitoring wells were advanced in 2005 and 2006 near trench drains and former sanitary sewer lines. TCE, chromium, and hexavalent chromium were detected at concentrations exceeding MTCA Method A cleanup levels in one or more locations.	The four trench drains were filled with concrete upon Precision closure in 2005.	Results of the 2005 soil sampling suggest hexavalent chromium and TCE are present in soils. Trench drains have been filled with concrete.

Site Feature[1]	Description	Investigation History	Remediation History	Pre-RI Conditions (Through 2021)
Scrubber Room	A cooling-water tank, chromic-acid evaporator, chromic-acid purification unit, and aboveground chromic-acid holding tank were located in the scrubber room. The evaporator was located within an in-ground concrete vault (evaporator pit). The evaporator was used to concentrate chromic-acid wastes.	Two soil borings were advanced south of the scrubber room in 2005. Soil samples from both locations were analyzed for chromium and hexavalent chromium. Chromium and hexavalent chromium concentrations were detected at concentrations less than the respective MTCA Method A cleanup levels.	All tanks and equipment were removed upon Precision closure in 2005. In 2020, the evaporator pit was decommissioned as part of interim actions. Decommissioning included removing standing water, sealing the pit floor with concrete, filling the pit with compacted 6-inch lifts of gravel, and pouring a 5-inch concrete slab over the gravel to match surrounding building floor grade.	Equipment removed in 2005 and the evaporator pit was decommissioned in 2020.
Covered Former Steam Cleaning Area	An outdoor, covered, steam-cleaning area was located south of the southeast corner of warehouse 1 and was used prior to 1986. A sanitary sewer drain was located in the area. Liquids were discharged via the drain to an oil/water separator. In 1986, the oil/water separator was dismantled and steam cleaning operations were moved inside (to the west to the 'steam clean pit'). A sodium hydroxide stripping tank was also located in the former outdoor covered area, as well as a compressor condensate tank.	Multiple borings were advanced in 2005 and 2015 around the former steam cleaning area (GP30, GP31, SB31, SB32 etc.). Contaminants of concern were either not detected or detected at concentrations less than the MTCA respective cleanup levels.	Sewer drain was decommissioned in 1986.	Area used for general equipment storage and employee break area now by Pacific Industrial Supply. The former drain is filled with concrete and is no longer a drain.
Steam Clean Pit Area	After 1986, steam cleaning operations were moved indoors to the steam clean pit area. A containment curb was located along the southern wall of the area. A sodium hydroxide tank was located east of the steam clean pit.	Multiple borings were advanced in 2005 and 2015 around the former steam cleaning area (GP29, SB3, MW4). Contaminants of concern were either not detected or detected at concentrations less than the respective MTCA cleanup levels.	NA	No longer used for steam cleaning. Sodium hydroxide tank removed in 2005. The curb was demolished to allow forklift traffic through.
Other Building Areas	Other areas not discussed above, located in the building areas south of Warehouse 1, include a hazardous waste storage area including a used oil AST; the boiler room, and the compressor room. The boiler reportedly used fuel from an underground storage tank (UST) in the boiler room. The UST was reportedly decommissioned in place and filled with slurry in 1992. The exact location of the UST is unknown. Other areas in warehouse 1 included the grinding shop, cylinder shop, paint booth, pump repair room, and auxiliary room.	Multiple soil borings and/or monitoring wells were advanced in 2005 through 2015.	NA	The used oil AST was removed in 2005. The boiler room UST was abandoned in place and filled with slurry in 1992. The current boiler uses natural gas. Hazardous waste is no longer stored in the former hazardous waste storage area. Pacific Industrial Supply utilizes an air compressor in the compressor room. The remaining areas formerly used by Precision Engineering are now used by Pacific Industrial Supply
Hydraulic Cylinder Test Vault	A hydraulic cylinder test vault is located approximately 10 feet west of warehouse 3. The vault measures 4 feet in diameter and is approximately 25 feet deep.	Two soil samples were collected in 2005 near the hydraulic cylinder test vault in 2005 (GP5).	None.	Vault not used since 2005. Vault is covered with heavy locked lid. The lid was opened on two occasions in 2022 to observe for water (for potential sampling) and the vault was observed to be dry on both occasions.
Drainage Ditch	A drainage ditch is located south of the property boundary. The ditch wraps around the eastern side of the adjacent Seattle Limousine (Kaspac/Chiyoda) property, and receives overland flow from the Kaspac/Chiyoda property as well as the Precision Engineering property, 14th Avenue South, and the Highway 99 northbound entrance ramp. There is one stormwater pipe outfall into the ditch from Precision Engineering, and two outfalls from Kaspac/Chiyoda. Water in the ditch can discharge to the south in one 24-inch diameter concrete culvert to the WSDOT interchange pond.	Soil samples were collected from the ditch in April 1986 (4 samples), 1989 (15 samples), and 2006. Hexavalent chromium was detected near the stormwater outfall south of Precision Engineering. Lead and arsenic were detected at concentrations greater than the respective Model Toxics Control Act (MTCA) cleanup levels at several other locations within the ditch.	In October 2007, approximately 100 cubic yards (CY) of soil were excavated from the ditch and disposed offsite. Following confirmation sampling, additional excavation was conducted at two ditch locations in March 2008. Excavated areas were backfilled and reseeded. Not all impacted soil was removed.	One confirmation soil sample from the 2007/2008 remediation activities contained concentrations of lead and arsenic above the cleanup level.

Notes:

References for this table include MFA 2005, MFA 2008, MFA 2011, and Kennedy Jenks 2015 (see report text for reference list).

[1] Refer to Figure 2-2 for locations of site features.

[2] Figures in previous reports variously show these tanks as labeled 3 through 6 from north to south, or south to north. This report labels them from north to south.

[3] Note that in historical reports these tanks are referred to as tanks 3 and 4. To avoid potential confusion with former tanks 3 and 4, this report has renamed these tanks 3a and 4a.

[4] Multiple historical reports indicate the tanks included Tank 7 (chromic acid), a sodium hydroxide strip tank, and a sodium bicarbonate strip tank. All historical report figures show Tank 7. For the remaining two tanks, all historical reports seem to erroneously indicate they were both sodium carbonate tanks.

[5] Most historical report figures show the four trench drains as shown in Figure 2-3. Some historical reports incorrectly only show the northern two trench drains, and/or show the southeastern trench drain in an incorrect location. Figure 2-3 is interpreted to be correct.

Table 2-2

Regulatory History

Precision Engineering, Inc.
Seattle, Washington

Date	Description
1966 to 2005	Precision Engineering Operations
1977 to 1985	Precision Engineering held a waste discharge permit from Municipality of Metropolitan Seattle (METRO). Waste Discharge Permit Number 7052.
1985	Waste Discharge Permit Number 7052 cancelled by METRO.
May 1986	Ecology Administrative Order DE 86-307, requiring Precision to evaluate their facility, develop a Spill Prevention Plan, and apply for stormwater and wastewater discharge permits.
February 1986	Municipality of Metropolitan Seattle Compliance Order (Penalty and Compliance Schedule).
1988	Precision performed soil and groundwater investigations (Sweet-Edwards/EMCON, multiple reports[1]).
December 1988	Pollution Control Hearing Board No. 87-13 stipulated Precision had successfully complied with Agreed Order DE 86-307.
1989	Precision performed additional soil and groundwater investigations (Sweet-Edwards/EMCON, multiple reports).
1990 to 1993	Precision Engineering performed an Independent Remedial Action (Precision Engineering report).
August 1994	Ecology issued NPDES ISGP No. S03-001925 to Precision Engineering
June 2005	Precision performed a Preliminary Soil and Groundwater Site Assessment (MFA report)
December 2005	Precision performed a Supplemental Remedial Investigation (MFA report)
March 2006	Ecology VCP Opinion Letter requesting additional characterization
March 2006	Ecology Hazardous Waste & Toxics Reduction (HWTR) inspection indicated no violations, but to dispose of some 55-gallon drums to be considered "clean closed."
2006 to 2007	Precision performed Final Remedial Investigation and Risk Assessment (MFA report)
September 2009	Ecology VCP Opinion Letter requesting additional characterization
2007 to 2010	Precision performed Final Feasibility Study (MFA report)
July 2011	Ecology VCP Opinion Letter requesting additional characterization
2014 to 2015	Ecology performed a Remedial Investigation (Kennedy/Jenks report).
December 2015	Ecology VCP Opinion Letter requesting additional characterization
2019 to 2020	Precision Engineering performed additional investigation, and an interim action
December 2020	Ecology and Precision Engineering entered into Agreed Order DE 18079
2022 to 2023	Precision Engineering performed additional investigation per the Agreed Order

Notes:

[1] Specific reports/dates are shown in Table 4-1.

Table 3-1

Well Construction Details

Precision Engineering, Inc.

Seattle, Washington

Well Identification	Install Date	Water Bearing Zone	Stickup or Flush	Top of Casing Elevation (NAVD88)[1]	Screened interval (feet bgs)[2]
MW1	6/16/1988	Deep	Stickup	26.83	30-40
MW2	6/15/1988	Shallow	Flush	22.57	10-20
MW3	6/15/1988	Shallow	Stickup	23.23	10-20
MW4	6/16/1988	Shallow	Stickup	24.28	15-25
MW5	12/15/2005	Shallow	Flush	23.58	10-20
MW6	12/15/2005	Shallow	Flush	21.66	10-20
MW7	12/16/2005	Deep	Flush	21.53	26-31
MW8	12/15/2005	Shallow	Flush	21.06	10-20
MW9	8/16/2014	Deep	Flush	20.65	31-36
MW10	8/16/2014	Shallow	Flush	20.50	10-20
MW11	8/16/2014	Shallow	Flush	22.47	10-20
MW12	3/29/2022	Shallow	Flush	23.55	8-13
MW13	3/29/2022	Deep	Flush	23.21	26-31
MW14	3/24/2022	Shallow	Flush	23.49	10-20
MW15	3/23/2022	Deep	Flush	23.31	27-32
MW16	3/22/2022	Deep	Flush	22.28	26-31
MW17	3/21/2022	Deep	Flush	22.35	26-31
MW18	3/28/2022	Shallow	Flush	22.51	5-15
MW19	5/26/2023	Shallow	Stickup	24.52	10-15
MW20	5/25/2023	Shallow	Stickup	22.28	14-24
MW21	5/31/2023	Shallow	Stickup	22.67	10-20
MW22	5/30/2023	Deep	Stickup	22.60	54-59
MW23	5/24/2023	Shallow	Stickup	23.09	8-18

Notes:

[1] All wells were surveyed by True North Land Surveying, Inc. Wells MW1 through MW18 surveyed on June 1, 2022. Wells MW19 through MW23 surveyed on June 29, 2023.

[2] Approximate depth of the screened interval in feet below ground surface (to the nearest foot).

All wells are 2-inch diameter Schedule 40 PVC, 0.010" slot size, installed in auger- or sonic-drilled boreholes of 9-inch or greater borehole size. All well screen annular spaces were filled with colorado silica sand.

bgs = below ground surface

NAVD88 = North American Vertical Datum of 1988

See Appendix A for boring logs and Appendix B for well survey data

Table 3-2

Depth to Water and Groundwater Elevations 2019 – 2023

Precision Engineering, Inc.

Seattle, Washington

Well Identification	Water Bearing Zone	Screened Interval (feet bgs)	Top of Casing Elevation (NAVD88)	Date	Depth to Water (ft below top of casing)[1]	Water Level Elevation (ft NAVD88)
MW1	Deep	30-40	26.83	07/23/2019	3.09	23.74
				12/17/2019	1.82	25.01
				01/29/2020	0.31	26.52
				04/29/2020	0.74	26.09
				05/31/2022	0.21	26.62
				07/11/2023	2.82	24.01
				12/05/2023	1.09	25.74
MW2	Shallow	10-20	22.57	07/24/2019	5.32	17.25
				12/17/2019	2.52	20.05
				01/29/2020	4.35	18.22
				04/28/2020	4.48	18.09
				05/31/2022	4.45	18.12
				07/11/2023	4.24	18.33
				12/05/2023	4.26	18.31
MW3	Shallow	10-20	23.23	07/23/2019	6.29	16.94
				12/17/2019	6.01	17.22
				01/29/2020	5.00	18.23
				04/28/2020	5.65	17.58
				05/31/2022	5.48	17.75
				07/11/2023	6.21	17.02
				12/05/2023	5.11	18.12
MW4	Shallow	15-25	24.28	07/23/2019	3.11	21.17
				12/17/2019	1.94	22.34
				01/29/2020	1.55	22.73
				04/29/2020	0.75	23.53
				05/31/2022	2.30	21.98
				07/11/2023	3.32	20.96
				12/05/2023	2.05	22.23
MW5	Shallow	10-20	23.58	07/23/2019	5.72	17.86
				12/17/2019	5.50	18.08
				01/29/2020	4.71	18.87
				04/29/2020	4.79	18.79
				05/31/2022	4.72	18.86
				07/11/2023	5.61	17.97
				12/05/2023	5.00	18.58

Well Identification	Water Bearing Zone	Screened Interval (feet bgs)	Top of Casing Elevation (NAVD88)	Date	Depth to Water (ft below top of casing)[1]	Water Level Elevation (ft NAVD88)
MW6	Shallow	10-20	21.66	07/23/2019	5.19	16.47
				12/17/2019	5.41	16.25
				01/29/2020	4.99	16.67
				04/28/2020	5.15	16.51
				05/31/2022	4.20	17.46
				07/11/2023	4.18	17.48
				12/05/2023	4.18	17.48
MW7	Deep	26-31	21.53	07/23/2019	5.81	15.72
				12/17/2019	5.71	15.82
				01/29/2020	5.32	16.21
				04/28/2020	6.55	14.98
				05/31/2022	5.15	16.38
				07/11/2023	6.16	15.37
				12/05/2023	5.92	15.61
MW8	Shallow	10-20	21.06	07/23/2019	4.61	16.45
				12/18/2019	5.36	15.70
				01/29/2020	3.29	17.77
				04/28/2020	3.61	17.45
				05/31/2022	4.45	16.61
				07/11/2023	4.80	16.26
				12/05/2023	3.25	17.81
MW9	Deep	31-36	20.65	07/23/2019	5.91	14.74
				12/17/2019	6.13	14.52
				01/29/2020	5.32	15.33
				04/28/2020	5.18	15.47
				05/31/2022	3.20	17.45
				07/11/2023	5.81	14.84
				12/05/2023	5.40	15.25
MW10	Shallow	10-20	20.50	07/23/2019	4.20	16.30
				12/18/2019	4.76	15.74
				01/29/2020	3.66	16.84
				04/28/2020	6.11	14.39
				05/31/2022	3.13	17.37
				07/11/2023	4.67	15.83
				12/05/2023	3.75	16.75
MW11	Shallow	10-20	22.47	07/23/2019	5.22	17.25
				12/17/2019	5.19	17.28
				01/29/2020	4.35	18.12
				04/28/2020	4.59	17.88
				05/31/2022	4.15	18.32
				07/11/2023	4.88	17.59
				12/05/2023	4.12	18.35

Well Identification	Water Bearing Zone	Screened Interval (feet bgs)	Top of Casing Elevation (NAVD88)	Date	Depth to Water (ft below top of casing)[1]	Water Level Elevation (ft NAVD88)
MW12	Shallow	8-13	23.55	--	--	--
				--	--	--
				--	--	--
				--	--	--
				05/31/2022	0.70	22.85
				07/11/2023	0.12	23.43
				12/05/2023	0.30	23.25
MW13	Deep	26-31	23.21	--	--	--
				--	--	--
				--	--	--
				--	--	--
				05/31/2022	artesian	>23.21
				07/11/2023	artesian	>23.21
				12/05/2023	artesian	>23.21
MW14	Shallow	10-20	23.49	--	--	--
				--	--	--
				--	--	--
				--	--	--
				05/31/2022	4.34	19.15
				07/11/2023	4.60	18.89
				12/05/2023	5.79	17.70
MW15	Deep	27-32	23.31	--	--	--
				--	--	--
				--	--	--
				--	--	--
				05/31/2022	3.82	19.49
				07/11/2023	4.37	18.94
				12/05/2023	4.12	19.19
MW16	Deep	26-31	22.28	--	--	--
				--	--	--
				--	--	--
				--	--	--
				05/31/2022	4.18	18.10
				07/11/2023	4.51	17.77
				12/05/2023	8.14	14.14
MW17	Deep	26-31	22.35	--	--	--
				--	--	--
				--	--	--
				--	--	--
				05/31/2022	4.16	18.19
				07/11/2023	4.37	17.98
				12/05/2023	3.50	18.85

Well Identification	Water Bearing Zone	Screened Interval (feet bgs)	Top of Casing Elevation (NAVD88)	Date	Depth to Water (ft below top of casing)[1]	Water Level Elevation (ft NAVD88)
MW18	Shallow	5-15	22.51	--	--	--
				--	--	--
				--	--	--
				--	--	--
				05/31/2022	4.45	18.06
				07/11/2023	5.97	16.54
				12/05/2023	4.28	18.23
MW19	Shallow	10-15	24.52	--	--	--
				--	--	--
				--	--	--
				--	--	--
				--	--	--
				07/11/2023	9.21	15.31
				12/05/2023	6.49	18.03
MW20	Shallow	15-25	22.28	--	--	--
				--	--	--
				--	--	--
				--	--	--
				--	--	--
				07/11/2023	7.17	15.11
				12/05/2023	5.03	17.25
MW21	Shallow	10-20	22.67	--	--	--
				--	--	--
				--	--	--
				--	--	--
				--	--	--
				07/11/2023	6.61	16.06
				12/05/2023	4.72	17.95
MW22	Deep	54-59	22.60	--	--	--
				--	--	--
				--	--	--
				--	--	--
				--	--	--
				07/11/2023	7.75	14.85
				12/05/2023	7.17	15.43
MW23	Shallow	8-18	23.09	--	--	--
				--	--	--
				--	--	--
				--	--	--
				--	--	--
				07/11/2023	6.78	16.31
				12/05/2023	5.38	17.71

Notes:

[1] Depth to water measured from the north rim of PVC

-- = Well not installed until 2022 or 2023

NAVD88 = North American Vertical Datum of 1988

Table 4-1

Investigation Summary

Precision Engineering, Inc.
Seattle, Washington

Date of Work	Associated Reference	Sample Locations	Media Sampled	Laboratory Analysis Conducted	Summary of Activities	Used in RI?
May 1988	Sweet-Edwards/EMCON, Inc. 1988. Status Report Soils/Ground Water Investigation, Seattle Facility. Dated 15 December 1988.	HA-1 through HA-6	Soil	Extraction Procedure Toxicity Test (EP TOX) Chromium	Hand-augered locations adjacent to Plating Tank 1.	No, only EP Tox was conducted (and soil was later excavated)
June 1988	Sweet-Edwards/EMCON, Inc. 1988. Status Report Soils/Ground Water Investigation, Seattle Facility. Dated 15 December 1988.	MW1 through MW4	Groundwater	Total Chromium	Four groundwater monitoring wells constructed. No soil samples were submitted for chemical analysis.	Historical groundwater data not used; groundwater data from 2019 to 2023 is used
August 1988	Sweet-Edwards/EMCON, Inc. 1988. Status Report Soils/Ground Water Investigation, Seattle Facility. Dated 15 December 1988.	P-1	None	NA	Piezometer installed in August 1988 for evaluation of groundwater elevations. A boring log for P-2 installed in April 1989, was appended to this report.	No samples collected
March 1989	Sweet-Edwards/EMCON, Inc. 1989a. Tank #7 Precision Engineering, Inc. Seattle, Washington June 1989.	B-1	Soil	EP Tox metals, pH	Characterization of deep soil near Chromic Acid Tank 7 pit. Temporary well installed (no aqueous samples); however, was abandoned in April 1989.	No, only EP Tox and pH was conducted
March 1989	Sweet-Edwards/EMCON, Inc. 1989b. Precision Engineering, Drainage Ditch Soil EP Tox Results. Dated 28 April 1989.	S1 through S6	Soil	EP Tox metals	Surface soil samples from the drainage ditch south of the Former Precision Engineering property.	No, only EP Tox was conducted
March 1989	Sweet-Edwards/EMCON, Inc. 1989c. Precision Engineering, Letter regarding results from soil and groundwater investigation. Dated 24 August 1989.	S1 through S6, PEI-B1 through PEI-B4	Soil	EP Tox metals	Results only; interpretation in the February 1990 report.	No, only EP Tox was conducted
September 1989	Sweet-Edwards/EMCON, Inc. 1989d. Surface Soil Sampling, Precision Engineering Seattle Facility. Dated 30 August 1989.	HA-7 through HA-13	Soil	EP Tox Chromium	Second phase of hand auger investigation locations near Plating Tanks 1 and 2.	No, only EP Tox was conducted
November 1989	Sweet-Edwards/EMCON, Inc. 1990. Soil Sample Results: Tank No. 1 and Drainage Ditch, Precision Engineering, Inc. Seattle Facility. Dated 4 January 1990.	B-1 through B-5	Soil	EP Tox Chromium	Additional soil samples near Plating Tank 1.	No, only EP Tox was conducted
November 1989	Sweet-Edwards/EMCON, Inc. 1990. Soil Sample Results: Tank No. 1 and Drainage Ditch, Precision Engineering, Inc. Seattle Facility. Dated 4 January 1990.	S-7 through S-13	Soil	EP Tox Chromium	Soil samples in the drainage ditch near the S-6 sampling location.	No, only EP Tox was conducted
March 1989 and November 1989	Sweet-Edwards/EMCON, Inc. 1990. Soil Sampling, Precision Engineering, Inc. Seattle Washington. Dated 26 February 1990.	S1 through S13 and B1 through B4	Soil	EP Tox Chromium	Summarizes Phase I (locations S1 through S6), "background" samples B1 through B4, Phase II (S7 through S13).	No, only EP Tox was conducted
March and April 1993	Maul Foster Alongi. 1993. Precision Engineering, Inc. Independent Remedial Action Report. Dated 2 July 1993.	WP-1 through WP-14, NW-1, EW-1, MW-1, BW-1, PE-430B, PE-430E, PE-430S, PE-430W, PE-430N, BW-2	Soil and concrete	TCLP chromium and total chromium	Summarizes removal of Plating Tanks 3 through 6, and repairs to Tank 7. Also summarizes characterization activities conducted previously in 1988 through 1990, and remediation during excavation of Tanks 1 and 2.	No, soil/concrete was later excavated[1]
June 2005	Maul Foster Alongi. 2005. Preliminary Soil and Groundwater Site Assessment Report. Dated 5 August 2005.	GP1 through GP11	Soil and groundwater	Metals, VOCs, petroleum hydrocarbons, hexavalent chromium, PCBs and PAHs	Summarizes soil and groundwater sampling conducted following closure of Precision Engineering operations.	Yes

Date of Work	Associated Reference	Sample Locations	Media Sampled	Laboratory Analysis Conducted	Summary of Activities	Used in RI?
December 2005	Maul Foster Alongi. 2006. Supplemental Remedial Investigation. Dated 22 February 2006.	GP12 through GP31, MW5 through MW8, HA1 through HA5	Soil and groundwater	Metals, VOCs, petroleum hydrocarbons, hexavalent chromium, PCBs and PAHs	Summarizes second phase of soil sampling by Geoprobe, groundwater reconnaissance sampling, and construction of three additional monitoring wells. Includes investigation in the drainage ditch.	Yes
April 2006 through January 2007	Maul Foster Alongi. 2008. Final Remedial Investigation and Risk Assessment Report. Dated 21 July 2008.	HA6 through HA12, A1 through A3, A5 through A7, and IA1 through IA9	Soil, groundwater, indoor air and sub-slab soil vapor	VOCs, hexavalent chromium, PAHs	Summary of prior sampling activities. New activities as part of this report included indoor air and sub-slab vapor sampling, and further characterization in the drainage ditch.	Yes
October 2007 through July 2010	Maul Foster Alongi. 2011. Final Feasibility Study. Dated 3 March 2011.	B1 through B13, P1 through P9, SS1 through SS6, C1 through C3	Soil and groundwater	Metals, VOCs, petroleum hydrocarbons, hexavalent chromium, and PAHs	Additional groundwater samples from existing monitoring well network. An interim action was conducted in the drainage ditch.	No, sample data is limited to ditch soil that was later excavated, and outdated groundwater data
2014 to 2015	Kennedy/Jenks Consultants. 2015. Remedial Investigation Report, Former Precision Engineering Property. Dated August 6, 2015.	SB1 through SB19, MW9 through MW11, and IA-SHOP, AMB-OUTDOOR, SS-1 air/vapor samples	Soil, groundwater, indoor air, outdoor air, and sub-slab soil vapor	Metals, VOCs, petroleum hydrocarbons, hexavalent chromium	Soil, groundwater, and air/vapor sampling performed throughout the site and offsite (SB19). Includes installing three additional monitoring wells (MW9 through MW11).	yes
2019	No report.	MW1 through MW11	Groundwater	Metals, VOCs, petroleum hydrocarbons, hexavalent chromium, PAHs	Groundwater samples collected from MW1 through MW11 in July 2019 and December 2019.	yes
2020	No report.	MW1 through MW11	Groundwater	Metals, VOCs, petroleum hydrocarbons, hexavalent chromium, PAHs	Groundwater samples collected from MW1 through MW11 in January 2020 and April 2020.	yes
2020	Maul Foster Alongi. 2020. Vapor Report. Vapor Intrusion Assessment, Interim Remedial Actions, Vapor Intrusion Priority Work Plan. Dated 30 December 2020.	A8 through A11, IA8 through IA20, AA1 through AA5, RAD1 through RAD5, EVAPPIT	Indoor air, outdoor air, sub-slab soil vapor; and one water sample	Air/vapor analyzed for TCE and breakdown products, other VOCs. Water sample analyzed for TCE, metals, TPH	Air/vapor sampling performed throughout the site before, during and after interim actions to address indoor air concerns. One water sample analyzed from evaporator pit.	yes
2022	This RI.	SB20 through SB33, MW12 through MW18, RAD-1, RAD-4, RAD-5	Soil, groundwater, indoor air	Metals, VOCs, SVOCs, petroleum hydrocarbons, hexavalent chromium, PAHs, PCBs, PFAS, conventionals	Additional soil borings and monitoring wells; soil, groundwater sampled. Continued indoor air monitoring for TCE+.	Yes
2023	This RI.	SB34 through SB37, MW19 through MW23, SW-1, SWS-2, HA-26 through HA-29, RAD-1, RAD-4, RAD-5	Soil, groundwater, indoor air	Metals, VOCs, SVOCs, petroleum hydrocarbons, hexavalent chromium, PAHs, PCBs, PFAS, conventionals	Additional monitoring wells; soil, groundwater, and ditch water sampled. Continued indoor air monitoring for TCE+.	Yes

Notes:

[1] Some soil and/or concrete was reportedly replaced in the excavation. However, the soil sample data is quite outdated, exact locations unknown, and superseded by multiple more recent investigations spanning 2005 to 2023.

VOCs = volatile organic compounds

PAHs = polycyclic aromatic hydrocarbons

PCBs = polychlorinated biphenyls

Table 5-1

Groundwater Field Parameters and Geochemical Indicators

Precision Engineering, Inc.

Seattle, Washington

Well	WBZ	Date	Temp (C)	DO (mg/L)	SPC (uS/cm)	Sal (ppt)	pH	ORP (mV)	Turb (NTU)	Fe^{2+} (mg/L)	TOC (mg/L)	NO_3 (mg/L)	SO_4 (mg/L)	Diss. Mn (mg/L)
MW1	D	7/13/23	14.7	1.59	301	0.14	8.28	32.6	1.57	--	--	--	--	--
		12/5/23	12.4	1.26	299	0.14	8.25	114.7	3.99	--	--	--	--	--
MW2	S	7/14/23	17.8	2.20	2,848	1.49	6.75	-46.9	5.97	--	--	--	--	--
		12/6/23	--[1]	--	--	--	--	--	--	--	--	--	--	--
MW3	S	7/13/23	15.4	2.15	446	0.22	6.59	-20.5	2.13	3.5	15.34	0.1 U	0.1 U	1.27
		12/5/23	15.8	0.19	437	0.21	6.50	-96.3	6.98	2.0	14.60	0.1 U	0.1 U	1.20
MW4	S	7/21/23	17.7	1.70	469	0.23	7.81	-9.7	3.99	--	--	--	--	--
		12/6/23	14.9	0.65	479	0.23	7.77	100.0	4.64	--	--	--	--	--
MW5	S	7/20/23	17.9	0.53	705	0.35	6.58	114.9	1.94	0.0	3.66	0.1 U	95	0.420
		12/5/23	18.3	0.45	638	0.31	6.51	187.8	1.87	0.0	3.61	0.1 U	97.9	0.285
MW6	S	7/21/23	16.7	4.17	3,247	1.71	6.77	-54.3	5.85	--	--	--	--	--
		12/7/23	16.1	0.14	3,351	1.77	6.66	-171.7	23.71	--	--	--	--	--
MW7	D	7/24/23	16.4	1.35	2,227	1.15	6.95	128.9	1.15	--	--	--	--	--
		12/7/23	15.3	0.19	2,215	1.14	6.84	-24.7	0.10	--	--	--	--	--
MW8	S	7/14/23	16.5	2.15	1,780	0.91	6.52	-17.9	11.5	1.5	35.15	0.1 U	0.1 U	3.19
		12/6/23	15.7	0.16	1,167	0.58	6.54	-119.9	32.28	1.5	35.42	0.1 U	0.1 U	3.29
MW9	D	7/14/23	16.2	1.07	2,385	1.23	7.05	2.7	1.07	2.0	21.96	0.1 U	4.89	1.99
		12/7/23	14.9	0.19	2,358	1.22	6.96	-96.5	0.10	4	20.44	0.1 U	4.91	2.30
MW10	S	7/14/23	16.5	1.95	3,879	2.06	6.66	-49.1	3.87	2.5	106.7	2.73	0.1 U	1.63
		12/7/23	15.8	0.15	3,907	2.08	6.00	-140.4	21.12	4.0	114.9	0.1 U	0.1 U	1.49
MW11	S	7/20/23	16.7	0.33	1,178	0.59	6.66	-12.7	4.41	5.5	54.92	0.1 U	0.1 U	1.76
		12/5/23	16.1	0.14	1,225	0.61	6.57	-127.9	10.03	1.5	55.22	0.1 U	1.19	1.57
MW12	S	7/24/23	17.0	0.80	291	0.14	8.30	134.2	4.77	--	--	--	--	--
		12/4/23	15.3	0.17	297	0.14	8.23	109.9	16.81	--	--	--	--	--
MW13	D	7/24/23	14.0	1.57	339	0.16	8.11	127.5	3.27	0.0	0.78	0.1 U	35.5	0.115
		12/4/23	13.9	0.08	347	0.17	8.08	-81.4	14.1	0.0	1.29	0.1 U	36.6	0.118
MW14	S	7/24/23	17.2	0.58	303	0.14	7.54	60.0	2.11	1.0	13.89	0.1 U	20.6	0.282
		12/4/23	17.6	0.40	307	0.15	7.59	-158.9	4.49	0.0	1.82	0.1 U	19.2	0.253
MW15	D	7/20/23	17.6	0.65	290	0.14	7.87	61.5	1.57	0.0	--	--	--	--
		12/4/23	17.6	0.37	294	0.14	8.00	-186.2	8.12	0.0	--	--	--	--
MW16	D	7/21/23	16.4	1.80	951	0.47	7.21	-44.1	4.59	--	--	--	--	--
		12/5/23	16.0	0.51	929	0.46	7.11	-147.1	3.60	--	--	--	--	--
MW17	D	7/20/23	16.8	2.49	461	0.22	7.70	-37.4	4.84	1.0	1.19	0.1 U	26.1	0.173
		12/5/23	15.5	0.28	416	0.20	7.65	-176.5	51.24	0.5	1.75	0.1 U	27.3	0.135
MW18	S	7/13/23	17.4	1.56	957	0.47	6.70	-71.8	35.6	--	--	--	--	--
		12/5/23	14.1	0.12	971	0.48	6.75	-150.3	16.04	--	--	--	--	--
MW19	S	7/25/23	15.3	0.29	622	0.30	6.77	65.3	4.15	0.5	8.41	0.1 U	3.96	1.97
		12/6/23	13.5	0.09	600	0.29	6.63	-108.5	19.08	1.5	14.33	0.1 U	1.91	2.27
MW20	S	7/25/23	15.9	0.58	1169	0.59	6.76	52.6	4.82	--	--	--	--	--
		12/6/23	13.7	0.08	1141	0.57	6.77	-134.3	65.74	--	--	--	--	--
MW21	S	7/25/23	15.6	0.41	629	0.31	6.86	-20.1	1.74	3.0	--	--	--	--
		12/6/23	13.4	0.14	723	0.36	6.78	-163.5	21.71	2.0	--	--	--	--
MW22	D	7/25/23	15.4	1.01	2933	1.54	8.11	-67.7	3.70	--	--	--	--	--
		12/6/23	13.7	0.16	2988	1.57	7.75	-165.1	4.72	--	6.73	0.1 U	165	0.246
MW23	S	7/24/23	15.5	0.56	726	0.36	6.95	-63.9	4.87	1.5	32.32	0.1 U	1.01	4.49
		12/6/23	14.4	0.14	803	0.40	6.89	-218.2	22.39	6.5	36.46	0.1 U	0.1 U	5.74

Notes:

[1] There was insufficient groundwater recharge to obtain parameters and a groundwater sample within one day.

WBZ = water-bearing zones: S = Shallow WBZ; D = Deep WBZ

Temp (c) = Temperature in Celsius

DO = Dissolved oxygen

SPC = Specific Conductance in microSiemens per centimeter

Sal = Salinity in parts per thousand

ORP = Oxidation reduction potential in millivolts

uS/cm = microSiemens per centimeter

Turb = Turbidity in nephelometric turbidity units

Fe^{2+} = Ferrous iron

TOC = Total Organic Carbon

NO_3 = Nitrate as nitrogen

SO_4 = Sulfate

NTU = Nephelometric turbidity unit

Diss Mn = Dissolved Manganese

mg/L = milligram per liter

U = Not detected

-- Not performed

mV = Millivolt

ppt = parts per trillion

Table 6-1

PCULs for Soil, Groundwater, and Air

Precision Engineering, Inc.

Seattle, Washington

Chemical	Vadose Soil PCUL (mg/kg)	Saturated Soil PCUL (mg/kg)	Groundwater PCUL (µg/L)	Air PCUL (µg/m^3)	Sub-Slab Soil Gas Screening Level (µg/m^3)
Metals					
Antimony	5.4	0.27	6	0.14	NE
Arsenic	7.3	7.3	8	0.00058	NE
Beryllium	63	3.2	4	0.0010	NE
Cadmium	0.77	0.77	1.2	0.0014	NE
Chromium, total	260	260	100	NE	NE
Chromium, trivalent	548	48[1]	27	NE	NE
Chromium, hexavalent	0.018	0.00089	0.05	0.00001	NE
Copper	36	36	3.1	NE	NE
Lead	250	56	5.6	NE	NE
Mercury	0.07	0.07	0.025	0.14	4.57
Nickel	48	48	8.2	0.01	NE
Selenium	5.2	0.26	50	9.14	NE
Silver	0.32	0.02	1.9	NE	NE
Thallium	0.088	0.0044	0.062	NE	NE
Zinc	101	85	81	NE	NE
Petroleum Hydrocarbons					
Gasoline range hydrocarbons	100	100	800	140	4667
Diesel range hydrocarbons	2000	2000	500	140	NE
Oil range hydrocarbons	2000	2000	500	NE	NE
Total diesel & oil range hydrocarbons	2000	2000	500	NE	NE
Volatile Organic Compounds (VOCs)					
Acetone	29	2.1	7200	NE	NE
Acrolein	0.0044	0.00032	1.1	0.01	0.30
Acrylonitrile	0.00012	0.0000083	0.03	0.04	1.23
Benzene	0.0088	0.00056	1.60	0.32	10.68
Bromobenzene	0.56	0.033	64	27	912
Bromochloromethane	NE	NE	NE	18	NE
Bromoethane	NE	NE	NE	NE	NE
Bromoform	0.078	0.005	12	2.27	75.76
Bromomethane	0.051	0.0033	11	2.29	76.27
n-Butylbenzene	14	0.71	400	NE	NE
sec-Butylbenzene	25	1.3	800	NE	NE
tert-Butylbenzene	19	1	800	NE	NE
Carbon disulfide	4.1	0.25	800	320	10667
Carbon tetrachloride	0.0029	0.00015	0.35	0.42	13.89
Chlorobenzene	0.86	0.051	100	22.88	763
Chloroethane	NE	NE	14667	4576	152533
2-Chloroethyl vinyl ether	NE	NE	NE	NE	NE
Chloroform	0.074	0.0048	1.2	0.11	3.62
Chloromethane	NE	NE	153	41.12	1370.67
3-Chloro-1-propene	0.011	0.0007	2.08	0.42	NE
2-Chlorotoluene	1.9	0.11	160	NE	NE
4-Chlorotoluene	NE	NE	NE	NE	NE

Chemical	Vadose Soil PCUL (mg/kg)	Saturated Soil PCUL (mg/kg)	Groundwater PCUL (µg/L)	Air PCUL (µg/m^3)	Sub-Slab Soil Gas Screening Level (µg/m^3)
Dibromochloromethane	0.01	0.0007	2.2	NE	NE
1,2-Dibromo-3-chloropropane	0.00089	0.000056	0.042	0.00011	0.0037
Dibromomethane	0.42	0.028	80	1.82	60.80
Dichlorobromomethane	0.013	0.00089	1.4	0.07	2.24
trans-1,4-Dichloro-2-butene	NE	NE	NE	0.0006	NE
Dichlorodifluoromethane	38	0.53	4.2	45.76	1525
1,1-Dichloroethane	0.041	0.0026	7.7	1.56	52.08
1,2-Dichloroethane (EDC)	0.023	0.0016	3.5	0.096	3.21
1,1-Dichloroethylene	0.046	0.0025	7.0	91.36	3045
cis-1,2-Dichloroethylene	0.079	0.0052	16	NE	NE
trans-1,2-Dichloroethylene	0.52	0.032	77	18.29	609.52
1,2-Dichloroethylene (mixed isomers)	0.37	0.023	72	NE	NE
1,2-Dichloropropane	0.016	0.001	3.1	0.68	22.52
1,3-Dichloropropane	0.88	0.057	160	NE	NE
2,2-Dichloropropane	NE	NE	NE	NE	NE
1,1-Dichloropropene	NE	NE	NE	NE	NE
cis-1,3-Dichloropropene	0.0023	0.00014	0.44	NE	NE
trans-1,3-Dichloropropene	0.0023	0.00014	0.44	NE	NE
Ethane	NE	NE	NE	NE	NE
Ethylbenzene	0.18	0.01	21	458	15253
Ethylene dibromide (EDB)	0.0003	0.00002	0.05	0.0042	0.14
2-Hexanone	0.17	0.012	40	13.71	457
Isopropylbenzene (cumene)	15	0.79	800	182	6080
4-Isopropyltoluene	NE	NE	NE	NE	NE
Methyl ethyl ketone (2-butanone)	20	1.4	4800	2288	76267
Methyl iodide	NE	NE	NE	NE	NE
Methyl isobutyl ketone (4-methyl-2-pentanone)	2.7	0.19	640	1371	45707
Methyl tert-butyl ether	0.1	0.0072	24	9.62	320.51
Methylene chloride	0.022	0.0015	5.0	66	2200
n-Propylbenzene	16	0.88	800	458	15253
Styrene	2.2	0.12	100	458	15253
1,1,1,2-Tetrachloroethane	0.0098	0.00063	1.7	0.34	11.26
1,1,2,2-Tetrachloroethane	0.0012	0.00008	0.22	0.043	1.44
Tetrachloroethylene (PCE)	0.029	0.0016	2.9	9.62	320.51
Toluene	0.72	0.044	102	2288	76267
1,2,3-Trichlorobenzene	0.20	0.011	6.4	NE	NE
1,1,1-Trichloroethane	1.5	0.084	200	2288	76267
1,1,2-Trichloroethane	0.005	0.00033	0.90	0.09	3.05
Trichloroethylene (TCE)	0.0044	0.00027	0.70	0.33	11
Trichlorofluoroethane	NE	NE	NE	NE	NE
Trichlorofluoromethane	23	0.79	119	320	10667
1,2,3-Trichloropropane	0.0000024	0.00000015	0.00038	0.14	NE
Trichlorotrifluoroethane	7605	116	167	2288	76267
1,2,3-Trimethylbenzene	1.3	0.073	80	27.43	914.29
1,2,4-Trimethylbenzene	1.3	0.072	80	27.43	914.29
1,3,5-Trimethylbenzene	1.3	0.071	80	27.43	914.29
Vinyl acetate	33	2.3	7809	91.36	3045
Vinyl chloride	0.0011	0.000056	0.18	0.28	9.41

Chemical	Vadose Soil PCUL (mg/kg)	Saturated Soil PCUL (mg/kg)	Groundwater PCUL (µg/L)	Air PCUL (µg/m^3)	Sub-Slab Soil Gas Screening Level (µg/m^3)
Total xylenes	0.94	0.055	106	45.76	1525
Semivolatile Organic Compounds (SVOCs)					
Benzoic acid	0.65	0.17	589	NE	NE
Benzyl alcohol	0.057	0.017	56	NE	NE
Bis(2-chloroethoxy)methane	NE	NE	NE	NE	NE
Bis(2-chloroethyl)ether	0.00022	0.000014	0.040	0.0075	NE
Bis(chloromethyl)ether	0.0045	0.0045	0.00020	0.00004	NE
Bis(2-chloro-1-methylethyl)ether	1.81	0.12	320	NE	NE
Bis(2-ethylhexyl) phthalate	0.1	0.0051	0.046	1	NE
4-Bromophenyl phenyl ether	NE	NE	NE	NE	NE
Butyl benzyl phthalate	0.0036	0.00018	0.013	NE	NE
Carbazole	NE	NE	NE	NE	NE
4-Chloroaniline	0.0027	0.00017	0.44	NE	NE
4-Chloro-3-methylphenol	0.5	0.028	36	NE	NE
2-Chloronaphthalene	5.4	0.28	100	NE	NE
2-Chlorophenol	0.2	0.011	17	NE	NE
4-Chlorophenyl phenyl ether	NE	NE	NE	NE	NE
Dibutyl phthalate	0.28	0.015	8.0	NE	NE
1,2-Dichlorobenzene	0.035	0.003	4.5	91	3045
1,3-Dichlorobenzene	0.023	0.0013	2.0	NE	NE
1,4-Dichlorobenzene	0.11	0.0081	5.0	0.23	7.58
3,3'-Dichlorobenzidine	0.000034	0.000002	0.0033	0.01	NE
2,4-Dichlorophenol	0.069	0.0043	10	NE	NE
Diethyl phthalate	0.2	0.034	93	NE	NE
Dimethyl phthalate	0.071	0.019	59	NE	NE
2,4-Dimethylphenol	0.029	0.0023	2.9	NE	NE
1,2-Dinitrobenzene	8	8	1.6	NE	NE
1,3-Dinitrobenzene	8	8	1.6	NE	NE
1,4-Dinitrobenzene	8	8	1.6	NE	NE
4,6-Dinitro-2-methylphenol	0.13	0.0073	7.0	NE	NE
2,4-Dinitrophenol	0.13	0.0092	32	NE	NE
2,4-Dinitrotoluene	0.0028	0.00016	0.18	0.028	NE
2,6-Dinitrotoluene	0.0009	0.000051	0.058	NE	NE
Di-n-octyl phthalate	6.2	0.33	2.3	NE	NE
1,4-Dioxane	0.0018	0.00013	0.44	0.50	NE
Hexachlorobenzene	0.000008	0.0000004	0.000005	0.01	0.18
Hexachlorobutadiene	0.00021	0.000011	0.010	0.11	3.79
Hexachlorocyclopentadiene	0.032	0.0017	1.0	0.09	3.05
Hexachloroethane	0.00016	0.0000097	0.020	0.23	7.58
Isophorone	0.49	0.032	92	913.6	NE
2-Methoxynaphthalene	NE	NE	NE	NE	NE
2-Methylphenol (o-cresol)	0.069	0.0064	11	273.6	NE
3-Methylphenol (m-cresol)	4000	4000	800	273.6	NE
4-Methylphenol (p-cresol)	0.67	0.062	106	273.6	NE
2-Nitroaniline	1	0.064	160	0.023	NE
3-Nitroaniline	NE	NE	NE	NE	NE
4-Nitroaniline	0.018	0.0013	4.4	2.74	NE
Nitrobenzene	0.1	0.0065	16	0.063	NE
2-Nitrophenol	NE	NE	NE	NE	NE
4-Nitrophenol	NE	NE	NE	NE	NE

Chemical	Vadose Soil PCUL (mg/kg)	Saturated Soil PCUL (mg/kg)	Groundwater PCUL (µg/L)	Air PCUL (µg/m^3)	Sub-Slab Soil Gas Screening Level (µg/m^3)
n-Nitrosodiphenylamine	0.028	0.0016	0.55	0.96	NE
n-Nitrosodi-n-propylamine	0.00012	0.000007	0.013	0.0013	NE
Pentachlorophenol	0.000032	0.0000018	0.0020	0.49	NE
Phenol	0.42	0.048	101	91.36	NE
1,2,4-Trichlorobenzene	0.031	0.0019	0.96	0.91	30.45
2,4,5-Trichlorophenol	0.0013	0.00007	0.037	NE	NE
2,4,6-Trichlorophenol	0.092	0.0053	8.0	0.8	NE
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	0.5	0.028	5.3	NE	NE
Acenaphthylene	1.3	1.3	NE	NE	NE
Anthracene	0.96	0.051	2.1	NE	NE
Benzo(a)anthracene	NE	NE	0.00016	NE	NE
Benzo(b)fluoranthene	NE	NE	0.00016	NE	NE
Benzo(k)fluoranthene	NE	NE	0.0016	NE	NE
Total benzofluoranthenes	3.2	3.2	NE	NE	NE
Benzo(g,h,i)perylene	0.67	0.67	NE	NE	NE
Benzo(a)pyrene	0.00031	0.000016	0.000016	0.00091	NE
Chrysene	NE	NE	0.016	NE	NE
Dibenz(a,h)anthracene	NE	NE	0.000016	NE	NE
Dibenzofuran	0.54	0.029	3.1	NE	NE
Fluoranthene	1.7	0.09	1.8	NE	NE
Fluorene	0.54	0.029	3.7	NE	NE
Indeno(1,2,3-cd)pyrene	NE	NE	0.00016	NE	NE
1-Methylnaphthalene	0.082	0.0042	1.5	NE	NE
2-Methylnaphthalene	0.67	0.039	14	NE	NE
Naphthalene	0.039	0.0021	1.4	0.074	2.45
Phenanthrene	1.5	1.5	NE	NE	NE
Pyrene	2.6	0.14	2.0	NE	NE
Total cPAH TEQ	0.00031	0.000016	0.0097	0.0011	NE
Polychlorinated Biphenyls (PCBs)					
Total PCB Aroclors	0.000011	0.00000055	0.000007	0.0044	NE
Total PCB TEQ	0.0000000069	0.00000000035	0.0000000044	0.000000066	NE
Per- and Polyfluoroalkyl Substances (PFAS)					
Perfluorobutanesulfonic acid (PFBS)	0.0018	0.00012	0.35	NE	NE
Perfluorohexanoic acid (PFHxA)	0.035	0.0025	8	NE	NE
Perfluorohexanesulfonic acid (PFHxS)	0.00041	0.000026	0.065	NE	NE
Perfluorononanoic acid (PFNA)	0.00008	0.0000048	0.009	NE	NE
Perfluorooctanesulfonic acid (PFOS)	0.00017	0.00001	0.015	NE	NE
Perfluorooctanoic acid (PFOA)	0.000063	0.000004	0.01	NE	NE

Notes:

PCUL = Preliminary Cleanup Level

mg/kg = milligram per kilogram

µg/L = microgram per liter

µg/m^3 = microgram per cubic meter

cPAH = carcinogenic polycyclic aromatic hydrocarbon

TEQ = Total toxic equivalent concentration

NE = Not established

[1] LDW PCUL is 27.1 mg/kg, however the PCUL has been adjusted for Puget Sound background of 48 mg/kg (Ecology 1994) per WAC 173-340-700(6)(d)

Table 7-1

Summary of Vadose Soil Exceedances

Precision Engineering, Inc.

Seattle, Washington

Location Identification		GP1	GP2	GP3	GP4	GP5	GP6	GP7	GP8	GP9	GP10	GP11	GP12	GP12	GP13	GP14	GP15	GP16
Sample Identification		GP1-S-1.5	GP2-S-1.0	GP3-S-2.0	GP4-S-1.5	GP5-S-1.5	GP6-S-1.0	GP7-S-2.0	GP8-S-1.5	GP9-S-2.0	GP10-S-1.5	GP11-S-2.0	GP12-S-3.0	GP12-S-5.0	GP13-S-1.0	GP14-S-3.0	GP15-S-3.0	GP16-S-1.0
Sample Date		6/7/05	6/7/05	6/9/05	6/16/05	6/16/05	6/16/05	6/16/05	6/16/05	6/17/05	6/17/05	6/17/05	12/13/05	12/13/05	12/14/05	12/13/05	12/13/05	12/13/05
Start Depth (feet)		1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1
End Depth (feet)		1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1
Analyte	**Soil PCUL - Vadose**																	
Metals (mg/kg)																		
Arsenic	7.3	--	**11.3**	--	--	--	--	--	--	--	--	--	**2.79**	--	**9.45**	**3**	**7.76**	--
Cadmium	0.77	--	0.542 U	--	--	--	--	--	--	--	--	--	0.591 U	--	**1.29**	0.609 U	**0.714**	--
Chromium	260	**205**	**2680**	**915**	**1230**	**18.9**	**584**	**23.6**	**22.2**	**43.3**	**21.8**	**21.7**	**24.3**	**25.2**	**26.6**	**24.8**	**24.7**	**30**
Chromium, Hexavalent	0.018	**152**	**523**	**27.7**	**53.4**	0.111 U	**627**	**0.119**	**0.661**	**2.97**	**0.142**	**0.573**	1.1 U	1 U	1.4 U	2 U	1.2 U	2.1 U
Chromium, Trivalent	548	**53**	**2157**	**887.3**	**1176.6**	**18.9**	ND	**23.481**	**21.539**	**40.33**	**21.658**	**21.127**	**24.3**	**25.2**	**26.6**	**24.8**	**24.7**	**30**
Copper	36	--	--	--	--	--	--	--	--	--	--	--	**17.6**	--	**29**	**14.4**	**30.4**	--
Lead	250	--	**34.8**	--	--	--	--	--	--	--	--	--	**2.45**	--	**21.1**	**2.2**	**18.7**	--
Mercury	0.07	--	--	--	--	--	--	--	--	--	--	--	0.131 U	--	0.168 U	0.12 U	0.154 U	--
Nickel	48	--	--	--	--	--	--	--	--	--	--	--	**25.6**	--	**21.8**	**32.9**	**16.4**	--
Selenium	5.2	--	--	--	--	--	--	--	--	--	--	--	0.591 U	--	0.593 U	0.609 U	0.529 U	--
Thallium	0.088	--	--	--	--	--	--	--	--	--	--	--	0.591 U	--	0.593 U	0.609 U	0.529 U	--
Zinc	101	--	--	--	--	--	--	--	--	--	--	--	**32.9**	--	**84.9**	**38.4**	**71.6**	--
Total Petroleum Hydrocarbons (mg/kg)																		
Diesel-range hydrocarbons	2,000	**49.9**	**53.3**	**48.9**	**60.4**	**48.4**	**52.4**	**49.2**	**51.9**	**51.5**	**52.6**	**52.8**	10.7 U	--	--	--	17.7	--
Lube oil-range hydrocarbons	2,000	**99.8**	**107**	**97.7**	**121**	**96.9**	**105**	**98.5**	**104**	**103**	**105**	**106**	26.6 U	--	--	--	59.1	--
Total TPH	2,000	**149.7**	**160.3**	**146.6**	**181.4**	**145.3**	**157.4**	**147.7**	**155.9**	**154.5**	**157.6**	**158.8**	ND	--	--	--	76.8	--
Volatile Organic Compounds (VOCs) (mg/kg)																		
Benzene	0.0088	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	--	--	--	--	--	--
cis-1,2-Dichloroethylene	0.079	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	0.00286 U	0.00273 U	0.0119 U	0.00293 U	0.00326 U	0.00222 U
Methylene Chloride	0.022	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	**0.0179**	0.00837 U	--	--	--	--	--	--
Trichloroethylene	0.0044	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	**0.0405**	0.00781 U	0.00986 U	0.00742 U	0.0112 U	**0.0872**	0.00239 U	0.00227 U	0.00989 U	**0.00449**	0.00272 U	**0.00363**
Vinyl Chloride	0.0011	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	0.00239 U	0.00227 U	0.00989 U	0.00244 U	0.00272 U	0.00185 U
Semivolatile Compounds (SVOCs) (mg/kg)																		
1,4-Dioxane	0.0018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																		
1-Methylnaphthalene	0.082	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	0.00031	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	0.039	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	--	--	--	--	--	--
Total cPAH TEQ	0.00031	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																		
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																		
Perfluorohexanesulfonic acid (PFHxS)	0.00041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.00017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location Identification		GP16		GP17		GP18		GP19		GP20		GP21		GP22		GP24		GP25		GP26		GP27		GP28		GP29		GP30		GP31		GP32		HA1	
Sample Identification		GP16-S-5.0		GP17-S-1.0		GP18-S-1.0		GP19-S-1.0		GP20-S-1.0		GP21-S-1.0		GP22-S-1.0		GP24-S-3.0		GP25-S-1.0		GP26-S-1.0		GP27-S-1.0		GP28-S-1.0		GP29-S-1.0		GP30-S-1.0		GP31-S-1.0		GP32-S-1.0		HA1-0.5	
Sample Date		12/13/05		12/13/05		12/13/05		12/13/05		12/14/05		12/14/05		12/13/05		12/14/05		12/12/05		12/12/05		12/12/05		12/12/05		12/12/05		12/12/05		12/12/05		12/14/05		12/15/05	
Start Depth (feet)		5		1		1		1		1		1		1		3		1		1		1		1		1		1		1		1		0.5	
End Depth (feet)		5		1		1		1		1		1		1		3		1		1		1		1		1		1		1		1		0.5	
Analyte	**Soil PCUL - Vadose**																																		
Metals (mg/kg)																																			
Arsenic	7.3	--		--		**3.55**		--		**5.47**		--		--		**3.06**		--		--		--		**1.89**		**5.91**	U	--		**5.72**		--		**3.81**	
Cadmium	0.77	--		--		0.615	U	--		0.592	U	--		--		0.542	U	--		--		--		0.542	U	0.577	U	--		0.549	U	--		0.576	U
Chromium	260	**26.2**		**254**		**4430**		**22**		**17.6**		**25.6**		**46.8**		**30.2**		**19.3**		**23.7**		**22**		**20.5**		**29.6**		**27.2**		**19.2**		**6750**		**34.3**	
Chromium, Hexavalent	0.018	2.1	U	1.7	U	**2300**	J	2.5	U	1.1	U	1	U	**2.9**	J	1	U	1.8	U	2.2	U	2.2	U	2.2	U	2.4	U	2.1	U	2.1	U	**3500**	J	2.9	U
Chromium, Trivalent	548	**26.2**		**254**		**2130**	J	**22**		**17.6**		**25.6**		**43.9**	J	**30.2**		**19.3**		**23.7**		**22**		**20.5**		**29.6**		**27.2**		**19.2**		**3250**	J	**34.3**	
Copper	36	--		--		**113**		--		**29.4**		--		--		**16.5**		--		--		--		**12.6**		**15.6**		--		**40.2**		--		**32.8**	
Lead	250	--		--		**26.3**		--		**10.1**		--		--		**3.09**		--		--		--		**1.54**		**18**		--		**14.2**		--		**34.6**	
Mercury	0.07	--		--		**1.1**		--		0.152	U	--		--		0.115	U	--		--		--		0.144	U	**0.876**		--		0.131	U	--		0.132	U
Nickel	48	--		--		**23.1**		--		**13**		--		--		**28.5**		--		--		--		**22.5**		**27**		--		**14.4**		--		**21.3**	
Selenium	5.2	--		--		0.615	U	--		0.592	U	--		--		0.542	U	--		--		--		0.542	U	0.577	U	--		0.549	U	--		0.576	U
Thallium	0.088	--		--		0.615	U	--		0.592	U	--		--		0.542	U	--		--		--		0.542	U	0.577	U	--		0.549	U	--		0.576	U
Zinc	101	--		--		**40.9**		--		**49.3**		--		--		**44.3**		--		--		--		**24.9**		**36.9**		--		**46.1**		--		**140**	
Total Petroleum Hydrocarbons (mg/kg)																																			
Diesel-range hydrocarbons	2,000	11.2	U	**11.6**		**156**		**52.8**		**198**		11.2	U			11.1	U			**36.4**				10.8	U	**80.4**		**14.9**		**145**		11.3	U	**210**	
Lube oil-range hydrocarbons	2,000	28	U	**63.1**		**742**		**172**		**301**		28	U			27.8	U			**121**				27	U	**249**		**90.5**		**1300**		28.3	U	**1170**	
Total TPH	2,000	ND		**74.7**		**898**		**224.8**		**499**		ND				ND				**157.4**				ND		**329.4**		**105.4**		**1445**		ND		**1380**	
Volatile Organic Compounds (VOCs) (mg/kg)																																			
Benzene	0.0088	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		0.00172	U
cis-1,2-Dichloroethylene	0.079	0.00255	U	0.00251	U	0.00283	U	0.0032	U	0.00315	U	0.00261	U	0.00272	U	0.00309	U	0.00256	U	0.00241	U	0.00263	U	0.00224	U	**0.00494**		0.00287	U	0.00242	U	0.00284	U	0.00344	U
Methylene Chloride	0.022	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		0.00401	U
Trichloroethylene	0.0044	0.00212	U	0.00209	U	**0.00343**		0.00267	U	0.00262	U	0.00218	U	0.00226	U	0.00258	U	0.00213	U	0.00201	U	0.00219	U	0.00187	U	0.00247	U	0.00239	U	0.00202	U	0.00237	U	0.00287	U
Vinyl Chloride	0.0011	0.00212	U	0.00209	U	0.00236	U	0.00267	U	0.00262	U	0.00218	U	0.00226	U	0.00258	U	0.00213	U	0.00201	U	0.00219	U	0.00187	U	0.00247	U	0.00239	U	0.00202	U	0.00237	U	0.00287	U
Semivolatile Compounds (SVOCs) (mg/kg)																																			
1,4-Dioxane	0.0018	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Bis(2-Ethylhexyl) Phthalate	0.1	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Diethyl Phthalate	0.2	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																																			
1-Methylnaphthalene	0.082	--		--		**0.0167**		0.0124	U	0.012	U	--		--		--		--		--		--		--		0.0119	U	--		0.0117	U	--		0.0151	U
Benzo(a)anthracene	NE	--		--		**0.0235**		0.0124	U	0.012	U	--		--		--		--		--		--		--		**0.075**		--		0.0117	U	--		0.0151	U
Benzo(a)pyrene	0.00031	--		--		0.0111	U	0.0124	U	0.012	U	--		--		--		--		--		--		--		**0.0571**		--		0.0117	U	--		0.0151	U
Benzo(b)fluoranthene	NE	--		--		**0.0746**		0.0124	U	0.012	U	--		--		--		--		--		--		--		**0.0611**		--		0.0117	U	--		0.0151	U
Benzo(k)fluoranthene	NE	--		--		**0.056**		0.0124	U	0.012	U	--		--		--		--		--		--		--		**0.0703**		--		0.0117	U	--		0.0151	U
Chrysene	NE	--		--		**0.0717**		**0.0127**		0.012	U	--		--		--		--		--		--		--		**0.122**		--		**0.034**		--		0.0151	U
Dibenzo(a,h)anthracene	NE	--		--		0.0111	U	0.0124	U	0.012	U	--		--		--		--		--		--		--		**0.0162**		--		0.0117	U	--		0.0151	U
Indeno(1,2,3-c,d)pyrene	NE	--		--		0.0111	U	0.0124	U	0.012	U	--		--		--		--		--		--		--		**0.026**		--		0.0117	U	--		0.0151	U
Naphthalene	0.039	--		--		**0.0179**		0.0124	U	0.012	U	--		--		--		--		--		--		--		0.0119	U	--		0.0117	U	--		0.00573	U
Total cPAH TEQ	0.00031	--		--		**0.03649**		**0.01066**		0.00906	U	--		--		--		--		--		--		--		**0.09548**		--		**0.01028**		--		0.0114	U
Polychlorinated Biphenyls (PCBs) (mg/kg)																																			
PCB-Aroclor 1254	NE	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Total PCB Aroclors	0.000011	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																																			
Perfluorohexanesulfonic acid (PFHxS)	0.00041	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Perfluorooctanesulfonic acid (PFOS)	0.00017	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Perfluorooctanoic acid (PFOA)	0.000063	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	

Location Identification		HA1	HA2	HA2	HA6	HA7	HA8	HA9	HA10	HA11	HA12	HA26	HA27	HA28	HA29	SB3	SB-20	SB-21
Sample Identification		HA1-1.5	HA2-0.5	HA2-1.5	HA6-0.5	HA7-0.5	HA8-0.5	HA9-0.5	HA10-0.5	HA11-0.5	HA12-0.5	HA26-1	HA27-1	HA28-1	HA29-1	SB3-2	SB-20-2-3	SB-21-3-4
Sample Date		12/15/05	12/15/05	12/15/05	4/18/06	4/18/06	4/18/06	4/19/06	4/19/06	4/19/06	4/19/06	9/22/23	9/22/23	9/22/23	9/22/23	8/8/14	3/8/22	3/7/22
Start Depth (feet)		1.5	0.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	1	2	2	3
End Depth (feet)		1.5	0.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.5	1	1	1.5	2	3	4
Analyte	**Soil PCUL - Vadose**																	
Metals (mg/kg)																		
Arsenic	7.3	**2.88 J**	**3.94**	**2.71**	--	--	--	--	--	--	**9**	**9.38**	**7.27**	**9.87**	**3.93**	--	**2.59**	**2.9**
Cadmium	0.77	0.55 U	**0.984**	0.613 U	--	--	--	--	--	--	**0.48 JB**	**0.29**	**0.38**	**0.36**	**0.17**	--	**0.07 J**	**0.12**
Chromium	260	**110**	**206**	**215**	--	--	--	--	--	--	**46 B**	**24.6**	**24.5**	**30.2**	**20.4**	--	**21**	**39.2**
Chromium, Hexavalent	0.018	**6.5 J**	**89 J**	**3.2 J**	**3.33**	**0.22**	**0.26**	**3.4**	**0.074**	**0.45**	--	0.564 UJ	0.529 U	0.574 U	0.53 U	--	0.538 UJ	0.575 UJ
Chromium, Trivalent	548	**103.5 J**	**117 J**	**211.8 J**	--	--	--	--	--	--	--	**24.6**	**24.5**	**30.2**	**20.4**	--	**21**	**39.2**
Copper	36	**16.2 J**	**70.9**	**28.2**	--	--	--	--	--	--	**39 B**	**31.8**	**49.2**	**45.3**	**14.8**	--	**12.5**	**23.8**
Lead	250	**15.3 J**	**81.4**	**36.5**	--	--	--	--	--	--	**220 B**	**78.5**	**71.6**	**82.7**	**12**	--	**2.13**	**3.92**
Mercury	0.07	**0.328**	0.142 U	**0.232**	--	--	--	--	--	--	--	**0.222**	**0.0493**	**0.195**	**0.0855**	--	**0.0163 J**	**0.0292**
Nickel	48	**24.7 J**	**36**	**31**	--	--	--	--	--	--	--	**27.5**	**25.3**	**35.3**	**26.1**	--	**26.7**	**46.8**
Selenium	5.2	0.55 U	0.723 U	0.613 U	--	--	--	--	--	--	--	**0.8**	**0.58**	**0.72**	**0.55**	--	**0.69**	**1.06**
Thallium	0.088	0.55 U	0.723 U	0.613 U	--	--	--	--	--	--	--	--	--	--	--	--	**0.05 J**	**0.1 J**
Zinc	101	**70.8 J**	**341**	**134**	--	--	--	--	--	--	--	**105**	**109**	**111**	**58.3**	--	**32.3**	**60.6**
Total Petroleum Hydrocarbons (mg/kg)																		
Diesel-range hydrocarbons	2,000	**37.6**	**636**	**73.8**	--	--	--	--	--	--	--	28 U	27 U	30 U	27 U	**10000**	27 U	29 U
Lube oil-range hydrocarbons	2,000	**182**	**3170**	**409**	--	--	--	--	--	--	--	56 U	54 U	61 U	54 U	**12000**	54 U	58 U
Total TPH	2,000	**219.6**	**3806**	**482.8**	--	--	--	--	--	--	--	ND	ND	ND	ND	**22000**	ND	ND
Volatile Organic Compounds (VOCs) (mg/kg)																		
Benzene	0.0088	0.00207 U	0.00219 U	0.00138 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethylene	0.079	0.00415 U	0.00438 U	0.00277 U	--	--	--	--	--	--	--	0.00102 U	0.0008 U	0.00095 U	0.00074 U	--	0.00061 U	0.00095 U
Methylene Chloride	0.022	0.00484 U	0.00511 U	0.00323 U	--	--	--	--	--	--	--	**0.00624**	**0.0436**	**0.00479**	**0.0801**	--	--	--
Trichloroethylene	0.0044	0.00346 U	0.00365 U	0.0023 U	--	--	--	--	--	--	--	0.00102 U	0.0008 U	0.00095 U	0.00074 U	--	0.00061 U	0.00095 U
Vinyl Chloride	0.0011	0.00346 U	0.00365 U	0.0023 U	--	--	--	--	--	--	--	0.00102 U	0.0008 U	0.00095 U	0.00074 U	--	0.00061 U	0.00095 U
Semivolatile Compounds (SVOCs) (mg/kg)																		
1,4-Dioxane	0.0018	--	--	--	--	--	--	--	--	--	--	1 U	1 U	1 U	1 U	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																		
1-Methylnaphthalene	0.082	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--	--	--	**0.00915**	**0.0197**	**0.00809**	**0.00107 J**	--	--	--
Benzo(a)anthracene	NE	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--	--	--	**0.0185**	**0.0275**	**0.0195**	**0.00296 J**	--	--	--
Benzo(a)pyrene	0.00031	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--	--	--	**0.0273**	**0.0333**	**0.0224**	**0.00455 J**	--	--	--
Benzo(b)fluoranthene	NE	0.0129 U	**0.0222**	**0.0204**	--	--	--	--	--	--	--	**0.0298**	**0.0352**	**0.0282**	**0.00662**	--	--	--
Benzo(k)fluoranthene	NE	0.0129 U	**0.0205**	**0.0151**	--	--	--	--	--	--	--	**0.0141**	**0.0182**	**0.0147**	**0.00302 J**	--	--	--
Chrysene	NE	0.0129 U	**0.0276**	**0.0179**	--	--	--	--	--	--	--	**0.0333**	**0.045**	**0.0298**	**0.0057**	--	--	--
Dibenzo(a,h)anthracene	NE	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--	--	--	**0.00753**	**0.00897**	**0.0074**	**0.00133 J**	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--	--	--	**0.0234**	**0.0267**	**0.0198**	**0.00427 J**	--	--	--
Naphthalene	0.039	0.00691 U	0.0073 U	0.00461 U	--	--	--	--	--	--	--	**0.00876**	**0.012**	**0.00567**	0.005 U	--	--	--
Total cPAH TEQ	0.00031	0.00974 U	**0.01599**	**0.01185**	--	--	--	--	--	--	--	**0.04335**	**0.05294**	**0.03793**	**0.00774 J**	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																		
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																		
Perfluorohexanesulfonic acid (PFHxS)	0.00041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.00017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location Identification		SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-29	SB-30	SB-31	SB-33	SB-34	SB-35	SB-36	SB-37	MW-13	MW-14
Sample Identification		SB-22-0.5-1.5	SB-23-1.5-2.5	SB-24-3-4	SB-25-3.5-4.5	SB-26-3-4	SB-27-3-4	SB-28-2.5-3	SB-29-0-2	SB-30-3-4	SB-31-2-3	SB-33-2-3	SB34-2-3	SB35-3-4	SB36-2-3.5	SB37-2-3	MW-13-3-4	MW-14-2-3
Sample Date		3/10/22	3/9/22	3/8/22	3/8/22	3/7/22	3/7/22	3/7/22	3/10/22	3/9/22	3/9/22	3/9/22	6/2/23	6/2/23	6/2/23	6/2/23	3/29/22	3/24/22
Start Depth (feet)		0.5	1.5	3	3.5	3	3	2.5	0	3	2	2	2	3	2	2	3	2
End Depth (feet)		1.5	2.5	4	4.5	4	4	3	2	4	3	3	3	4	3.5	3	4	3
Analyte	**Soil PCUL - Vadose**																	
Metals (mg/kg)																		
Arsenic	7.3	**3.04**	**9.93**	**2.88**	**3.64**	**2.91**	**3.35**	**8.5**	**1.86**	**8.08**	**9.51**	**5.96**	**2.5**	**2.71**	**2.19**	**5.08**	**7.32**	**6.66**
Cadmium	0.77	**0.07 J**	**0.54**	**0.06 J**	**0.07 J**	**0.07 J**	**0.1 J**	**0.39**	**0.05 J**	**0.54**	**0.13**	**0.16**	**0.08 J**	**0.08 J**	**0.07 J**	**0.16**	0.309 U	**0.24**
Chromium	260	**23.5**	**20.3**	**23.4**	**20.2**	**22.6**	**23**	**23.8**	**22.3**	**18.5**	**20.7**	**465**	**21.2**	**20.4**	**20.9**	**30**	**40**	**36.1 J**
Chromium, Hexavalent	0.018	0.576 U	0.624 UJ	0.54 UJ	0.574 UJ	0.524 U	0.569 U	0.627 U	0.557 U	0.575 U	0.591 U	**83.6**	0.527 U	0.541 U	0.518 U	0.579 U	0.618 U	0.618 U
Chromium, Trivalent	548	**23.5**	**20.3**	**23.4**	**20.2**	**22.6**	**23**	**23.8**	**22.3**	**18.5**	**20.7**	**465**	**21.2**	**20.4**	**20.9**	**30**	**40**	**36.1 J**
Copper	36	**14.4**	**29.5**	**11.8**	**12.6**	**12.2**	**14**	**30**	**11.1**	**31.1**	**29.4**	**18.2**	**11.8**	**10.4**	**12.8**	**20.2**	**23.4**	**20.2**
Lead	250	**2.7**	**16.9**	**2.09**	**2.68**	**2.34**	**2.85**	**16.6**	**2.1**	**130**	**17.8**	**3.24**	**2.18**	**1.92**	**2.13**	**9.43**	**5.06**	**13.1**
Mercury	0.07	**0.0253**	**0.0781**	**0.0118 J**	**0.012 J**	**0.00649 J**	**0.0178 J**	**0.095**	**0.022**	**0.0848**	**0.114**	**0.047**	**0.0126 J**	**0.0132 J**	**0.018 J**	**0.042**	**0.0336**	**0.0469**
Nickel	48	**32.1**	**18.2**	**31.9**	**32**	**29.5**	**28.3**	**20.4**	**26.2**	**19.6**	**17.6**	**37.7**	**27.3**	**26.8**	**31**	**35.3**	**36.5**	**38.8**
Selenium	5.2	**0.62**	**0.89**	**0.64**	**0.61**	**0.82**	**0.72**	**0.95**	**0.5 J**	**0.62**	**0.95**	**0.71**	**0.95**	**1.1**	**0.48 J**	**0.68**	**2.21**	**0.75**
Thallium	0.088	**0.07 J**	**0.1 J**	**0.05 J**	**0.07 J**	**0.06 J**	**0.08 J**	**0.1 J**	**0.05 J**	**0.07 J**	**0.08 J**	**0.08 J**	--	--	--	--	**0.129**	**0.12 J**
Zinc	101	**37.9**	**60.7**	**33.2**	**37.3**	**34.8**	**43.1**	**61**	**32.4**	**83.8**	**53.7**	**41.2**	**31.2**	**30.5**	**33.9**	**49.4**	**67**	**72**
Total Petroleum Hydrocarbons (mg/kg)																		
Diesel-range hydrocarbons	2,000	29 U	32 U	28 U	29 U	27 U	28 U	**26**	28 U	**28.1**	**36.2**	28 U	27 U	27 U	27 U	30 U	33 U	28 U
Lube oil-range hydrocarbons	2,000	58 U	63 U	56 U	58 U	54 U	57 U	**129**	56 U	**186**	**161**	55 U	54 U	54 U	54 U	59 U	65 U	57 U
Total TPH	2,000	ND	ND	ND	ND	ND	ND	**155**	ND	**214.1**	**197.2**	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs) (mg/kg)																		
Benzene	0.0088	--	--	--	--	--	--	--	0.00056 U	--	--	**0.00032 J**	--	--	--	--	--	0.00072 U
cis-1,2-Dichloroethylene	0.079	0.001 U	0.00089 U	**0.00478**	**0.0278**	0.00066 U	0.00068 U	**0.00036 J**	0.00056 U	0.00079 U	0.00077 U	**0.00087**	0.00094 U	0.00098 U	0.00112 U	0.00107 U	0.00072 U	0.00072 U
Methylene Chloride	0.022	--	--	--	--	--	--	--	0.0028 U	--	--	0.00316 U	0.00472 U	0.00491 U	0.00561 U	0.00535 U	--	0.0036 U
Trichloroethylene	0.0044	0.001 U	0.00089 U	**0.00914**	**0.0172**	0.00066 U	0.00068 U	0.00092 U	0.00056 U	0.00079 U	0.00077 U	**0.00973**	0.00094 U	0.00098 U	0.00112 U	0.00107 U	0.00072 U	0.00072 U
Vinyl Chloride	0.0011	0.001 U	0.00089 U	0.00092 U	0.00072 U	0.00066 U	0.00068 U	0.00092 U	0.00056 U	0.00079 U	0.00077 U	0.00063 U	0.00094 U	0.00098 U	0.00112 U	0.00107 U	0.00072 U	0.00072 U
Semivolatile Compounds (SVOCs) (mg/kg)																		
1,4-Dioxane	0.0018	--	--	--	--	--	--	--	0.334 U	--	--	0.0199 U	0.335 U	0.335 U	0.335 U	1 U	--	0.335 U
Bis(2-Ethylhexyl) Phthalate	0.1	--	--	--	--	--	--	--	**0.0591**	--	--	0.0499 U	--	--	--	--	--	0.0499 U
Diethyl Phthalate	0.2	--	--	--	--	--	--	--	0.0499 U	--	--	0.0499 U	--	--	--	--	--	0.0499 U
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																		
1-Methylnaphthalene	0.082	--	**0.0205**	--	--	**0.0091**	--	--	**0.0012 J**	--	--	**0.00054 J**	**0.00052 J**	0.00498 U	0.00497 U	**0.0128**	--	0.005 U
Benzo(a)anthracene	NE	--	**0.0147**	--	--	0.00499 U	--	--	**0.00244 J**	--	--	**0.00379 J**	0.00497 U	0.00498 U	0.00497 U	**0.00614**	--	**0.00184 J**
Benzo(a)pyrene	0.00031	--	**0.0109**	--	--	**0.00085 J**	--	--	**0.00245 J**	--	--	**0.00257 J**	0.00497 U	0.00498 U	0.00497 U	**0.00451 J**	--	**0.00221 J**
Benzo(b)fluoranthene	NE	--	**0.0141**	--	--	0.00499 U	--	--	**0.00349 J**	--	--	**0.00692**	0.00497 U	0.00498 U	0.00497 U	**0.00682**	--	**0.00433 J**
Benzo(k)fluoranthene	NE	--	**0.00715**	--	--	0.00499 U	--	--	**0.00176 J**	--	--	**0.00391 J**	0.00497 U	0.00498 U	0.00497 U	**0.00416 J**	--	**0.00172 J**
Chrysene	NE	--	**0.0231**	--	--	**0.0015 J**	--	--	**0.00476 J**	--	--	**0.00821**	0.00497 U	0.00498 U	0.00497 U	**0.0102**	--	**0.00564**
Dibenzo(a,h)anthracene	NE	--	**0.00251 J**	--	--	**0.0009 J**	--	--	**0.00112 J**	--	--	**0.00168 J**	0.00497 U	0.00498 U	0.00497 U	**0.00113 J**	--	**0.00091 J**
Indeno(1,2,3-c,d)pyrene	NE	--	**0.0103**	--	--	0.00499 U	--	--	**0.00243 J**	--	--	**0.00439 J**	0.00497 U	0.00498 U	0.00497 U	**0.00487 J**	--	**0.0039 J**
Naphthalene	0.039	--	**0.0347**	--	--	**0.00503**	--	--	**0.00179 J**	--	--	0.00499 U	0.00497 U	0.00498 U	0.00497 U	**0.0118**	--	**0.0135**
Total cPAH TEQ	0.00031	--	**0.01879**	--	--	**0.00245**	--	--	**0.00431**	--	--	**0.00616**	0.00425 U	0.00426 U	0.00425 U	**0.0084 J**	--	**0.00438**
Polychlorinated Biphenyls (PCBs) (mg/kg)																		
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	**0.0148 J**	--	--	0.0199 U	--	--	--	--	--	0.02 U
Total PCB Aroclors	0.000011	--	--	--	--	--	--	--	**0.0148 J**	--	--	0.0199 U	--	--	--	--	--	0.02 U
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																		
Perfluorohexanesulfonic acid (PFHxS)	0.00041	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--	--	--	--	--	0.0012 U
Perfluorooctanesulfonic acid (PFOS)	0.00017	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--	--	--	--	--	0.0012 U
Perfluorooctanoic acid (PFOA)	0.000063	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--	--	--	--	--	0.0012 U

Location Identification		MW-15	MW-16	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-23
Sample Identification		MW-15-3-4	MW-16-3-4	MW-17-3-4	MW-18-3-4	MW19-6-7.5	MW20-2.5-4	MW21-2.5-4	MW22-2.5-4	MW23-2.5-4
Sample Date		3/23/22	3/22/22	3/21/22	3/28/22	5/26/23	5/25/23	5/31/23	5/30/23	5/24/23
Start Depth (feet)		3	3	3	3	6	2.5	2.5	2.5	2.5
End Depth (feet)		4	4	4	4	7.5	4	4	4	4
Analyte	**Soil PCUL - Vadose**									
Metals (mg/kg)										
Arsenic	7.3	**3.92**	**9.01 J**	**7.27**	**5.72**	**5.96**	**3.84**	**6.31**	**6.1**	**7.34**
Cadmium	0.77	**0.23**	**2.51 J**	**1.04**	0.251 U	**0.04 J**	**0.25**	**0.29**	**0.23**	**0.47**
Chromium	260	**27.2**	**18.1**	**28.7**	**31.8**	**18.2**	**27.2**	**25.4**	**31.9**	**23.5**
Chromium, Hexavalent	0.018	0.612 U	0.641 U	0.6 UJ	0.543 U	0.646 U	0.608 U	0.561 U	0.547 U	0.545 U
Chromium, Trivalent	548	**27.2**	**18.1**	**28.7**	**31.8**	**18.2**	**27.2**	**25.4**	**31.9**	**23.5**
Copper	36	**13.2**	**22.7 J**	**27**	**17.8**	**23.7**	**27.2**	**26.6**	**39.6**	**58.9**
Lead	250	**8.07**	**11.1 J**	**11**	**8.55**	**4.62**	**91.1**	**84.6**	**72**	**104**
Mercury	0.07	**0.0263**	**0.0314**	**0.0974 J**	**0.0423**	**0.0308 J**	**0.0738**	**0.0501**	**0.0293**	**0.106**
Nickel	48	**39.8**	**18.9 J**	**30.1**	**28.7**	**12.3**	**35.1**	**26.6**	**30.3**	**22.6**
Selenium	5.2	**0.25 J**	**0.35 J**	**0.87**	**1.14**	**0.94**	**0.93**	**1.2**	**0.75**	**0.97**
Thallium	0.088	**0.07 J**	**0.12 J**	**0.09 J**	**0.0589**	--	--	--	--	--
Zinc	101	**54**	**88 J**	**64.4**	**41**	**33.8**	**68**	**236**	**102**	**201**
Total Petroleum Hydrocarbons (mg/kg)										
Diesel-range hydrocarbons	2,000	31 U	32 U	30 U	28 U	32 U	31 U	**15.4**	28 U	**83.3**
Lube oil-range hydrocarbons	2,000	61 U	64 U	59 U	55 U	65 U	61 U	**88.7**	55 U	**491**
Total TPH	2,000	ND	ND	ND	ND	ND	ND	**104.1**	ND	**574.3**
Volatile Organic Compounds (VOCs) (mg/kg)										
Benzene	0.0088	**0.00024 J**	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethylene	0.079	**0.00051 J**	0.00075 U	0.00073 U	**0.00195**	0.00114 U	0.00118 U	0.00111 U	0.00093 U	0.00128 U
Methylene Chloride	0.022	0.00371 U	--	--	--	0.00571 U	0.00588 U	0.00557 U	0.00466 U	0.00642 U
Trichloroethylene	0.0044	0.00074 U	0.00075 U	0.00073 U	**0.00111**	0.00114 U	0.00118 U	0.00111 U	0.00093 U	0.00128 U
Vinyl Chloride	0.0011	0.00074 U	0.00075 U	0.00073 U	0.00069 U	0.00114 U	0.00118 U	0.00111 U	0.00093 U	0.00128 U
Semivolatile Compounds (SVOCs) (mg/kg)										
1,4-Dioxane	0.0018	0.334 U	--	--	--	0.335 U	1.67 U	1.67 U	1 U	10 U
Bis(2-Ethylhexyl) Phthalate	0.1	0.0499 U	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.2	0.0499 U	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)										
1-Methylnaphthalene	0.082	0.005 U	--	--	--	**0.00142 J**	0.015 U	**0.00649**	**0.00173**	0.0748 U
Benzo(a)anthracene	NE	**0.00174 J**	--	--	--	**0.00173 J**	**0.0289**	**0.0387**	**0.104**	**0.107**
Benzo(a)pyrene	0.00031	**0.00176 J**	--	--	--	0.00497 U	**0.0431**	**0.0469**	**0.125**	**0.139**
Benzo(b)fluoranthene	NE	**0.0033 J**	--	--	--	**0.00258 J**	**0.0511**	**0.0542**	**0.138**	**0.157**
Benzo(k)fluoranthene	NE	**0.00147 J**	--	--	--	**0.00096 J**	**0.0289**	**0.0307**	**0.0796**	**0.0781**
Chrysene	NE	**0.00513**	--	--	--	**0.00336 J**	**0.0484**	**0.0643**	**0.154**	**0.171**
Dibenzo(a,h)anthracene	NE	0.005 U	--	--	--	0.00497 U	**0.0129**	**0.0112**	**0.0271**	**0.0311**
Indeno(1,2,3-c,d)pyrene	NE	**0.00317 J**	--	--	--	**0.00142 J**	**0.0441**	**0.0459**	**0.112**	**0.121**
Naphthalene	0.039	**0.0159**	--	--	--	**0.0955**	0.015 U	**0.0343**	0.015 U	0.0748 U
Total cPAH TEQ	0.00031	**0.00372**	--	--	--	**0.0039 J**	**0.07077**	**0.07731**	**0.20221**	**0.22233**
Polychlorinated Biphenyls (PCBs) (mg/kg)										
PCB-Aroclor 1254	NE	0.02 U	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000011	0.02 U	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)										
Perfluorohexanesulfonic acid (PFHxS)	0.00041	0.0012 U	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.00017	0.0012 U	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000063	0.0012 U	--	--	--	--	--	--	--	--

Notes:

J = Estimated result
mg/kg = Milligram per kilogram
ND = Not detected (calculated)
PAHs = Polycyclic Aromatic Hydrocarbons
PCBs = Polychlorinated Biphenyls
PCUL = Preliminary Cleanup Level provided to GeoEngineers by Washington State Department of Ecology (Ecology) June 3, 2022 as the PCULs for the Remedial Investigation (PFAS PCULs are from Ecology Publication 22-09-058)
PFAS = Per- and Polyfluoroalkyl Substances
SVOCs = Semivolatile Volatile Organic Compounds
TPH = Total Petroleum Hydrocarbons (NWTPH-Dx where performed, HCID otherwise)
U = Not detected
VOCs = Volatile Organic Compounds

Table 7-2

Summary of Saturated Soil Exceedances

Precision Engineering, Inc.

Seattle, Washington

Location Identification		GP1	GP1	GP2	GP3	GP3	GP5	GP5	GP6	GP7	GP10	GP11	GP13	GP14	GP15	GP17	GP19
Sample Identification		GP1-S-6.0	GP1-S-10.0	GP2-S-10.0	GP3-S-6.0	GP3-S-14	GP5-S-8.0	GP5-S-14.0	GP6-S-14.5	GP7-S-8.0	GP10-S-13.5	GP11-S-6.5	GP13-S-6.0	GP14-S-6.0	GP15-S-6.0	GP17-S-6.0	GP19-S-7.0
Sample Date		6/7/2005	6/9/2005	6/9/2005	6/9/2005	6/9/2005	6/16/2005	6/16/2005	6/16/2005	6/16/2005	6/17/2005	6/17/2005	12/14/2005	12/13/2005	12/13/2005	12/13/2005	12/13/2005
Start Depth (feet)		6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7
End Depth (feet)		6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7
Analyte	**Soil PCUL - Saturated**																
Metals (mg/kg)																	
Arsenic	7.3	4.99 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	0.77	0.499 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	260	**147**	**73.5**	**24.9**	**1100**	**941**	--	**20.1**	**259**	**21**	**24.1**	**17.3**	**46.6**	**31.4**	**20.2**	**1660**	**27.1**
Chromium, Hexavalent	0.00089	**31.8**	**14.4**	0.109 U	**49.8**	**34.4**	--	0.115 U	**0.181**	0.113 U	0.106 U	**0.37**	1.3 U	**1.2 J**	1.2 U	**60 J**	2.7 U
Chromium, Trivalent	48	**115.2**	**59.1**	**24.9**	**1050.2**	**906.6**	--	**20.1**	**258.819**	**21**	**24.1**	**16.93**	**46.6**	**30.2 J**	**20.2**	**1600 J**	**27.1**
Copper	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	56	2 U		2.11 U		--	--	--	--	--	--	--	--	--	--	--	--
Mercury	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	0.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	0.0044	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (TPH) (mg/kg)																	
Diesel-range hydrocarbons	2,000	**51.2**	**48.3**	**52.4**	**54.7**	**52.6**	--	**50.3**	**49**	**57**	**53.4**	**48.7**	12.8 U	10.8 U	--	--	14.5 U
Lube oil-range hydrocarbons	2,000	**102**	**96.6**	**105**	**109**	**105**	--	**101**	**98**	**114**	**107**	**97.4**	**56.1**	26.9 U	--	--	**56.7**
Total TPH	2,000	**153.2**	**144.9**	**157.4**	**163.7**	**157.6**	--	**151.3**	**147**	**171**	**160.4**	**146.1**	**56.1**	ND	--	--	**56.7**
Volatile Organic Compounds (VOCs) (mg/kg)																	
Benzene	0.00056	**0.00255**	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--
cis-1,2-Dichloroethylene	0.0052	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	**0.149**	0.0442 U	0.0398 U	**0.0788**	0.00347 U	0.00315 U	0.0126 U	0.00272 U	0.00326 U
Methylene Chloride	0.0015	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--
Trichloroethylene	0.00027	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	**1.16**	0.00884 U	0.00796 U	**0.281**	0.00289 U	0.00262 U	0.0105 U	0.00227 U	0.00272 U
Vinyl Chloride	0.000056	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	0.00289 U	0.00262 U	0.0105 U	0.00227 U	0.00272 U
Semivolatile Compounds (SVOCs) (mg/kg)																	
1,4-Dioxane	0.00013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																	
1-Methylnaphthalene	0.0042	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	0.0021	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--
Total cPAH TEQ	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																	
Total PCB Aroclors	0.00000055	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																	
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location Identification		GP20	GP21	GP22	GP23	GP23	GP24	GP25	GP26	GP27	GP28	GP29	GP30	GP31	MW9	MW9	MW9
Sample Identification		GP20-S-6.0	GP21-S-6.5	GP22-S-10.0	GP23-S-7.0	GP23-S-10.5	GP24-S-6.5	GP25-S-7.0	GP26-S-9.5	GP27-S-13.0	GP28-S-7.0	GP29-S-6.0	GP30-S-6.0	GP31-S-6.0	MW9-18-19	MW9-32.5-33.5	MW9-38-39
Sample Date		12/14/2005	12/14/2005	12/13/2005	12/14/2005	12/14/2005	12/14/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	8/16/2014	8/16/2014	8/16/2014
Start Depth (feet)		6	6.5	10	7	10.5	6.5	7	9.5	13	7	6	6	6	18	32.5	38
End Depth (feet)		6	6.5	10	7	10.5	6.5	7	9.5	13	7	6	6	6	19	33.5	39
Analyte	**Soil PCUL - Saturated**																
Metals (mg/kg)																	
Arsenic	7.3	--	--	--	--	--	--	--	--	--	--	--	--	--	**10**	5 U	5 U
Cadmium	0.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	260	**24.5**	**23**	**32.1**	**23.3**	**979**	**29.3**	**19.8**	**24**	**18.6**	**22.4**	**31.9**	**32.7**	**23.6**	**19**	**17.8**	**32.3**
Chromium, Hexavalent	0.00089	1.5 U	1.3 U	1.3 U	1.1 U	1.2 U	2.4 U	1.7 U	2.1 U	2.1 U	1.8 U	2.6 U	2.4 U	3 U	0.492 U	0.448 U	0.471 U
Chromium, Trivalent	48	**24.5**	**23**	**32.1**	**23.3**	**979**	**29.3**	**19.8**	**24**	**18.6**	**22.4**	**31.9**	**32.7**	**23.6**	**19**	**17.8**	**32.3**
Copper	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	56	--	--	--	--	--	--	--	--	--	--	--	--	--	6 U	2 U	2 U
Mercury	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	0.26	--	--	--	--	--	--	--	--	--	--	--	--	--	10 U	5 U	5 U
Thallium	0.0044	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (TPH) (mg/kg)																	
Diesel-range hydrocarbons	2,000	**75.9**	**5270**	11.3 U	10.8 U	--	--	10.6 U	10.8 U	10.9 U	10.4 U	12.8 U	**39.6**	58.9	6.2 U	5.7 U	**9.3**
Lube oil-range hydrocarbons	2,000	**294**	**19900**	28.2 U	26.9 U	--	--	26.6 U	27.1 U	27.2 U	26 U	32 U	**165**	157	**14**	11 U	**14**
Total TPH	2,000	**369.9**	**25170**	ND	ND	--	--	ND	ND	ND	ND	ND	**204.6**	215.9	**14**	ND	**23.3**
Volatile Organic Compounds (VOCs) (mg/kg)																	
Benzene	0.00056	--	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U
cis-1,2-Dichloroethylene	0.0052	0.00542 U	0.00335 U	0.00227 U	0.00216 U	0.00272 U	0.0034 U	0.00297 U	0.00318 U	0.00245 U	0.00261 U	**0.00996**	0.00399 U	0.00409 U	0.001 U	0.0009 U	0.001 U
Methylene Chloride	0.0015	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0051 UB	0.0055 UB	0.0055 UB
Trichloroethylene	0.00027	0.00452 U	0.00279 U	0.00189 U	0.0018 U	0.00227 U	0.00283 U	0.00247 U	0.00265 U	0.00205 U	0.00217 U	0.00243 U	0.00332 U	0.00341 U	0.001 U	0.0009 U	0.001 U
Vinyl Chloride	0.000056	0.00452 U	0.00279 U	0.00189 U	0.0018 U	0.00227 U	0.00283 U	0.00247 U	0.00265 U	0.00205 U	0.00217 U	0.00243 U	0.00332 U	0.00341 U	0.001 U	0.0009 U	0.001 U
Semivolatile Compounds (SVOCs) (mg/kg)																	
1,4-Dioxane	0.00013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																	
1-Methylnaphthalene	0.0042	0.0139 U	0.0129 U	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--
Benzo(a)anthracene	NE	0.0139 U	0.0129 U	--	--	--	--	--	--	--	--	--	**0.0154**	**0.0211**	--	--	--
Benzo(a)pyrene	0.000016	0.0139 U	0.0129 U	--	--	--	--	--	--	--	--	--	0.0146 U	**0.0176**	--	--	--
Benzo(b)fluoranthene	NE	0.0139 U	0.0129 U	--	--	--	--	--	--	--	--	--	0.0146 U	**0.0261**	--	--	--
Benzo(k)fluoranthene	NE	0.0139 U	0.0129 U	--	--	--	--	--	--	--	--	--	0.0146 U	**0.0178**	--	--	--
Chrysene	NE	0.0139 U	0.0129 U	--	--	--	--	--	--	--	--	--	**0.0334**	**0.0449**	--	--	--
Dibenzo(a,h)anthracene	NE	0.0139 U	0.0129 U	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	0.0139 U	0.0129 U	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--
Naphthalene	0.0021	0.0139 U	0.0129 U	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	0.0051 U	0.0047 U	0.0048 U
Total cPAH TEQ	0.000016	0.01049 U	0.00974 U	--	--	--	--	--	--	--	--	--	**0.01355**	**0.03021**	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																	
Total PCB Aroclors	0.00000055	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																	
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location Identification		MW11		MW11		MW-13		MW-13		MW-13		MW-14		MW-14		MW-14		MW-15		MW-15		MW-15		MW-16		MW-16		MW-16	
Sample Identification		MW11-18-19		MW100		MW-13-11-12		DUP-2-220329		MW-13-28-29		MW-14-10.5-11.5		MW-14-17-18		MW-14-34-35		MW-14-44-45		MW-15-6-7		MW-15-28-29		MW-15-35-36		MW-16-12-13		MW-16-17.5-18.5		MW-16-48-49	
Sample Date		8/16/2014		8/16/2014		3/29/2022		3/29/2022		3/29/2022		3/24/2022		3/24/2022		3/24/2022		3/24/2022		3/23/2022		3/23/2022		3/23/2022		3/22/2022		3/22/2022		3/22/2022	
Start Depth (feet)		18		18		11		11		28		10.5		17		34		44		6		28		35		12		17.5		48	
End Depth (feet)		19		19		12		12		29		11.5		18		35		45		7		29		36		13		18.5		49	
Analyte	**Soil PCUL - Saturated**																												
Metals (mg/kg)																													
Arsenic	7.3	6	U	5	U	**3.69**		**3.93**		**3.24**		**3.2**		--		--		**3.54**		**1.54**		**1.95**		--		**4.13**		**2.59**		**3.11**	
Cadmium	0.77	--		--		0.25	U	0.24	U	0.3	U	**0.05**	**J**	--		--		**0.11**		**0.05**	**J**	**0.08**	**J**	--		**0.08**	**J**	**0.07**	**J**	**0.08**	**J**
Chromium	260	**38**		**37.8**		**19.4**		**25.9**		**40.1**		**25.3**	**J**	--		--		**27.6**	**J**	**1870**		**27.2**		--		**15.8**		**20.3**		**22.2**	
Chromium, Hexavalent	0.00089	0.455	U	0.448	U	0.532	U	0.521	U	0.612	U	0.517	U	--		--		0.537	U	**175**		0.532	U	--		0.664	U	0.534	U	0.539	U
Chromium, Trivalent	48	**38**		**37.8**		**19.4**		**25.9**		**40.1**		**25.3**	**J**	--		--		**27.6**	**J**	**1695**		**27.2**		--		**15.8**		**20.3**		**22.2**	
Copper	36	--		--		**12.7**		**12.1**		**16.8**		**11.2**		--		--		**19.7**		**8.03**		**14**		--		**25**		**9.99**		**14.1**	
Lead	56	**2**		2	U	**2.24**		**2.93**		**2.86**		**1.52**		--		--		**3.16**		**2.06**		**1.5**		--		**3.04**		**2.25**		**2.43**	
Mercury	0.07	--		--		**0.0148**	**J**	**0.0202**	**J**	**0.0237**	**J**	**0.00777**	**J**	--		--		**0.0317**		0.0289	U	0.0214	U	--		**0.0373**		**0.00879**	**J**	**0.0167**	**J**
Nickel	48	--		--		**24.2**		**26.8**		**47**		**34.9**		--		--		**36.8**		**24.8**		**37.1**		--		**13.2**		**24.7**		**31.3**	
Selenium	0.26	6	U	5	U	**1.46**		**1.2**		**1.16**		**0.37**	**J**	--		--		**0.7**		**0.25**	**J**	**0.51**		--		**0.62**	**J**	**0.35**	**J**	**0.32**	**J**
Thallium	0.0044	--		--		**0.0545**		**0.067**		**0.06**		**0.04**	**J**	--		--		**0.07**	**J**	**0.05**	**J**	**0.03**	**J**	--		**0.08**	**J**	**0.04**	**J**	**0.08**	**J**
Zinc	85	--		--		**40.1**		**38.3**		**38.5**		**27.8**		--		--		**49.7**		**28.1**		**27.2**		--		**31.8**	**J**	**28.8**	**J**	**36.4**	**J**
Total Petroleum Hydrocarbons (TPH) (mg/kg)																													
Diesel-range hydrocarbons	2,000	**6.2**		--		27	U	27	U	32	U	27	U	--		--		28	U	29	U	27	U	--		34	U	25	U	27	U
Lube oil-range hydrocarbons	2,000	11	U	--		54	U	54	U	63	U	54	U	--		--		55	U	58	U	53	U	--		68	U	50	U	54	U
Total TPH	2,000	**6.2**		--		ND		ND		ND		ND		--		--		ND		ND		ND		--		ND		ND		ND	
Volatile Organic Compounds (VOCs) (mg/kg)																													
Benzene	0.00056	0.0009	U	0.0011	U	--		--		--		0.0005	U	--		--		0.00055	U	0.00062	U	0.00054	U	--		--		--		--	
cis-1,2-Dichloroethylene	0.0052	0.0009	U	0.0011	U	0.00065	U	0.00085	U	0.0009	U	**0.00855**		**0.0017**		0.00121	U	0.00055	U	**0.00456**		0.00054	U	0.00063	U	0.00071	U	0.00065	U	0.00056	U
Methylene Chloride	0.0015	0.005	UB	0.0041	UB	--		--		--		0.00249	U	--		--		0.00273	U	0.00308	U	0.0027	U	--		--		--		--	
Trichloroethylene	0.00027	0.0009	U	0.0011	U	0.00065	U	0.00085	U	0.0009	U	**0.018**		**0.00398**		0.00121	U	0.00055	U	**0.0691**		0.00054	U	0.00063	U	0.00071	U	0.00065	U	0.00056	U
Vinyl Chloride	0.000056	0.0009	U	0.0011	U	0.00065	U	0.00085	U	0.0009	U	0.0005	U	0.0005	U	0.00121	U	0.00055	U	0.00062	U	0.00054	U	0.00063	U	0.00071	U	0.00065	U	0.00056	U
Semivolatile Compounds (SVOCs) (mg/kg)																													
1,4-Dioxane	0.00013	--		--		--		--		--		0.335	U	--		--		0.335	U	0.335	U	0.335	U	--		--		--		--	
Bis(2-Ethylhexyl) Phthalate	0.0051	--		--		--		--		--		0.0499	U	--		--		0.0499	U	0.0499	U	0.0498	U	--		--		--		--	
Diethyl Phthalate	0.034	--		--		--		--		--		0.0499	U	--		--		**0.345**		0.0499	U	0.0498	U	--		--		--		--	
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																													
1-Methylnaphthalene	0.0042	--		--		--		--		--		0.005	U	--		--		0.005	U	0.00498	U	0.00499	U	--		--		--		--	
Benzo(a)anthracene	NE	--		--		--		--		--		0.005	U	--		--		0.005	U	0.00498	U	0.00499	U	--		--		--		--	
Benzo(a)pyrene	0.000016	--		--		--		--		--		0.005	U	--		--		0.005	U	0.00498	U	0.00499	U	--		--		--		--	
Benzo(b)fluoranthene	NE	--		--		--		--		--		0.005	U	--		--		0.005	U	0.00498	U	0.00499	U	--		--		--		--	
Benzo(k)fluoranthene	NE	--		--		--		--		--		0.005	U	--		--		0.005	U	0.00498	U	0.00499	U	--		--		--		--	
Chrysene	NE	--		--		--		--		--		0.005	U	--		--		**0.00173**	**J**	0.00498	U	0.00499	U	--		--		--		--	
Dibenzo(a,h)anthracene	NE	--		--		--		--		--		0.005	U	--		--		0.005	U	0.00498	U	0.00499	U	--		--		--		--	
Indeno(1,2,3-c,d)pyrene	NE	--		--		--		--		--		0.005	U	--		--		0.005	U	0.00498	U	0.00499	U	--		--		--		--	
Naphthalene	0.0021	0.0044	U	0.0053	U	--		--		--		0.00249	U	--		--		**0.00128**	**J**	**0.00598**		0.00499	U	--		--		--		--	
Total cPAH TEQ	0.000016	--		--		--		--		--		0.00428	U	--		--		**0.00427**		0.00426	U	0.00427	U	--		--		--		--	
Polychlorinated Biphenyls (PCBs) (mg/kg)																													
Total PCB Aroclors	0.00000055	--		--		--		--		--		0.02	U	--		--		0.0199	U	0.0199	U	0.0198	U	--		--		--		--	
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																													
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--		--		0.00082	U	0.00099	U	--		0.0011	U	--		--		--		--		0.001	U	--		--		--		--	
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--		--		0.00082	U	0.00099	U	--		0.0011	U	--		--		--		--		0.001	U	--		--		--		--	
Perfluorooctanoic acid (PFOA)	0.000004	--		--		0.00082	U	0.00099	U	--		0.0011	U	--		--		--		--		0.001	U	--		--		--		--	

Location Identification		MW-17	MW-17	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-22	MW-22	MW-23	MW-23	SB1	SB3	SB4
Sample Identification		MW-17-7-8	MW-17-25-26	MW-17-48-49	MW-18-5.5-6.5	MW19-9-10.5	MW20-23-24.5	MW21-15-16.5	MW22-10-11	MW22-30-31	MW22-45-45.5	MW23-5-6.5	MW23-15-16.5	SB1-5	SB3-8	SB4-5
Sample Date		3/21/2022	3/21/2022	3/21/2022	3/28/2022	5/26/2023	5/25/2023	5/31/2023	5/30/2023	5/30/2023	5/30/2023	5/24/2023	5/24/2023	8/8/2014	8/8/2014	8/7/2014
Start Depth (feet)		7	25	48	5.5	9	23	15	10	30	45	5	15	5	8	5
End Depth (feet)		8	26	49	6.5	10.5	24.5	16.5	11	31	45.5	6.5	16.5	5	8	5
Analyte	**Soil PCUL - Saturated**															
Metals (mg/kg)																
Arsenic	7.3	**4.09**	**1.71**	**3.16**	**8.36**	**3.85**	**6.64**	**3.27**	**3.18**	**5.71**	**2.49**	**5.48**	**3.03**	5 U	6 U	**7**
Cadmium	0.77	**0.07 J**	**0.07 J**	**0.08 J**	0.33 U	**0.07 J**	**0.52**	**0.11 J**	**0.04 J**	**0.25**	**0.1 J**	**0.28**	**0.04 J**	--	--	--
Chromium	260	**15.5**	**19.9**	**22.5**	**27.2**	**17.2**	**17.2**	**11.2**	**13.7**	**36.1**	**40**	**14.9**	**9.78**	**48.7**	**67.3**	**22.7**
Chromium, Hexavalent	0.00089	0.709 UJ	0.551 UJ	0.523 UJ	0.791 U	0.66 U	0.798 U	0.667 U	0.631 U	0.612 U	0.553 U	0.657 U	0.632 U	0.44 U	0.452 U	0.572 U
Chromium, Trivalent	48	**15.5**	**19.9**	**22.5**	**27.2**	**17.2**	**17.2**	**11.2**	**13.7**	**36.1**	**40**	**14.9**	**9.78**	**48.7**	**67.3**	**22.7**
Copper	36	**32.1**	**12.6**	**12.5**	**19.7**	**25.9**	**33.9**	**22.6**	**13.3**	**33.4**	**14.9**	**27.8**	**18.8**	--	--	--
Lead	56	**3.99**	**1.86**	**2.37**	**11.7**	**3.41**	**4.64**	**2.48**	**2.97**	**3.8**	**2.25**	**45.6**	**2.15**	2 U	2 U	**11**
Mercury	0.07	**0.0529 J**	**0.0207 J**	**0.0318 J**	**0.0639**	**0.0359**	**0.042**	**0.0396**	**0.0175 J**	**0.0553**	**0.015 J**	**0.0382**	**0.0223 J**	--	--	--
Nickel	48	**13.2**	**32**	**27**	**20.3**	**11.2**	**17.7**	**9.49**	**10.8**	**54.2**	**32.2**	**13.6**	**8.34**	--	--	--
Selenium	0.26	**0.97**	**0.42 J**	**0.57**	**1.31**	**0.86**	**1.7**	**0.83**	**0.42 J**	**0.66**	**0.59**	**0.81**	**1.1**	5 U	6 U	6 U
Thallium	0.0044	**0.09 J**	**0.04 J**	**0.06 J**	**0.083**	--	--	--	--	--	--	--	--	--	--	--
Zinc	85	**40.3**	**30.6**	**35.8**	**34.9**	**31.7**	**38.3**	**27.8**	**19.2**	**54**	**32.8**	**63.1**	**23**	--	--	--
Total Petroleum Hydrocarbons (TPH) (mg/kg)																
Diesel-range hydrocarbons	2,000	34 U	28 U	27 U	34 U	34 U	40 U	34 U	32 U	31 U	28 U	**14.7**	32 U	**7.5**	5.8 U	**65**
Lube oil-range hydrocarbons	2,000	68 U	56 U	53 U	68 U	68 U	80 U	68 U	64 U	62 U	56 U	**89.7**	65 U	**62**	**14**	**220**
Total TPH	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**104.4**	ND	**69.5**	**14**	**285**
Volatile Organic Compounds (VOCs) (mg/kg)																
Benzene	0.00056	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0007 U	0.0018 U
cis-1,2-Dichloroethylene	0.0052	0.00091 U	0.00053 U	0.00084 U	0.00092 U	0.0013 U	0.00146 U	0.00122 U	0.00119 U	0.00123 U	0.00079 U	0.00124 U	0.00141 U	0.001 U	0.0007 U	0.0018 U
Methylene Chloride	0.0015	--	--	--	--	0.00648 U	0.0073 U	0.00609 U	0.00595 U	0.00614 U	0.00397 U	0.0062 U	0.00703 U	0.002 U	**0.0024**	**0.0039**
Trichloroethylene	0.00027	0.00091 U	0.00053 U	0.00084 U	0.00092 U	0.0013 U	0.00146 U	0.00122 U	0.00119 U	0.00123 U	0.00079 U	0.00124 U	0.00141 U	0.001 U	0.0007 U	0.0018 U
Vinyl Chloride	0.000056	0.00091 U	0.00053 U	0.00084 U	0.00092 U	0.0013 U	0.00146 U	0.00122 U	0.00119 U	0.00123 U	0.00079 U	0.00124 U	0.00141 U	0.001 U	0.0007 U	0.0018 U
Semivolatile Compounds (SVOCs) (mg/kg)																
1,4-Dioxane	0.00013	--	--	--	--	0.334 U	1.01 U	0.334 U	**0.601**	0.334 U	0.335 U	1 U	1 U	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																
1-Methylnaphthalene	0.0042	--	--	--	--	**0.002 J**	**0.00137 J**	**0.00097 J**	**0.0166**	**0.00067 J**	**0.00064 J**	0.015 U	**0.00098 J**	--	--	--
Benzo(a)anthracene	NE	--	--	--	--	**0.00107 J**	0.005 U	**0.00261 J**	**0.00672**	**0.00291 J**	0.005 U	**0.00904**	**0.00159 J**	--	--	--
Benzo(a)pyrene	0.000016	--	--	--	--	0.00498 U	0.005 U	**0.00568**	**0.00721**	**0.00547**	0.005 U	**0.0113**	0.005 U	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	0.00498 U	**0.00148 J**	**0.00423 J**	**0.00874**	**0.00433 J**	0.005 U	**0.0209**	**0.00221 J**	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	0.00498 U	0.005 U	**0.00253 J**	**0.00434 J**	**0.00259 J**	0.005 U	**0.0114**	**0.00135 J**	--	--	--
Chrysene	NE	--	--	--	--	**0.00221 J**	**0.00144 J**	**0.00513**	**0.0109**	**0.0053**	**0.00123 J**	**0.0173**	**0.00228 J**	--	--	--
Dibenzo(a,h)anthracene	NE	--	--	--	--	0.00498 U	0.005 U	0.005 U	**0.00095 J**	0.005 U	0.005 U	**0.00963**	0.005 U	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	--	--	--	--	0.00498 U	0.005 U	**0.00527**	**0.00596**	**0.00531**	0.005 U	**0.00934**	**0.00119 J**	--	--	--
Naphthalene	0.0021	--	--	--	--	**0.00462 J**	**0.00232 J**	0.005 U	**0.00405 J**	0.005 U	**0.00146 J**	0.015 U	**0.00134 J**	0.0049 U	0.0037 U	0.0088 U
Total cPAH TEQ	0.000016	--	--	--	--	**0.00411 J**	**0.00416 J**	**0.00837 J**	**0.01181 J**	**0.00827 J**	**0.00426 J**	**0.02194**	**0.0039 J**	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																
Total PCB Aroclors	0.00000055	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location Identification		SB4	SB5	SB6	SB7	SB7	SB8	SB10	SB11	SB11	SB12	SB13	SB14	SB15	SB15	SB16	SB16	SB16
Sample Identification		SB4-20	SB5-11	SB6-16	SB7-11	SB7-19	SB8-16	SB10-7	SB11-10	SB11-30	SB12-12	SB13-9	SB14-6	SB15-26	SB15-41	SB16-26	SB16-40	SB16-46
Sample Date		8/7/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	4/15/2015	4/15/2015	4/16/2015	4/16/2015	4/16/2015
Start Depth (feet)		20	11	16	11	19	16	7	10	30	12	9	6	26	41	26	40	46
End Depth (feet)		20	11	16	11	19	16	7	10	30	12	9	6	26	41	26	40	46
Analyte	**Soil PCUL - Saturated**																	
Metals (mg/kg)																		
Arsenic	7.3	**6**	7 U	7 U	7 U	6 U	7 U	5 U	6 U	**6**	7 U	8 U	5 U	**5.6**	**4.9**	**5.6**	**3.1**	**2.9**
Cadmium	0.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	260	**14.9**	**15.7**	**10**	**17.7**	**24.8**	**23.7**	**30.3**	**11.7**	**20.9**	**17**	**16.8**	**27.6**	**17.9**	**43.4**	**18.6**	**26.1**	**24.5**
Chromium, Hexavalent	0.00089	0.482 U	0.552 U	0.571 U	0.554 U	0.462 U	0.544 U	0.445 U	0.472 U	0.484 U	0.516 U	0.534 U	0.425 U	0.519 U	0.502 U	0.525 U	0.476 U	0.441 U
Chromium, Trivalent	48	**14.9**	**15.7**	**10**	**17.7**	**24.8**	**23.7**	**30.3**	**11.7**	**20.9**	**17**	**16.8**	**27.6**	**17.9**	**43.4**	**18.6**	**26.1**	**24.5**
Copper	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	56	2 U	3 U	3 U	**4**	2 U	**7**	**2**	**6**	2 U	3 U	3 U	**56**	**2.9**	**4**	**2.6**	**2.3**	**2.4**
Mercury	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	0.26	6 U	7 U	7 U	7 U	6 U	7 U	5 U	6 U	6 U	7 U	8 U	5 U	**0.9**	0.6 U	0.6 U	0.5 U	0.5 U
Thallium	0.0044	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (TPH) (mg/kg)																		
Diesel-range hydrocarbons	2,000	6.2 U	**420**	**15**	**38**	5.9 U	**74**	5.6 U	**9.7**	--	6.5 U	6.7 U	**74**	6.7 U	5.8 U	7.3 U	--	--
Lube oil-range hydrocarbons	2,000	12 U	**1900**	**49**	**440**	12 U	**560**	11 U	**30**	--	**19**	**18**	**730**	13 U	12 U	15 U	--	--
Total TPH	2,000	ND	**2320**	**64**	**478**	ND	**634**	ND	**39.7**	--	**19**	**18**	**804**	ND	ND	ND	--	--
Volatile Organic Compounds (VOCs) (mg/kg)																		
Benzene	0.00056	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	**0.0021**	0.0013 U	0.0012 U	0.0015 U	--	--
cis-1,2-Dichloroethylene	0.0052	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U	0.0012 U	0.0015 U	--	--
Methylene Chloride	0.0015	**0.0028**	**0.0048**	**0.0048**	**0.0094**	**0.0024**	0.003 U	**0.0026**	**0.0083**	--	0.0024 U	**0.0035**	0.0041 U	0.0027 U	0.0024 U	**0.0049**	--	--
Trichloroethylene	0.00027	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U	0.0012 U	0.0015 U	--	--
Vinyl Chloride	0.000056	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U	0.0012 U	0.0015 U	--	--
Semivolatile Compounds (SVOCs) (mg/kg)																		
1,4-Dioxane	0.00013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																		
1-Methylnaphthalene	0.0042	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	0.0021	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	--	0.006 U	0.0072 U	**0.028**	0.0067 U	0.006 U	0.0073 U	--	--
Total cPAH TEQ	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																		
Total PCB Aroclors	0.00000055	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																		
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location Identification		SB17	SB17	SB17	SB18	SB18	SB18	SB19	SB19	SB19	SB-20	SB-20	SB-21	SB-21	SB-22	SB-23	SB-24	SB-25	SB-26
Sample Identification		SB17-26	SB17-40	SB17-43.5	SB18-26	SB18-36.5	SB18-39.5	SB19-35	SB19-45	SB19-50	SB-20-5-6	SB-20-10-11	SB-21-8-9	SB-21-13-14	SB-22-4-5	SB-23-10-11	SB-24-6.5-7.5	SB-25-6-7	SB-26-11-12
Sample Date		4/16/2015	4/17/2015	4/17/2015	4/17/2015	4/17/2015	4/17/2015	4/20/2015	4/20/2015	4/20/2015	3/8/2022	3/8/2022	3/7/2022	3/7/2022	3/10/2022	3/9/2022	3/8/2022	3/8/2022	3/7/2022
Start Depth (feet)		26	40	43.5	26	36.5	39.5	35	45	50	5	10	8	13	4	10	6.5	6	11
End Depth (feet)		26	40	43.5	26	36.5	39.5	35	45	50	6	11	9	14	5	11	7.5	7	12
Analyte	**Soil PCUL - Saturated**																		
Metals (mg/kg)																			
Arsenic	7.3	**4.8**	**2.5**	**2.8**	**6.4**	**2.3**	**2.1**	**8.5**	**6.2**	**3.7**	**3.12**	**2.79**	**4.2**	**4.05**	**2.71**	**2.62**	**3.92**	**2.84**	**2.79**
Cadmium	0.77	--	--	--	--	--	--	--	--	--	**0.1 J**	**0.07 J**	**0.12 J**	**0.08 J**	**0.09 J**	**0.06 J**	**0.13**	**0.05 J**	**0.08 J**
Chromium	260	**18.4**	**21.2**	**25.3**	**19.5**	**18.1**	**21.9**	**20.4**	**46**	**43.8**	**24.7**	**24.4**	**25**	**19.6 J**	**35**	**21.1**	**20.7**	**25.9**	**25.6**
Chromium, Hexavalent	0.00089	0.499 U	0.426 U	**1.78**	0.51 U	0.459 U	0.426 U	0.5 U	0.469 U	0.508 U	0.538 UJ	0.545 UJ	0.593 UJ	0.546 UJ	0.58 U	0.562 UJ	0.536 UJ	0.545 UJ	0.551 U
Chromium, Trivalent	48	**18.4**	**21.2**	**25.3**	**19.5**	**18.1**	**21.9**	**20.4**	**46**	**43.8**	**24.7**	**24.4**	**25**	**19.6 J**	**35**	**21.1**	**20.7**	**25.9**	**25.6**
Copper	36	--	--	--	--	--	--	--	--	--	**13.4**	**11**	**17.9**	**16.3**	**13.7**	**10.9**	**13.5**	**12.8**	**12.2**
Lead	56	**2.1**	**1.7**	**1.9**	**2.9**	**1.8**	**1.7**	**2.5**	**4.6**	**3.9**	**2.62**	**2.05**	**3.59**	**3.05**	**2.76**	**3.23**	**2.54**	**2.24**	**2.25**
Mercury	0.07	--	--	--	--	--	--	--	--	--	**0.0218 J**	**0.0185 J**	**0.0302**	**0.0108 J**	**0.0277**	**0.018 J**	**0.0136 J**	**0.0124 J**	**0.0118 J**
Nickel	48	--	--	--	--	--	--	--	--	--	**30.4**	**29.9**	**30.1**	**24.4**	**37.8**	**23.8**	**32.2**	**31.7**	**29.8**
Selenium	0.26	0.6 U	0.5 U	0.6 U	0.6 U	0.5 U	0.5 U	0.6 U	1 U	0.6 U	**0.74**	**0.73**	**0.93**	**0.96**	**0.52 J**	**0.26 J**	**0.82**	**0.62**	**0.64**
Thallium	0.0044	--	--	--	--	--	--	--	--	--	**0.1 J**	**0.06 J**	**0.1 J**	**0.09 J**	**0.07 J**	**0.05 J**	**0.11 J**	**0.05 J**	**0.09 J**
Zinc	85	--	--	--	--	--	--	--	--	--	**37.2**	**30.6**	**48.3**	**41.2**	**41.6**	**29**	**39.3**	**33.5**	**37.2**
Total Petroleum Hydrocarbons (TPH) (mg/kg)																			
Diesel-range hydrocarbons	2,000	6.5 U	6.2 U	--	6.7 U	5.5 U	--	6.4 U	6 U	6.3 U	27 U	27 U	29 U	28 U	30 U	29 U	28 U	27 U	28 U
Lube oil-range hydrocarbons	2,000	13 U	12 U	--	13 U	11 U	--	13 U	12 U	13 U	55 U	54 U	57 U	56 U	59 U	59 U	55 U	55 U	57 U
Total TPH	2,000	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs) (mg/kg)																			
Benzene	0.00056	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	--	0.0015 U	0.001 U	0.0011 U	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethylene	0.0052	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	--	0.0015 U	0.001 U	0.0011 U	0.0009 U	0.0009 U	0.0007 U	0.0007 U	0.0006 U	0.0008 U	**0.0547**	**0.00115**	0.00061 U
Methylene Chloride	0.0015	**0.003**	**0.0028**	**0.0024**	**0.0031**	**0.0019**	--	0.0031 U	**0.0024**	**0.0026**	--	--	--	--	--	--	--	--	--
Trichloroethylene	0.00027	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	--	0.0015 U	0.001 U	0.0011 U	0.0009 U	0.0009 U	0.0007 U	0.0007 U	0.0006 U	0.0008 U	**0.0284**	**0.00311**	0.00061 U
Vinyl Chloride	0.000056	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	--	0.0015 U	0.001 U	0.0011 U	0.0009 U	0.0009 U	0.0007 U	0.0007 U	0.0006 U	0.0008 U	0.00078 U	0.00064 U	0.00061 U
Semivolatile Compounds (SVOCs) (mg/kg)																			
1,4-Dioxane	0.00013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																			
1-Methylnaphthalene	0.0042	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0046 J**	--	--	0.00499 U
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0037 J**	--	--	0.00499 U
Benzo(a)pyrene	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.003 J**	--	--	0.00499 U
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0043 J**	--	--	0.00499 U
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0019 J**	--	--	0.00499 U
Chrysene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0059**	--	--	**0.00174 J**
Dibenzo(a,h)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.005 U	--	--	0.00499 U
Indeno(1,2,3-c,d)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0032 J**	--	--	0.00499 U
Naphthalene	0.0021	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	--	0.0077 U	0.0048 U	0.0054 U	--	--	--	--	--	**0.0084**	--	--	0.00499 U
Total cPAH TEQ	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0054**	--	--	**0.00426**
Polychlorinated Biphenyls (PCBs) (mg/kg)																			
Total PCB Aroclors	0.00000055	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																			
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location Identification		SB-27		SB-28		SB-30		SB-30		SB-31		SB-32		SB-32		SB-33		SB-34		SB-35		SB-36		SB-37	
Sample Identification		SB-27-10-11		SB-28-8.5-9		SB-30-7.5-8.5		SB-30-17-18		SB-31-8-9		SB-32-4-5		SB-32-13-14		SB-33-4-5		SB34-13-14		SB35-8-9		SB36-10-11.5		SB37-12.5-13.5	
Sample Date		3/7/2022		3/7/2022		3/9/2022		3/9/2022		3/9/2022		3/9/2022		3/9/2022		3/9/2022		6/2/2023		6/2/2023		6/2/2023		6/2/2023	
Start Depth (feet)		10		8.5		7.5		17		8		4		13		4		13		8		10		12.5	
End Depth (feet)		11		9		8.5		18		9		5		14		5		14		9		11.5		13.5	
Analyte	**Soil PCUL - Saturated**																								
Metals (mg/kg)																									
Arsenic	7.3	**3.62**		**4.62**		**5.16**		**3.02**		**6.61**		**14.7**		**3.73**		**2.89**		**3.62**		**2.35**		**2.27**		**5.48**	
Cadmium	0.77	**0.1**	J	0.14	U	**0.2**		**0.06**	J	**0.14**		**0.41**		**0.04**	J	**0.1**	J	**0.1**	J	**0.07**	J	**0.07**	J	**0.07**	J
Chromium	260	**26.2**		**14.6**		**27.5**		**21.7**		**13.8**		**20.4**		**13**		**598**		**23.2**		**20.8**		**27.2**		**20.2**	
Chromium, Hexavalent	0.00089	0.552	U	0.68	U	3.06	U	0.538	U	3.57	U	0.678	U	0.701	U	**28.4**		0.546	U	0.531	U	0.537	U	0.648	U
Chromium, Trivalent	48	**26.2**		**14.6**		**27.5**		**21.7**		**13.8**		**20.4**		**13**		**598**		**23.2**		**20.8**		**27.2**		**20.2**	
Copper	36	**31.6**		**23.1**		**14.9**		**10.7**		**28.5**		**32.6**		**23.6**		**15.6**		**15**		**10.1**		**11**		**18.5**	
Lead	56	**5.06**		**3.7**		**18**		**2.08**		**14.5**		**16.6**		**2.72**		**2.29**		**2.48**		**1.79**		**1.75**		**2.72**	
Mercury	0.07	**0.0212**		**0.0398**		**0.0998**		**0.0228**	J	**0.0611**		**0.108**		**0.0347**		**0.0228**		**0.00685**	J	**0.0101**	J	**0.00619**	J	**0.00819**	J
Nickel	48	**26.4**		**15.6**		**31.8**		**28.9**		**15.1**		**17.2**		**8.46**		**30.5**		**32.6**		**26.7**		**27.7**		**14.8**	
Selenium	0.26	**0.76**		**1.17**		**0.42**	J	**0.46**	J	**0.75**		**0.85**		**0.5**	J	**0.68**		**1.25**		**0.77**		**0.69**		**0.85**	
Thallium	0.0044	**0.08**	J	**0.08**	J	**0.06**	J	**0.05**	J	**0.08**	J	**0.07**	J	**0.05**	J	**0.06**	J	--		--		--		--	
Zinc	85	**36.5**		**40.5**		**44.8**		**31.8**		**42.8**		**52.3**		**27.8**		**36.7**		**39.1**		**30.1**		**31.7**		**28.2**	
Total Petroleum Hydrocarbons (TPH) (mg/kg)																									
Diesel-range hydrocarbons	2,000	28	U	38	U	**59.8**		5.49	U	6.64	U	**65.2**		**7.81**		27	U	28	U	27	U	28	U	34	U
Lube oil-range hydrocarbons	2,000	56	U	77	U	**177**		11	U	**43.2**		**200**		**34**		54	U	55	U	55	U	57	U	67	U
Total TPH	2,000	ND		ND		**236.8**		ND		**43.2**		**265.2**		**41.81**		ND		ND		ND		ND		ND	
Volatile Organic Compounds (VOCs) (mg/kg)																									
Benzene	0.00056	--		--		--		--		--		--		--		**0.0003**	J	--		--		--		--	
cis-1,2-Dichloroethylene	0.0052	0.00062	U	0.00101	U	0.0013	U	0.00061	U	0.00089	U	**0.00032**	J	0.0009	U	**0.0024**		0.00096	U	0.00097	U	0.00111	U	0.00145	U
Methylene Chloride	0.0015	--		--		--		--		--		--		--		0.0033	U	0.00479	U	0.00485	U	0.00553	U	0.00724	U
Trichloroethylene	0.00027	0.00062	U	0.00101	U	0.0013	U	0.00061	U	0.00089	U	0.00085	U	0.0009	U	**0.0993**		0.00096	U	0.00097	U	0.00111	U	0.00145	U
Vinyl Chloride	0.000056	0.00062	U	0.00101	U	0.0013	U	0.00061	U	0.00089	U	0.00085	U	0.0009	U	0.00066	U	0.00096	U	0.00097	U	0.00111	U	0.00145	U
Semivolatile Compounds (SVOCs) (mg/kg)																									
1,4-Dioxane	0.00013	--		--		--		--		--		--		--		--		0.335	U	0.335	U	0.335	U	1	U
Bis(2-Ethylhexyl) Phthalate	0.0051	--		--		--		--		--		--		--		**0.0122**	J	--		--		--		--	
Diethyl Phthalate	0.034	--		--		--		--		--		--		--		0.0499	U	--		--		--		--	
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																									
1-Methylnaphthalene	0.0042	--		--		--		--		--		--		--		**0.00068**	J	0.005	U	0.00497	U	0.00497	U	0.005	U
Benzo(a)anthracene	NE	--		--		--		--		--		--		--		0.00499	U	0.005	U	0.00497	U	0.00497	U	0.005	U
Benzo(a)pyrene	0.000016	--		--		--		--		--		--		--		0.00499	U	0.005	U	0.00497	U	0.00497	U	0.005	U
Benzo(b)fluoranthene	NE	--		--		--		--		--		--		--		0.00499	U	0.005	U	0.00497	U	0.00497	U	0.005	U
Benzo(k)fluoranthene	NE	--		--		--		--		--		--		--		0.00499	U	0.005	U	0.00497	U	0.00497	U	0.005	U
Chrysene	NE	--		--		--		--		--		--		--		0.00499	U	0.005	U	0.00497	U	0.00497	U	**0.0021**	J
Dibenzo(a,h)anthracene	NE	--		--		--		--		--		--		--		0.00499	U	0.005	U	0.00497	U	0.00497	U	0.005	U
Indeno(1,2,3-c,d)pyrene	NE	--		--		--		--		--		--		--		0.00499	U	0.005	U	0.00497	U	0.00497	U	0.005	U
Naphthalene	0.0021	--		--		--		--		--		--		--		0.00499	U	0.005	U	0.00497	U	**0.00318**	J	0.005	U
Total cPAH TEQ	0.000016	--		--		--		--		--		--		--		0.00427	U	0.004275	U	0.00425	U	0.00425	U	**0.00427**	J
Polychlorinated Biphenyls (PCBs) (mg/kg)																									
Total PCB Aroclors	0.00000055	--		--		--		--		--		--		--		0.0198	U	--		--		--		--	
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																									
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--		--		--		--		--		--		--		0.001	U	--		--		--		--	
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--		--		--		--		--		--		--		0.001	U	--		--		--		--	
Perfluorooctanoic acid (PFOA)	0.000004	--		--		--		--		--		--		--		0.001	U	--		--		--		--	

Notes:

B = Blank detection
J = Estimated result
mg/kg = Milligram per kilogram
ND = Not detected (calculated)
PAHs = Polycyclic Aromatic Hydrocarbons
PCBs = Polychlorinated Biphenyls
PCUL = Preliminary Cleanup Level provided to GeoEngineers by
PCULs for the Remedial Investigation (PFAS PCULs are from Ecology Publication 22-09-058)
Washington State Department of Ecology (Ecology) June 3, 2022 as the
PFAS = Per- and Polyfluoroalkyl Substances
SVOCs = Semivolatile Volatile Organic Compounds
Total cPAH TEQ = Total toxic equivalency of cPAHs per WAC 173-340-708(8)(e)
Gray shading = Detected exceedance of PCUL
Blue shading = Not detected at a reporting limit above the PCUL

Table 7-3

Summary of Groundwater Exceedances

Precision Engineering, Inc.

Seattle, Washington

	Location Identification	MW1	MW1	MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2
	Sample Identification	MW1-W-35.0-20190723	MW1-W-32.0	MW1-W-35.0-20200129	MW1-W-35.0-20200428	MW1-220427	MW1-230713	MW1-20231205	MW2-W-19.0	MW2-W-15.0-20191216	MW2-W-15.0-20200129	MW2-W-15.0-20200427
	Sample Date	7/23/2019	12/18/2019	1/29/2020	4/28/2020	4/27/2022	7/13/2023	12/5/2023	7/24/2019	12/16/2019	1/29/2020	4/27/2020
	WBZ	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Shallow	Shallow	Shallow	Shallow
Analyte	**Water PCUL**											
Total Metals (µg/L)												
Arsenic	8.0	**33.3**	**29.7**	**30.8**	**27.7**	**33.7**	**30.6**	**30.6**	**7.54**	**9.05**	**6.46**	**5.9**
Cadmium	1.2	--	--	--	--	0.1 U	0.1 U	0.2 U	--	--	--	--
Chromium	100	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	**9.19**	**8.42**	**7.82**	**8.18**
Copper	3.1	5 U	5 U	5 U	5 U	0.5 U	0.5 U	1 U	10 U	5 U	5 U	5 U
Lead	5.6	--	--	--	--	0.1 U	0.1 U	0.2 U	--	--	--	--
Mercury	0.025	--	--	--	--	0.00041 U	**0.00034 J**	**0.00175**	--	--	--	--
Nickel	8.2	--	--	--	--	**0.38 J**	**0.172 J**	**0.166 J**	--	--	--	--
Selenium	50	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	**9.02**	**10.8**	5 U	**3.53**
Thallium	0.062	--	--	--	--	0.2 U	0.4 U	0.4 U	--	--	--	--
Zinc	81	--	--	--	--	6 U	6 U	12 U	--	--	--	--
Dissolved Metals (µg/L)												
Arsenic	8.0	--	--	--	--	**31.4**	**30.7**	**30.2**	--	--	--	--
Cadmium	1.2	--	--	--	--	0.1 U	0.1 U	0.1 U	--	--	--	--
Chromium	100	--	--	--	--	0.5 U	1 U	2.5 U	--	--	--	--
Chromium, Hexavalent	0.046	45 U	45 U	45 U	45 U	13 U	13 U	13 UJ	45 U	135 U	90 U	45 U
Chromium, Trivalent	27	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	--	--	--	--
Copper	3.1	--	--	--	--	0.5 U	0.5 U	**0.468 J**	--	--	--	--
Lead	5.6	--	--	--	--	0.1 U	0.1 U	0.1 U	--	--	--	--
Mercury	0.025	--	--	--	--	0.00041 U	**0.00015 J**	0.00041 U	--	--	--	--
Nickel	8.2	--	--	--	--	**0.15 J**	**0.135 J**	**0.25 J**	--	--	--	--
Selenium	50	--	--	--	--	--	0.5 U	1 U	--	--	--	--
Thallium	0.062	--	--	--	--	--	0.2 U	0.2 U	--	--	--	--
Zinc	81	--	--	--	--	--	6 U	12 U	--	--	--	--
Total Petroleum Hydrocarbons (µg/L)												
Diesel-range hydrocarbons	500	50 U	50 U	50 U	50 U	100 U	500 U	500 U	**250**	**450**	**240**	**470**
Lube oil-range hydrocarbons	500	250 U	250 U	250 U	250 U	200 U	1000 U	1000 U	250 U	**790**	**460**	**660**
Total TPH	500	ND	ND	ND	ND	ND	ND	ND	**250**	**1240**	**700**	**1130**
Volatile Organic Compounds (VOCs) (µg/L)												
Benzene	1.1	0.35 U	0.35 U	0.35 U	0.35 U	0.2 U			3.5 U	3.5 U	3.5 U	3.5 U
cis-1,2-Dichloroethylene	16	1 U	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U	10 U	10 U	10 U	10 U
Methylene Chloride	5.0	5 U	5 U	5 U	5 U	1 U	1 U	1 U	50 U	50 U	50 U	50 U
Trichloroethylene	0.70	1 U	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U	10 U	10 U	10 U	10 U
Vinyl Chloride	0.18	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	2 U	2 U	2 U
Semivolatile Compounds (SVOCs) (µg/L)												
1,4-Dioxane	0.44	--	--	--	--	0.2 U	0.2 U	0.2 UJ	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.046	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	93	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)												
1-Methylnaphthalene	1.5	--	--	--	--	--	0.01 U	0.01 U	--	--	--	--
Benzo(a)anthracene	0.00016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzo(a)pyrene	0.000016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzo(b)fluoranthene	0.00016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzo(k)fluoranthene	0.0016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U
Chrysene	0.016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U
Dibenzo(a,h)anthracene	0.000016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U
Naphthalene	1.4	0.4 U	0.4 U	0.4 U	0.4 U	--	0.01 U	0.01 U	0.4 U	0.4 U	0.4 U	0.4 U
Total cPAH TEQ	0.0097	0.0302 U	0.0302 U	0.0302 U	0.0302 U		0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U
Polychlorinated Biphenyls (PCBs) (µg/L)												
Total PCB Aroclors	0.000007	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)												
Perfluorohexanesulfonic acid (PFHxS)	0.065	--	--	--	--	0.004 U	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.015	--	--	--	--	**0.00092 J**	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.01					**0.00065 J**						

Location Identification		MW2	MW2	MW2	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW4	MW4
Sample Identification		MW-2-220422	MW2-230714	MW2-20231206	MW3-W-15.0-20190722	MW3-W-15.0-20191216	MW3-W-15.0-20200129	MW3-W-15.0-20200427	MW3-220420	MW3-230713	MW3-20231205	MW4-W-20.0-20190723	MW4-W-20.0-20191217
Sample Date		4/22/2022	7/14/2023	12/6/2023	7/22/2019	12/16/2019	1/29/2020	4/27/2020	4/20/2022	7/13/2023	12/5/2023	7/23/2019	12/17/2019
WBZ		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
Analyte	**Water PCUL**												
Total Metals (µg/L)													
Arsenic	8.0	**5.45**	**6.6**	**8.14**	**13.6**	**8.81**	**10.7**	**7.33**	**11.3**	**10.9**	**11.3**	**12.6**	**13.5**
Cadmium	1.2	0.2 U	1 U	**0.038 J**	–	–	–	–	0.1 U	0.5 U	**0.064 J**	–	–
Chromium	100	**9.51**	**11.3**	5 U	10 U	1 U	**1.03**	1 U	**1.09**	**1.14**	**0.862 J**	1 U	1 U
Copper	3.1	**0.674 J**	5 U	**0.553**	50 U	5 U	5 U	5 U	0.5 U	0.5 U	1 U	5 U	5 U
Lead	5.6	**0.158 J**	1 U	**0.103**	–	–	–	–	0.1 U	0.1 U	0.2 U	–	–
Mercury	0.025	**0.00371**	**0.00174**	**0.00368**	–	–	–	–	0.00042 U	0.00042 U	**0.00024 J**	–	–
Nickel	8.2	**2.82**	**1.93 J**	**1.75**	–	–	–	–	**3.55**	**2.53**	**3.38**	–	–
Selenium	50	**1.06**	5 U	**1.46**	1 U	2 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2 U
Thallium	0.062	0.4 U	2 U	0.4 U	–	–	–	–	0.2 U	0.4 U	0.4 U	–	–
Zinc	81	12 U	60 U	6 U	–	–	–	–	6 U	6 U	**57.4**	–	–
Dissolved Metals (µg/L)													
Arsenic	8.0	**4.72**	**7.15**	**3.61**	–	–	–	–	**10.7**	**11.7**	**10.3**	–	–
Cadmium	1.2	0.2 U	1 U	0.2 U	–	–	–	–	0.1 U	0.1 U	0.2 U	–	–
Chromium	100	**8.92**	**11.2**	**8.18**					**1.24**	**1.81 J**	2.5 U	–	–
Chromium, Hexavalent	0.046	13 U	13 U	13 U	45 U	90 U	45 U	45 U	13 UJ	13 U	13 U	45 U	45 U
Chromium, Trivalent	27	–	–	5 U	10 U	1 U		1 U	–	–	–	1 U	1 U
Copper	3.1	**0.556 J**	5 U	1 U	–	–	–	–	0.5 U	0.5 U	**0.738 J**	–	–
Lead	5.6	0.2 U	1 U	0.1 U	–	–	–	–	0.1 U	0.1 U	0.5 U	–	–
Mercury	0.025	**0.00051**	**0.00071**		–	–	–	–	0.00041 U	0.00042 U	0.00105 U	–	–
Nickel	8.2	**2.61**	**2.25 J**	**1.64**	–	–	–	–	**2.31**	**2.9**	**2.86**	–	–
Selenium	50	–	**4.71 J**	**1.55**	–	–	–	–	–	0.5 U	1 U	–	–
Thallium	0.062	–	2 U	0.4 U	–	–	–	–	–	0.2 U	1 U	–	–
Zinc	81	–	60 U	12 U	–	–	–	–	–	6 U	12 U	–	–
Total Petroleum Hydrocarbons (µg/L)													
Diesel-range hydrocarbons	500	**241**	500 U	**119**	**82**	**65**	50 U	**92**	100 U	500 U	500 U	50 U	50 U
Lube oil-range hydrocarbons	500	200 U	1000 U	200 U	250 U	250 U	250 U	250 U	200 U	1000 U	1000 U	250 U	250 U
Total TPH	500	**241**	ND	**119**	**82**	**65**	ND	**92**	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs) (µg/L)													
Benzene	1.1	0.4 U	–	–	0.35 U	0.35 U	0.35 U	0.35 U	0.2 U	–	–	0.35 U	0.35 U
cis-1,2-Dichloroethylene	16	0.4 U	1 U	2 U	1 U	1 U	1 U	1 U	0.2 U	**0.08 J**	0.2 U	1 U	1 U
Methylene Chloride	5.0	2 U	5 U	**5.8 J**	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	5 U
Trichloroethylene	0.70	0.4 U	1 U	2 U	1 U	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U	1 U	1 U
Vinyl Chloride	0.18	0.4 U	1 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Semivolatile Compounds (SVOCs) (µg/L)													
1,4-Dioxane	0.44	**0.9**	**0.3**	**0.3 J**	–	–	–	–	**0.3**	**0.2**	**0.3**	–	–
Bis(2-Ethylhexyl) Phthalate	0.046	0.2 U	–	–	–	–	–	–	–	–	–	–	–
Diethyl Phthalate	93	**0.3**	–	–	–	–	–	–	–	–	–	–	–
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)													
1-Methylnaphthalene	1.5	**0.014**	0.01 U	0.01 U	–	–	–	–	**0.002 J**	0.01 U	0.01 U	–	–
Benzo(a)anthracene	0.00016	**0.0009 J**	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Benzo(a)pyrene	0.000016	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Benzo(b)fluoranthene	0.00016	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Benzo(k)fluoranthene	0.0016	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Chrysene	0.016	**0.002 J**	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Dibenzo(a,h)anthracene	0.000016	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Naphthalene	1.4	**0.042**	0.01 U	**0.019**	0.4 U	0.4 U	0.4 U	0.4 U	**0.008 J**	0.01 U	0.01 U	0.4 U	0.4 U
Total cPAH TEQ	0.0097	**0.00761 J**	0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U	0.00805 U	0.00855 U	0.00855 U	0.0302 U	0.0302 U
Polychlorinated Biphenyls (PCBs) (µg/L)													
Total PCB Aroclors	0.000007	0.1 U	–	–	–	–	–	–	–	–	–	–	–
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)													
Perfluorohexanesulfonic acid (PFHxS)	0.065	–	–	0.0049 U	–	–	–	–	–	**0.0022 J**	**0.0018 J**	–	–
Perfluorooctanesulfonic acid (PFOS)	0.015	–	–	0.0049 U	–	–	–	–	–	**0.008**	**0.0091**	–	–
Perfluorooctanoic acid (PFOA)	0.01			**0.0045**						**0.015**	**0.016**		

Location Identification		MW4	MW4	MW4	MW4	MW4	MW5	MW5	MW5	MW5	MW5	MW5
Sample Identification		MW4-W-50.0	MW4-W-20.0-20200428	MW-4-220422	MW4-230721	MW4-20231206	MW5-W-15.0-20190723	MW5-W-15.0-20191217	MW5-W-15.0-20200130	MW5-W-15.0-20200428	MW-5-220422	MW5-230720
Sample Date		1/30/2020	4/28/2020	4/22/2022	7/21/2023	12/6/2023	7/23/2019	12/17/2019	1/30/2020	4/28/2020	4/22/2022	7/20/2023
WBZ		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
Analyte	**Water PCUL**											
Total Metals (µg/L)												
Arsenic	8.0	**12**	**10.6**	**12.2**	**11.9**	**11.7**	10 U	**6.19**	10 U	**5.37**	**3.48**	**4.16**
Cadmium	1.2	--	--	0.1 U	0.1 U	**0.037 J**	--	--	--	--	100 U	0.1 U
Chromium	100	1 U	1 U	0.5 U	2.5 U	1 U	**132000**	**38900**	**42200**	**44600**	**133000**	**115000**
Copper	3.1	5 U	5 U	**0.707**	**0.295 J**	**0.34 J**	1000 U	5 U	50 U	25 U	**1.4**	**1.1**
Lead	5.6	--	--	0.1 U	0.1 U	**0.072 J**	--	--	--	--	0.1 U	10 U
Mercury	0.025	--	--	**0.00038 J**	0.00041 U	**0.00032 J**	--	--	--	--	**0.0283**	**0.0182**
Nickel	8.2	--	--	**1.26**	**0.647**	**0.497 J**	--	--	--	--	**12.5 J**	**7.46**
Selenium	50	1 U	1 U	0.5 U	**0.187 J**	0.5 U	200 U	1 U	10 U	5 U	0.5 U	0.5 U
Thallium	0.062	--	--	0.2 U	0.2 U	0.4 U	--	--	--	--	200 U	20 U
Zinc	81	--	--	6 U	6 U	6 U	--	--	--	--	6 U	6 U
Dissolved Metals (µg/L)												
Arsenic	8.0	--	--	**11.8**	**11.2**	**11.7**	--	--	--	--	200 U	**4.9**
Cadmium	1.2	--	--	0.1 U	0.1 U	0.2 U	--	--	--	--	100 U	**0.061 J**
Chromium	100	--	--	0.5 U	0.5 U	1 UJ	--	--	--	--	**134000**	**115000 J**
Chromium, Hexavalent	0.046	45 U	45 U	13 U	13 U	13 U	**117000 J**	**31600**	**36200**	**38500**	**136000**	**163000 J**
Chromium, Trivalent	27	1 U	1 U	0.5 U	2.5 U	1 U	--	--	--	--	ND	ND
Copper	3.1	--	--	**0.503**	**0.896**	**1.3**	--	--	--	--	500 U	**0.863**
Lead	5.6	--	--	0.1 U	0.1 U	0.2 U	--	--	--	--	100 U	10 U
Mercury	0.025	--	--	0.00041 U	0.00041 U	**0.00018 J**	--	--	--	--	**0.0252**	**0.0127**
Nickel	8.2	--	--	**0.246 J**	**0.227 J**	**0.376 J**	--	--	--	--	500 U	**4.84**
Selenium	50	--	--	--	0.5 U	1 U	--	--	--	--	--	**0.642**
Thallium	0.062	--	--	--	0.2 U	0.4 U	--	--	--	--	--	20 U
Zinc	81	--	--	--	6 U	12 U	--	--	--	--	--	6 U
Total Petroleum Hydrocarbons (µg/L)												
Diesel-range hydrocarbons	500	50 U	50 U	100 U	500 U	500 U	**93**	**58**	**94**	**130**	**101**	500 U
Lube oil-range hydrocarbons	500	200 U	250 U	200 U	1000 U	1000 U	250 U	250 U	250 U	250 U	200 U	1000 U
Total TPH	500	ND	ND	ND	ND	ND	**93**	**58**	**94**	**130**	**101**	ND
Volatile Organic Compounds (VOCs) (µg/L)												
Benzene	1.1	0.35 U	0.35 U	0.2 U	--	--	3.5 U	1.7 U	0.35 U	0.35 U	0.2 U	--
cis-1,2-Dichloroethylene	16	1 U	1 U	0.2 U	0.2 U	0.2 U	10 U	5 U	1 U	1 U	**0.46**	**0.61**
Methylene Chloride	5.0	5 U	5 U	1 U	1 U	1 U	50 U	25 U	5 U	5 U	1 U	1 U
Trichloroethylene	0.70	1 U	1 U	0.2 U	0.2 U	0.2 U	10 U	5 U	**3.3**	**3.3**	**6.85**	**9.26**
Vinyl Chloride	0.18	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Semivolatile Compounds (SVOCs) (µg/L)												
1,4-Dioxane	0.44	--	--	**0.1 J**	0.2 U	0.2 UJ	--	--	--	--	**1.3**	**1.1**
Bis(2-Ethylhexyl) Phthalate	0.046	--	--	--	--	--	--	--	--	--	0.2 U	--
Diethyl Phthalate	93	--	--	--	--	--	--	--	--	--	**0.3**	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)												
1-Methylnaphthalene	1.5	--	--	**0.002 J**	0.01 U	0.01 U	--	--	--	--	**0.012**	**0.011**
Benzo(a)anthracene	0.00016	0.04 U	0.04 U	**0.001 J**	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.01 U
Benzo(a)pyrene	0.000016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U
Benzo(b)fluoranthene	0.00016	0.04 U	0.04 U	**0.002 J**	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.003 J**	0.01 U
Benzo(k)fluoranthene	0.0016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U
Chrysene	0.016	0.04 U	0.04 U	**0.002 J**	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.001 J**	0.01 U
Dibenzo(a,h)anthracene	0.000016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.01 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.04 U	0.04 U	**0.002 J**	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.01 U
Naphthalene	1.4	0.4 U	0.4 U	0.01 U	0.01 U	0.01 U	0.4 U	0.4 U	0.4 U	0.4 U	**0.115**	**0.104**
Total cPAH TEQ	0.0097	0.0302 U	0.0302 U	**0.00692 J**	0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U	**0.00701 J**	0.00855 U
Polychlorinated Biphenyls (PCBs) (µg/L)												
Total PCB Aroclors	0.000007	--	--	--	--	--	--	--	--	--	0.1 U	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)												
Perfluorohexanesulfonic acid (PFHxS)	0.065	--	--	--	--	--	--	--	--	--	**0.0037 J**	**0.004 J**
Perfluorooctanesulfonic acid (PFOS)	0.015	--	--	--	--	--	--	--	--	--	**0.045**	**0.013**
Perfluorooctanoic acid (PFOA)	0.01										**0.021**	**0.02**

Location Identification		MW5	MW6	MW6	MW6	MW6	MW6	MW6	MW6	MW7	MW7	MW7	MW7	MW7	MW7	MW7
Sample Identification		MW5-20231205	MW-6-W-15.0	MW6-W-15.0-20191216	MW6-W-15.0-20200429	MW6-W-15.0-20200427	MW-6-042022	MW6-230721	MW6-20231207	MW7-W-20.0	MW7-W-27.5-20191217	MW7-W-27.5-20200427	MW7-W-28.5	MW-7-04202022	MW7-230724	MW7-20231207
Sample Date		12/5/2023	7/23/2019	12/16/2019	1/29/2020	4/27/2020	4/20/2022	7/21/2023	12/7/2023	7/24/2019	12/17/2019	4/27/2020	1/29/2020	4/20/2022	7/24/2023	12/7/2023
WBZ		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Analyte	**Water PCUL**															
Total Metals (µg/L)																
Arsenic	8.0	20 U	**42.8**	**46.4**	**48.7**	**48.1**	**42.3**	**38.5**	**45.9**	**8.59**	**9.03**	**8.62**	**8.51**	**7.82**	**8.22**	**8.65**
Cadmium	1.2	10 U	--	--	--	--	0.5 U	2 U	2 U	--	--	--	--	0.1 U	0.1 U	0.5 U
Chromium	100	**105000**	**34.5**	**17.4**	**20.3**	**25.9**	**38.5**	**20.2**	**23.4**	**3.01**	**1.75**	5 U	**1.73**	**0.976**	**1.07 J**	2.5 U
Copper	3.1	50 U	**210**	5 U	5 U	25 U	**3.4**	10 U	**4.38 J**	10 U	5 U	25 U	**5.87**	**5.06**	**4.35**	**4.83**
Lead	5.6	10 U	--	--	--	--	**0.645**	2 U	**1.12 J**	--	--	--	--	**0.067 J**	0.1 U	0.5 U
Mercury	0.025	**0.0173**	--	--	--	--	**0.00512**	**0.00674**	**0.0105**	--	--	--	--	**0.217**	**0.133**	**0.141**
Nickel	8.2	50 U	--	--	--	--	**31.3**	**3.16 J**	**3.24 J**	--	--	--	--	**11.7**	**11**	**10.8**
Selenium	50	**18.3 J**	**11.8**	**13.5**	**14.3**	**6.15**	**3.75**	**12.4**	**5.82 J**	**6.24**	**8.21**	5 U	5 U	**0.226 J**	1 U	**1.3 J**
Thallium	0.062	20 U	--	--	--	--	1 U	4 U	4 U	--	--	--	--	0.2 U	0.2 U	1 U
Zinc	81	U	--	--	--	--	30 U	120 U	120 U	--	--	--	--	6 U	12 U	30 U
Dissolved Metals (µg/L)																
Arsenic	8.0	20 U	--	--	--	--	**36.5**	**41**	**41.2**	--	--	--	--	**7.79**	**8.32**	**7.93**
Cadmium	1.2	10 U	--	--	--	--	0.2 U	2 U	2 U	--	--	--	--	0.1 U	0.1 U	0.2 U
Chromium	100	**99900**	--	--	--	--	**22.6**	**20.2**	**21.2**	--	--	--	--	**0.943**	**1.09**	**0.694 J**
Chromium, Hexavalent	0.046	**89800 J**	45 U	450 U	45 U	225 U	13 UJ	13 U	13 U	45 U	45 U	45 U	45 U	13 UJ	13 U	13 U
Chromium, Trivalent	27	**10,100**	--	--	--	--	--	--	--	--	--	5 U		--	--	2.5 U
Copper	3.1	50 U	--	--	--	--	1 U	10 U	10 U	--	--	--	--	**5.2**	**4.21**	**5.59**
Lead	5.6	10 U	--	--	--	--	0.2 U	2 U	2 U	--	--	--	--	0.1 U	0.1 U	0.2 U
Mercury	0.025	0.00105 U	--	--	--	--	**0.00235**		**0.0039**	--	--	--	--	**0.127**	**0.111**	**0.127**
Nickel	8.2	**13.9 J**	--	--	--	--	**11.3**	**2.24 J**	**2.1 J**	--	--	--	--	**11.8**	**11.2**	**11.2**
Selenium	50	50 U	--	--	--	--	--	**10.2**	**4.26 J**	--	--	--	--	--	**0.408 J**	**1.14**
Thallium	0.062	20 U	--	--	--	--	--	4 U	4 U	--	--	--	--	--	0.2 U	0.4 U
Zinc	81	600 U	--	--	--	--	--	120 U	120 U	--	--	--	--	--	6 U	12 U
Total Petroleum Hydrocarbons (µg/L)																
Diesel-range hydrocarbons	500	500 U	**550**	**410**	**370**	**590**	**471**	500 U	**282**	**80**	**99**	**170**	**88**	100 U	500 U	500 U
Lube oil-range hydrocarbons	500	1000 U	**580**	**700**	**810**	**550**	**256**	1000 U	**241**	250 U	250 U	250 U	250 U	200 U	1000 U	1000 U
Total TPH	500	ND	**1130**	**1110**	**1180**	**1140**	**727**	ND	**523**	**80**	**99**	**170**	**88**	ND	ND	ND
Volatile Organic Compounds (VOCs) (µg/L)																
Benzene	1.1	--	3.5 U	3.5 U	3.5 U	3.5 U	2 U	--	--	0.35 U	0.35 U	0.35 U	0.35 U	0.2 U	--	--
cis-1,2-Dichloroethylene	16	**0.68**	10 U	10 U	10 U	10 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U
Methylene Chloride	5.0	1 U	50 U	50 U	50 U	50 U	**27.7**	10 U	10 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Trichloroethylene	0.70	**14.1**	10 U	10 U	10 U	10 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U
Vinyl Chloride	0.18	0.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Semivolatile Compounds (SVOCs) (µg/L)																
1,4-Dioxane	0.44	**1.1**	--	--	--	--	**0.2**	**0.2 J**	**0.2 J**	--	--	--	--	**0.5**	**0.4**	**0.3 J**
Bis(2-Ethylhexyl) Phthalate	0.046	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	93	--	--	--	--	--	**0.3**	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)																
1-Methylnaphthalene	1.5	**0.008 J**	--	--	--	--	**0.002 J**	0.01 U	0.01 U	--	--	--	--	**0.001 J**	0.01 U	0.01 U
Benzo(a)anthracene	0.00016	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene	0.000016	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene	0.00016	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	**0.007 J**	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	0.0016	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U
Chrysene	0.016	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U
Dibenzo(a,h)anthracene	0.000016	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U
Naphthalene	1.4	**0.069**	0.4 U	0.4 U	0.4 U	0.4 U	**0.006 J**	0.01 U	**0.007 J**	0.4 U	0.4 U	0.4 U	0.4 U	**0.006 J**	0.01 U	0.01 U
Total cPAH TEQ	0.0097	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U	0.00805 U	0.00855 U	**0.00875 J**	0.0302 U	0.0302 U	0.0302 U	0.0302 U	0.00805 U	0.00855 U	0.00855 U
Polychlorinated Biphenyls (PCBs) (µg/L)																
Total PCB Aroclors	0.000007	--	--	--	--	--	0.1 U	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)																
Perfluorohexanesulfonic acid (PFHxS)	0.065	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U
Perfluorooctanesulfonic acid (PFOS)	0.015	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U
Perfluorooctanoic acid (PFOA)	0.01							**0.012 J**	**0.007**						**0.0019 J**	**0.0016 J**

Location Identification		MW8	MW8	MW8	MW8	MW8	MW8	MW8	MW9	MW9
Sample Identification		MW-8-W-19.0	MW8-W-15.0-20191217	MW8-W-15.0-20200129	MW8-W-15.0-20200427	MW-8-220421	MW8-230714	MW8-20231206	MW-9-W-33.0	MW9-W-33.5-20191216
Sample Date		7/23/2019	12/17/2019	1/29/2020	4/27/2020	4/21/2022	7/14/2023	12/6/2023	7/23/2019	12/16/2019
WBZ		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Deep	Deep
Analyte	**Water PCUL**									
Total Metals (µg/L)										
Arsenic	8.0	**20.4**	**22.2**	**18.6**	**6.38**	**11.2**	**6.54**	**10.2**	**9.26**	**11.5**
Cadmium	1.2	--	--	--	--	0.1 U	0.2 U	0.1 U	--	--
Chromium	100	**8.82**	10 U	10 U	**6.3**	**9.98**	**8.5**	5 U	**1.56**	**21.6**
Copper	3.1	**44.7**	50 U	5 U	5 U	**0.206 J**	**2.37**	**0.234 J**	**5.87**	5 U
Lead	5.6	--	--	--	--	0.1 U	**0.536**	0.1 U	--	--
Mercury	0.025	--	--	--	--	**0.00239**	**0.00243**	**0.00313 J**	--	--
Nickel	8.2	--	--	--	--	**5.46**	**6.75**	**4.99**	--	--
Selenium	50	**2.99**	**3.44**	5 U	1 U	**0.254 J**	**1.39**	**0.391 J**	**2.7**	**4.66**
Thallium	0.062	--	--	--	--	0.2 U	0.4 U	0.4 U	--	--
Zinc	81	--	--	--	--	6 U	**27.6**	6 U	--	--
Dissolved Metals (µg/L)										
Arsenic	8.0	--	--	--	--	**10.9**	**6.05**	**11.4**	--	--
Cadmium	1.2	--	--	--	--	0.1 U	0.2 U	0.5 U	--	--
Chromium	100	--	--	--	--	**7.67**	**7.91**	**7.43**	--	--
Chromium, Hexavalent	0.046	45 U	135 U	45 U	45 U	13 UJ	**16 J**	13 U	45 U	45 U
Chromium, Trivalent	27	--	10 U	10 U	--	--	ND	5 U	--	--
Copper	3.1	--	--	--	--	0.5 U	1 U	2.5 U	--	--
Lead	5.6	--	--	--	--	0.1 U	0.2 U	0.5 U	--	--
Mercury	0.025	--	--	--	--	**0.00035 J**	**0.00126**	**0.00192**	--	--
Nickel	8.2	--	--	--	--	**4.96**	**6.97**	**5.34**	--	--
Selenium	50	--	--	--	--	--	1 U	**1.08 J**	--	--
Thallium	0.062	--	--	--	--	--	0.4 U	1 U	--	--
Zinc	81	--	--	--	--	--	12 U	30 U	--	--
Total Petroleum Hydrocarbons (µg/L)										
Diesel-range hydrocarbons	500	**370**	**430**	**300**	**340**	**210**	500 U	500 U	**110**	**200**
Lube oil-range hydrocarbons	500	250 U	**260**	250 U	250 U	200 U	1000 U	1000 U	250 U	**330**
Total TPH	500	**370**	**690**	**300**	**340**	**210**	ND	ND	**110**	**530**
Volatile Organic Compounds (VOCs) (µg/L)										
Benzene	1.1	0.35 U	3.5 U	0.35 U	0.35 U	**0.05 J**	--	--	0.35 U	0.35 U
cis-1,2-Dichloroethylene	16	1 U	10 U	1 U	1 U	0.2 U	0.2 U	0.2 U	1 U	1 U
Methylene Chloride	5.0	5 U	50 U	5 U	5 U	1 U	1 U	1 U	5 U	5 U
Trichloroethylene	0.70	1 U	10 U	1 U	1 U	0.2 U	0.2 U	0.2 U	1 U	1 U
Vinyl Chloride	0.18	0.2 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Semivolatile Compounds (SVOCs) (µg/L)										
1,4-Dioxane	0.44	--	--	--	--	**13.3**	**20.4**	**6 J**	--	--
Bis(2-Ethylhexyl) Phthalate	0.046	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	93	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)										
1-Methylnaphthalene	1.5	--	--	--	--	0.01 U	0.01 U	0.01 U	--	--
Benzo(a)anthracene	0.00016	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Benzo(a)pyrene	0.000016	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Benzo(b)fluoranthene	0.00016	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Benzo(k)fluoranthene	0.0016	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Chrysene	0.016	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Dibenzo(a,h)anthracene	0.000016	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U
Naphthalene	1.4	0.4 U	0.4 U	0.4 U	0.4 U	0.01 U	0.01 U	0.01 U	0.4 U	0.4 U
Total cPAH TEQ	0.0097	0.0302 U	0.0302 U	0.0302 U	0.0302 U	0.00805 U	0.00855 U	0.00855 U	0.0302 U	0.0302 U
Polychlorinated Biphenyls (PCBs) (µg/L)										
Total PCB Aroclors	0.000007	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)										
Perfluorohexanesulfonic acid (PFHxS)	0.065	--	--	--	--	--	**0.0095**	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.015	--	--	--	--	--	**0.0051 J**	--	--	--
Perfluorooctanoic acid (PFOA)	0.01						**0.035**			

Location Identification		MW9	MW9	MW9	MW9	MW9	MW10	MW10	MW10	MW10	MW10	MW10
Sample Identification		MW9-W-33.5-20200129	MW9-W-32.5	MW-9-04192022	MW9-230714	MW9-20231207	MW-10-W-15.0	MW10-W-15.0-20191217	MW10-W-15.0-20200129	MW10-W-15.0-20200427	MW-10-04192022	MW10-230714
Sample Date		1/29/2020	4/28/2020	4/19/2022	7/14/2023	12/7/2023	7/23/2019	12/17/2019	1/29/2020	4/27/2020	4/19/2022	7/14/2023
WBZ		Deep	Deep	Deep	Deep	Deep	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
Analyte	**Water PCUL**											
Total Metals (µg/L)												
Arsenic	8.0	**10.9**	**8.24**	**10.8**	**10.3**	**10.3**	**16.2**	**13.2**	**25.5**	**14.9**	**29.9**	**22.4**
Cadmium	1.2	–	–	**0.058 J**	0.1 U	**0.1 J**	–	–	–	–	0.2 U	**0.43 J**
Chromium	100	**2.2**	**2.02**	**1.4**	**1.57**	2.5 U	**7.96**	**7.67**	**10.5**	**11.5**	**15.7**	**12.1**
Copper	3.1	5 U	5 U	**2.86**	**1.62**	**2.53**	5 U	5 U	5 U	5 U	**0.794 J**	5 U
Lead	5.6	–	–	**0.113**	**0.11**	0.2 U	–	–	–	–	**0.278**	1 U
Mercury	0.025	–	–	**0.0477**	**0.0189**	**0.0337**	–	–	–	–	**0.00445**	**0.00127**
Nickel	8.2	–	–	**58.5**	**46.2**	**46.9**	–	–	–	–	**7.51**	**5.24**
Selenium	50	5 U	1 U	**0.549**	**0.931**	**1**	**4.34**	**10.4**	5 U	**3.68**	**1.26**	**2.94 J**
Thallium	0.062	–	–	0.2 U	0.2 U	1 U	–	–	–	–	0.4 U	2 U
Zinc	81	–	–	6 U	6 U	12 U	–	–	–	–	12 U	60 U
Dissolved Metals (µg/L)												
Arsenic	8.0	–	–	**9.92**	**10.2**	**9.64**	–	–	–	–	**28.4**	**19.1**
Cadmium	1.2	–	–	**0.042 J**	0.1 U	**0.062 J**	–	–	–	–	0.2 U	**0.53 J**
Chromium	100	–	–	**1.32**	**1.44**	**0.934 J**	–	–	–	–	**14.3**	**11**
Chromium, Hexavalent	0.046	45 U	45 U	13 UJ	13 U	13 U	45 U	135 U	90 U	45 U	13 UJ	13 U
Chromium, Trivalent	27	–	–	–	–	2.5 U	–	–	–	–	–	–
Copper	3.1	–	–	**5.47**	**1.09**	**2.88**	–	–	–	–	1 U	5 U
Lead	5.6	–	–	**0.084 J**	0.1 U	0.2 U	–	–	–	–	0.2 U	1 U
Mercury	0.025	–	–	**0.00303**	**0.00869**	**0.0199**	–	–	–	–	**0.001**	**0.00073**
Nickel	8.2	–	–	**55.7**	**42.1**	**52**	–	–	–	–	**7.2**	**4.47 J**
Selenium	50	–	–	**0.697**	1 U	**0.808 J**	–	–	–	–	**1.73**	5 U
Thallium	0.062	–	–	0.2 U	0.2 U	0.4 U	–	–	–	–	0.4 U	2 U
Zinc	81	–	–	6 U	6 U	12 U	–	–	–	–	12 U	60 U
Total Petroleum Hydrocarbons (µg/L)												
Diesel-range hydrocarbons	500	**100**	**140**	100 U	500 U	500 U	**370**	**440**	**410**	**650**	**335**	500 U
Lube oil-range hydrocarbons	500	250 U	250 U	200 U	1000 U	1000 U	250 U	**360**	**690**	**640**	200 U	1000 U
Total TPH	500	**100**	**140**	ND	ND	ND	**370**	**800**	**1100**	**1290**	**335**	ND
Volatile Organic Compounds (VOCs) (µg/L)												
Benzene	1.1	0.35 U	0.35 U	0.2 U	–		0.35 U	3.5 U	3.5 U	3.5 U	2 U	–
cis-1,2-Dichloroethylene	16	1 U	1 U	0.2 U	0.2 U	0.2 U	1 U	10 U	10 U	10 U	2 U	1 U
Methylene Chloride	5.0	5 U	5 U	1 U	1 U	1 U	5 U	50 U	50 U	50 U	**26.2**	5 U
Trichloroethylene	0.70	1 U	1 U	0.2 U	0.2 U	0.2 U	1 U	10 U	10 U	10 U	2 U	1 U
Vinyl Chloride	0.18	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	2 U	2 U	2 U	1 U
Semivolatile Compounds (SVOCs) (µg/L)												
1,4-Dioxane	0.44	–	–	**2.7**	**2.4**	**1.9**	–	–	–	–	**2.7**	**1.3**
Bis(2-Ethylhexyl) Phthalate	0.046	–	–	–	–	–	–	–	–	–	–	–
Diethyl Phthalate	93	–	–	–	–	–	–	–	–	–	–	–
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)												
1-Methylnaphthalene	1.5	–	–	**0.002 J**	0.01 U	0.01 U		–	–	–	**0.003 J**	0.01 U
Benzo(a)anthracene	0.00016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U
Benzo(a)pyrene	0.000016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U
Benzo(b)fluoranthene	0.00016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U
Benzo(k)fluoranthene	0.0016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U
Chrysene	0.016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.01 U
Dibenzo(a,h)anthracene	0.000016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.04 U	0.04 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.01 U
Naphthalene	1.4	0.4 U	0.4 U	0.01 U	0.01 U	0.01 U	0.4 U	0.4 U	0.4 U	0.4 U	0.01 U	0.01 U
Total cPAH TEQ	0.0097	0.0302 U	0.0302 U	0.00805 U	0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U	**0.00802 J**	0.00855 U
Polychlorinated Biphenyls (PCBs) (µg/L)												
Total PCB Aroclors	0.000007	–	–	–	–	–	–	–	–	–	–	–
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)												
Perfluorohexanesulfonic acid (PFHxS)	0.065	–	–	–	**0.0017 J**	**0.0016 J**	–	–	–	–	–	0.0049 U
Perfluorooctanesulfonic acid (PFOS)	0.015	–	–	–	**0.0014 J**	**0.0014 J**	–	–	–	–	–	0.0049 U
Perfluorooctanoic acid (PFOA)	0.01				**0.0049**	**0.0041**						**0.011**

Location Identification		MW10	MW11	MW11	MW11	MW11	MW11	MW11	MW11	MW-12	MW-12	MW-12	MW-13
Sample Identification		MW10-20231207	MW11-W-15.0-20190722	MW11-W-15.0-20191216	MW11-W-15.0-20200129	MW11-W-15.0-20200427	MW11-220421	MW11-230720	MW11-20231205	MW-12-220425	MW12-230724	MW12-20231204	MW-13-220427
Sample Date		12/7/2023	7/22/2019	12/16/2019	1/29/2020	4/27/2020	4/21/2022	7/20/2023	12/5/2023	4/25/2022	7/24/2023	12/4/2023	4/27/2022
WBZ		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Deep
Analyte	**Water PCUL**												
Total Metals (µg/L)													
Arsenic	8.0	**26.1**	10 U	**6.16**	**7.16**	**4.1**	**5.37**	**5.27**	**5.74**	**30.8**	**19.2**	**21.7**	**9.39**
Cadmium	1.2	0.5 U	–	–	–	–	0.1 U	**0.47 J**	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U
Chromium	100	**10.2**	10 U	**2.48**	**3.42**	**3.1**	**14.4**	**3.22 J**	**2.98**	0.5 U	0.5 U	2.5 U	0.5 U
Copper	3.1	2.5 U	50 U	5 U	5 U	5 U	**0.354 J**	5 U	1 U	**1.36**	**0.187 J**	**0.378 J**	0.5 U
Lead	5.6	0.5 U	–	–	–	–	0.1 U	1 U	0.2 U	**0.073 J**	**0.069 J**	**0.128**	0.1 U
Mercury	0.025	**0.00194**	–	–	–	–	0.00042 U	0.00042 U	**0.00228**	**0.00111**	**0.00055**	**0.00187**	0.00041 U
Nickel	8.2	**9.76**	–	–	–	–	**0.845**	5 U	**0.646 J**	**0.777**	**0.302 J**	**0.362 J**	**0.198 J**
Selenium	50	**2.63**	10 U	**2.66**	**1.76**	1 U	**0.378 J**	5 U	1 U	0.5 U	0.5 U	1 U	0.5 U
Thallium	0.062	1 U	–	–	–	–	0.2 U	2 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	81	30 U	–	–	–	–	6 U	60 U	12 U	6 U	6 U	12 U	6 U
Dissolved Metals (µg/L)													
Arsenic	8.0	**21.8**	–	–	–	–	**5.42**	**4.52**	**5.94**	**27.6**	**19.3**	**22.4**	**9.69**
Cadmium	1.2	0.1 U	–	–	–	–	0.1 U	1 U	0.2 U	0.1 U	0.1 U	0.2 U	0.1 U
Chromium	100	**10.2**	–	–	–	–	**3.2**	**3.15 J**	2.5 U	0.5 U	1 U	2.5 U	0.5 U
Chromium, Hexavalent	0.046	13 U	45 U	45 U	45 U	45 U	13 UJ	13 U	13 U	13 U	13 U	13 U	13 U
Chromium, Trivalent	27	–	10 U	–	–	–	–	–	–	0.5 U	0.5 U	2.5 U	0.5 U
Copper	3.1	1 U	–	–	–	–	**0.202 J**	5 U	1 U	**1.75**	0.5 U	**0.604 J**	0.5 U
Lead	5.6	0.1 U	–	–	–	–	0.1 U	1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U
Mercury	0.025	–	–	–	–	–	0.00042 U	0.00042 U	0.00042 U	0.00041 U	**0.00024 J**	**0.00099**	0.00041 U
Nickel	8.2	**6.76**	–	–	–	–	**0.643**	5 U	**0.706 J**	**0.631**	**0.096 J**	**0.356 J**	**0.159 J**
Selenium	50	**1.65**	–	–	–	–	–	5 U	1 U	–	0.5 U	1 U	–
Thallium	0.062	2 U	–	–	–	–	–	2 U	0.4 U	–	0.2 U	0.4 U	–
Zinc	81	12 U	–	–	–	–	–	60 U	12 U	–	6 U	12 U	–
Total Petroleum Hydrocarbons (µg/L)													
Diesel-range hydrocarbons	500	**108**	**200**	**250**	**150**	**260**	**136**	500 U	500 U	100 U	500 U	500 U	100 U
Lube oil-range hydrocarbons	500	200 U	250 U	**430**	250 U	250 U	200 U	1000 U	1000 U	200 U	1000 U	1000 U	200 U
Total TPH	500	**108**	**200**	**680**	**150**	**260**	**136**	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs) (µg/L)													
Benzene	1.1	–	0.35 U	0.35 U	0.35 U	0.35 U	0.2 U	–	–	0.2 U	–	–	0.2 U
cis-1,2-Dichloroethylene	16	2 U	1 U	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene Chloride	5.0	10 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethylene	0.70	2 U	1 U	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl Chloride	0.18	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Semivolatile Compounds (SVOCs) (µg/L)													
1,4-Dioxane	0.44	**2**	–	–	–	–	**0.9**	**0.6**	**0.6**	0.2 U	0.2 U	0.2 U	0.2 U
Bis(2-Ethylhexyl) Phthalate	0.046	–	–	–	–	–	–	–	–	–	–	–	–
Diethyl Phthalate	93	–	–	–	–	–	–	–	–	–	–	–	–
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)													
1-Methylnaphthalene	1.5	0.01 UJ	–	–	–	–	**0.017**	0.1 U	**0.011**	**0.003 J**	0.01 U	0.005 U	**0.002 J**
Benzo(a)anthracene	0.00016	0.01 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005 U	0.01 U
Benzo(a)pyrene	0.000016	0.01 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005 U	0.01 U
Benzo(b)fluoranthene	0.00016	0.01 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005 U	0.01 U
Benzo(k)fluoranthene	0.0016	0.01 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005 U	0.01 U
Chrysene	0.016	0.01 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.1 U	0.01 U	**0.001 J**	0.01 U	0.005 U	0.01 U
Dibenzo(a,h)anthracene	0.000016	0.01 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005 U	0.01 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.01 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005 U	0.01 U
Naphthalene	1.4	0.01 UJ	0.4 U	0.4 U	0.4 U	0.4 U	0.015 U	0.1 U	**0.027**	0.01 U	0.01 U	0.005 U	**0.03**
Total cPAH TEQ	0.0097	0.00855 UJ	0.0302 U	0.0302 U	0.0302 U	0.0302 U	0.01208 U	0.0855 U	0.00855 U	**0.00801 J**	0.00855 U	0.00428 U	0.00805 U
Polychlorinated Biphenyls (PCBs) (µg/L)													
Total PCB Aroclors	0.000007	–	–	–	–	–	–	–	–	–	–	–	–
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)													
Perfluorohexanesulfonic acid (PFHxS)	0.065	0.0045 U	–	–	–	–	–	0.025 U	–	0.004 U	–	–	0.004 U
Perfluorooctanesulfonic acid (PFOS)	0.015	0.0045 U	–	–	–	–	–	**0.0042 J**	–	**0.00066 J**	–	–	**0.00077 J**
Perfluorooctanoic acid (PFOA)	0.01	**0.015**						**0.01**		**0.00043 J**			**0.00092 J**

Location Identification		MW-13	MW-13	MW-14	MW-14	MW-14	MW-15	MW-15	MW-15	MW-16	MW-16	MW-16	MW-17	MW-17	MW-17
Sample Identification		MW13-230724	MW13-20231204	MW-14-220425	MW14-230724	MW14-20231204	MW-15-220422	MW15-230720	MW15-20231204	MW-16-04192022	MW16-230721	MW16-20231205	MW17-220420	MW17-230720	MW17-20231205
Sample Date		7/24/2023	12/4/2023	4/25/2022	7/24/2023	12/4/2023	4/22/2022	7/20/2023	12/4/2023	4/19/2022	7/21/2023	12/5/2023	4/20/2022	7/20/2023	12/5/2023
WBZ		Deep	Deep	Shallow	Shallow	Shallow	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep	Deep
Analyte	**Water PCUL**														
Total Metals (µg/L)															
Arsenic	8.0	**9.75**	**11.9**	**10.7**	**11.9**	**14.4**	**8.79**	**13.9**	**16.4**	**13.6**	**10.7**	**13.4**	**7.15**	**4.46**	**3.53**
Cadmium	1.2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.2 U
Chromium	100	0.5 U	2.5 U	**0.89**	**0.897**	2.5 U	**0.306 J**	0.5 U	2.5 U	**1.09**	**0.955**	**0.946 J**	**0.352 J**	0.5 U	1 U
Copper	3.1	0.5 U	1 U	**0.336 J**	0.5 U	1 U	**0.484 J**	**0.261 J**	1 U	**0.235 J**	0.5 U	**0.47 J**	**0.278 J**	**0.276 J**	**0.728 J**
Lead	5.6	0.1 U	0.1 U	0.1 U	0.1 U	**0.101**	**0.155**	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	**0.155**	**0.09 J**	**0.218**
Mercury	0.025	0.00041 U	**0.00015 J**	**0.00151**	**0.00056**	**0.00217**	**0.00031 J**	0.00041 U	**0.00119**	**0.00121**	**0.00046**	**0.00085**	**0.00137**	**0.00031 J**	**0.00045**
Nickel	8.2	**0.222 J**	**0.308 J**	**1.32**	**0.662**	**0.898 J**	**0.527**	**0.471 J**	**0.3 J**	**2.24**	**1.34**	**1.76**	**1.39**	**0.818**	**0.846 J**
Selenium	50	0.5 U	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	1 U	**0.203 J**	**0.854**	1 U	0.5 U	0.5 U	1 U
Thallium	0.062	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.2 U	0.4 U
Zinc	81	6 U	12 U	**4.14 J**	6 U	12 U	6 U	**13.1**	12 U	6 U	6 U	**13.2**	6 U	**4.56 J**	**6.01 J**
Dissolved Metals (µg/L)															
Arsenic	8.0	**9.53**	**11.3**	**7.94**	**12.1**	**13.5**	**9.23**	**13.6**	**16.4**	**13.7**	**6.66**	**16**	**7.28**	**3.39**	**6.85**
Cadmium	1.2	0.1 U	0.2 U	0.1 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.1 U	**0.041 J**	0.2 U	0.1 U	0.1 U	0.2 U
Chromium	100	1 U	2.5 U	**0.781**	**0.742 J**	**0.67 J**	1 U	0.5 U	1 U	**0.695**	**0.893**	2.5 U	0.5 U	0.5 U	2.5 U
Chromium, Hexavalent	0.046	13 U	13 UJ	13 U	13 U	13 U	13 U	13 U	13 U	13 UJ	13 U	13 U	13 UJ	13 U	13 U
Chromium, Trivalent	27	0.5 U	2.5 U	–	–	2.5 U	–	0.5 U	2.5 U	–	–	–	–	0.5 U	1 U
Copper	3.1	0.5 U	**0.396 J**	**0.377 J**	**0.342 J**	**0.67 J**	1 U	0.5 U	1 U	0.5 U	0.5 U	**0.544 J**	0.5 U	0.5 U	**0.556 J**
Lead	5.6	0.1 U	0.1 U	**0.071 J**	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.1 U	0.1 U	0.5 U
Mercury	0.025	0.00041 U	**0.00115**	**0.0004 J**	**0.00029 J**	**0.0006**	0.00041 U	0.00041 U	**0.00155**	0.00041 U	**0.00035 J**	0.00105 U	0.00041 U	0.00041 U	0.00042 U
Nickel	8.2	**0.192 J**	**0.302 J**	**1.24**	**0.637**	**0.804 J**	**0.192 J**	**0.156 J**	**0.22 J**	**1.72**	**1.12**	**1.4**	**0.487 J**	**0.561**	**0.676 J**
Selenium	50	0.5 U	1 U	–	0.5 U	1 U	–	0.5 U	1 U	**0.272 J**	**0.616**	1 U	–	**0.239 J**	1 U
Thallium	0.062	0.2 U	0.4 U	–	0.2 U	0.4 U	–	0.2 U	0.4 U	0.2 U	0.2 U	1 U	–	0.2 U	1 U
Zinc	81	6 U	12 U	–	6 U	12 U	–	6 U	12 U	6 U	6 U	12 U	–	6 U	12 U
Total Petroleum Hydrocarbons (µg/L)															
Diesel-range hydrocarbons	500	500 U	500 U	100 U	500 U	500 U	100 U	500 U	500 U	100 U	500 U	500 U	100 U	500 U	500 U
Lube oil-range hydrocarbons	500	1000 U	1000 U	200 U	1000 U	1000 U	200 U	1000 U	1000 U	200 U	1000 U	1000 U	200 U	1000 U	1000 U
Total TPH	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs) (µg/L)															
Benzene	1.1	–	–	0.2 U	–	–	0.2 U	–	–	0.2 U	–	–	0.2 U	–	–
cis-1,2-Dichloroethylene	16	0.2 U	0.2 U	**26.3**	**24.8**	**22.6**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene Chloride	5.0	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethylene	0.70	0.2 U	0.2 U	**40.3**	**23.2**	**24.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl Chloride	0.18	0.2 U	0.2 U	**0.32**	**1.56**	**0.96**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Semivolatile Compounds (SVOCs) (µg/L)															
1,4-Dioxane	0.44	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	**0.2**	**0.3**	0.2 U	0.2 U	0.2 U
Bis(2-Ethylhexyl) Phthalate	0.046	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diethyl Phthalate	93	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)															
1-Methylnaphthalene	1.5	0.01 U	0.005 U	**0.003 J**	0.01 U	0.01 U	**0.002 J**	0.01 U	0.01 U	**0.006 J**	0.01 U	0.01 U	**0.005 J**	0.01 U	0.01 U
Benzo(a)anthracene	0.00016	0.01 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene	0.000016	0.01 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene	0.00016	0.01 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	0.0016	0.01 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene	0.016	0.01 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzo(a,h)anthracene	0.000016	0.01 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.01 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Naphthalene	1.4	0.01 U	0.005 U	**0.012**	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.006 J**	**0.013**	0.01 U	0.01 U
Total cPAH TEQ	0.0097	0.00855 U	0.00428 U	0.00805 U	0.00855 U	0.00855 U	0.00805 U	0.00855 U	0.00855 U	0.00805 U	0.00855 U	0.00855 U	0.00805 U	0.00855 U	0.00855 U
Polychlorinated Biphenyls (PCBs) (µg/L)															
Total PCB Aroclors	0.000007	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)															
Perfluorohexanesulfonic acid (PFHxS)	0.065	–	–	0.0042 U	–	–	0.004 U	–	–	–	0.0049 U	–	–	**0.0019 J**	–
Perfluorooctanesulfonic acid (PFOS)	0.015	–	–	**0.002 J**	–	–	0.004 U	–	–	–	0.0049 U	–	–	**0.0018 J**	–
Perfluorooctanoic acid (PFOA)	0.01			**0.0019**			0.0016 U				**0.002**			0.002 U	

Location Identification		MW-18	MW-18	MW-18	MW-19	MW-19	MW-20	MW-20	MW-21	MW-21	MW-22	MW-22	MW-23	MW-23
Sample Identification		MW-18-220421	MW18-230713	MW18-20231205	MW19-230725	MW19-20231206	MW20-230725	MW20-20231206	MW21-230725	MW21-20231207	MW22-230725	MW22-20231206	MW23-230724	MW23-20231206
Sample Date		4/21/2022	7/13/2023	12/5/2023	7/25/2023	12/6/2023	7/25/2023	12/6/2023	7/25/2023	12/6/2023	7/25/2023	12/6/2023	7/24/2023	12/6/2023
WBZ		Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Deep	Deep	Shallow	Shallow
Analyte	**Water PCUL**													
Total Metals (µg/L)														
Arsenic	8.0	**44.3**	**25.6**	**34.9**	**7.49**	**37.1**	**1.9**	**5.16**	**6.1**	**9.36**	**6.07**	**4.54**	**72.5**	**98.6**
Cadmium	1.2	**0.048 J**	1 U	0.2 U	**0.099 J**	**0.05 J**	**0.202**	**0.065 J**	0.2 U	0.5 U	**0.031 J**	**0.186**	0.5 U	0.1 U
Chromium	100	**36.5**	**70.1**	**24.2**	2.5 U	5 U	**1.11**	5 U	**0.764 J**	2.5 U	**1.61**	1 U	**3.51**	5 U
Copper	3.1	**27.8**	**29.6**	**1.22**	**1.28**	**0.74**	**2.1**	**0.375 J**	1 U	2.5 U	**0.471 J**	**0.311 J**	**1.85 J**	**0.191 J**
Lead	5.6	**6.43**	**9.07**	**0.502**	**0.196**	**0.115**	**0.2**	**0.056 J**	**0.198 J**	0.5 U	**0.126**	**0.145**	**0.3 J**	**0.06 J**
Mercury	0.025	**0.801**	**0.147**	**0.0307**	**0.00293**	**0.00361**	**0.00411**	**0.00267**	0.00042 U	**0.00026 J**	**0.00153**	**0.00118**	**0.00078**	**0.00234**
Nickel	8.2	**65.6**	**66.2**	**46.7**	**5.92**	**4.05**	**8.89**	**5.3**	**1.27**	**0.81 J**	**0.779**	**0.766**	**2.71**	**1.97**
Selenium	50	**0.514**	5 U	1 U	**0.259 J**	**0.295 J**	**0.486 J**	**0.392 J**	1 U	2.5 U	**0.355 J**	**0.272 J**	**1.29 J**	**0.566**
Thallium	0.062	0.2 U	2 U	1 U	0.2 U	0.4 U	0.4 U	0.4 U	0.4 U	1 U	0.2 U	0.4 U	1 U	0.4 U
Zinc	81	**8.89**	60 U	**11.9 J**	6 U	**4.79 J**	12 U	**3.74 J**	12 U	30 U	6 U	**3.09 J**	30 U	**3.41 J**
Dissolved Metals (µg/L)														
Arsenic	8.0	**48.8**	**37.6**	**30.7**	**16.6**	**35.4**	**1.54**	**5.94**	**6.38**	**8.1**	**5.96**	**4.46**	**72**	**92.8**
Cadmium	1.2	0.1 U	0.1 U	0.2 U	**0.077 J**	**0.185 J**	**0.153**	0.5 U	0.1 U	0.5 U	0.1 U	0.2 U	0.2 U	**0.165 J**
Chromium	100	**31.7**	**52.6**	**22.8**	**0.686 J**	2.5 U	**1.1**	2.5 U	**0.958 J**	2.5 U	1 U	**0.61 J**	**2.27 J**	**1.76 J**
Chromium, Hexavalent	0.046	**19**	13 U	13 UJ	13 UJ	13 U	13 U	13 U	13 U	13 U	13 U	13 U	**13**	13 U
Chromium, Trivalent	27	–	–	–	2.5 U	5 U	–	5 U	–	2.5 U	–	1 U	–	5 U
Copper	3.1	**0.249 J**	0.5 U	**0.564 J**	**0.505**	**1.06 J**	**1.77**	2.5 U	0.5 U	**1.37 J**	**0.378 J**	**0.4 J**	1 U	**1.49 J**
Lead	5.6	0.1 U	**0.092 J**	0.2 U	0.1 U	0.5 U	**0.101**	0.5 U	0.1 U	0.5 U	0.1 U	0.2 U	0.2 U	0.5 U
Mercury	0.025	**0.00792**	**0.00247**	0.00105 U	**0.00039 J**	**0.00169**	**0.00305**	**0.00363**	0.00042 U	0.00042 U	**0.00076**	**0.00065**	**0.00026 J**	**0.00261**
Nickel	8.2	**60.2**	**55.9**	**48.4**	**6.38**	**3.92**	**9.69**	**6.11**	**1.16**	**0.735 J**	**0.485 J**	**1.29**	**2.47**	**1.82 J**
Selenium	50	–	0.5 U	1 U	**0.193 J**	2.5 U	**0.328 J**	2.5 U	0.5 U	2.5 U	**0.247 J**	**1.46**	**0.5 J**	2.5 U
Thallium	0.062	–	0.2 U	0.4 U	0.2 U	1 U	0.2 U	1 U	0.2 U	1 U	0.2 U	0.4 U	0.4 U	1 U
Zinc	81	–	6 U	12 U	**3.05 J**	30 U	6 U	**17.2 J**	6 U	30 U	6 U	12 U	12 U	30 U
Total Petroleum Hydrocarbons (µg/L)														
Diesel-range hydrocarbons	500	**754**	**876**	**338**	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U
Lube oil-range hydrocarbons	500	200 U	**234**	200 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U
Total TPH	500	**754**	**1110**	**338**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs) (µg/L)														
Benzene	1.1	**0.06 J**	–	–	–	–	–	–	–	–	–	–	–	–
cis-1,2-Dichloroethylene	16	**0.36**	**0.33**	**0.29**	**0.14 J**	**0.14 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene Chloride	5.0	1 U	1 U	1 U	1 U	**0.58 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethylene	0.70	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl Chloride	0.18	**0.22**	0.2 U	**0.15 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Semivolatile Compounds (SVOCs) (µg/L)														
1,4-Dioxane	0.44	**0.4**	**0.4**	**0.3**	0.2 U	0.2 UJ	**0.2**	**0.2 J**	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 U	**0.2 J**
Bis(2-Ethylhexyl) Phthalate	0.046	–	–	–	–	–	–	–	–	–	–	–	–	–
Diethyl Phthalate	93	–	–	–	–	–	–	–	–	–	–	–	–	–
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)														
1-Methylnaphthalene	1.5	**0.333**	**0.292**	**0.072**	0.01 UJ	0.01 U	0.01 U	0.01 U	**0.104**	**0.11**	–	0.01 U	**0.014**	0.01 U
Benzo(a)anthracene	0.00016	**0.013**	0.05 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	–	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene	0.000016	**0.009 J**	0.05 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	–	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene	0.00016	**0.011**	0.05 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	–	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	0.0016	**0.007 J**	0.05 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	–	0.01 U	0.01 U	0.01 U
Chrysene	0.016	**0.023**	0.05 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	–	0.01 U	0.01 U	0.01 U
Dibenzo(a,h)anthracene	0.000016	0.01 U	0.05 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	–	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-c,d)pyrene	0.00016	**0.004 J**	0.05 U	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	–	0.01 U	0.01 U	0.01 U
Naphthalene	1.4	**1.11**	**1.06**	**0.239**	**0.058 J**	**0.04**	**0.009 J**	0.01 U	**0.015 J**	0.01 U	–	0.01 U	0.01 U	0.01 U
Total cPAH TEQ	0.0097	**0.0132 J**	0.04275 U	0.00855 U	0.00855 UJ	0.00855 U	0.00855 U	0.00855 U	0.00855 U	0.00855 U	–	0.00855 U	0.00855 U	0.00855 U
Polychlorinated Biphenyls (PCBs) (µg/L)														
Total PCB Aroclors	0.000007	–	–	–	–	–	–	–	–	–	–	–	–	–
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)														
Perfluorohexanesulfonic acid (PFHxS)	0.065	–	**0.24**	–	**0.0034 J**	–	**0.0051**	–	**0.0019 J**	–	–	–	–	–
Perfluorooctanesulfonic acid (PFOS)	0.015	–	**0.07**	–	**0.0019 J**	–	**0.017**	–	**0.012**	–	–	–	–	–
Perfluorooctanoic acid (PFOA)	0.01		**0.75**		**0.0095**		**0.014**		**0.0073**					

Table 7-4

Summary of Ditch Water Sample Exceedances

Precision Engineering, Inc.

Seattle, Washington

	Location Identification	SW1	SW1	SW2
	Sample Identification	SW1-230328	SW1-20231204	SW2-20231204
	Sample Date	3/28/2023	12/4/2023	12/4/2023
Analyte	**Water PCUL for Reference**			
Total Metals (µg/L)				
Arsenic	8.0	**4.33**	**0.342 J**	**0.286 J**
Cadmium	1.2	**0.824**	**0.158 J**	**0.222**
Chromium	100	**47.1**	**2.22**	**0.61 J**
Copper	3.1	**142**	**7.67**	**6.8**
Lead	5.6	**60.3**	**0.974**	**0.782**
Mercury	0.025	**0.118**	**0.00841**	**0.00795**
Nickel	8.2	**18.7**	**3.38**	**7.52**
Selenium	50	1 U	1 U	1 U
Thallium	0.062	0.4 U	0.4 U	0.2 U
Zinc	81	**274**	**134**	**301**
Dissolved Metals (µg/L)				
Arsenic	8.0	**0.536**	**0.396 J**	**0.354 J**
Cadmium	1.2	**0.189**	**0.112 J**	**0.242**
Chromium	100	**5.35**	**2.28**	**0.85 J**
Chromium, Hexavalent	0.046	13 U	13 U	13 U
Chromium, Trivalent	27	**5.35**	**2.28**	**0.85 J**
Copper	3.1	**14.4**	**8.3**	**7.38**
Lead	5.6	**0.976**	**0.598**	**0.442**
Mercury	0.025	**0.026 J**	**0.00668**	**0.00681**
Nickel	8.2	**7.4**	**3.5**	**6.95**
Selenium	50	0.5 U	1 U	1 U
Thallium	0.062	0.2 U	0.4 U	0.4 U
Zinc	81	**143**	**132**	**289**
Total Petroleum Hydrocarbons (TPH) (µg/L)				
Gasoline-range hydrocarbons - HCID	800	250 U	250 U	250 U
Diesel-range hydrocarbons - HCID	500	500 U	500 U	500 U
Lube oil-range hydrocarbons - HCID	500	1,000 U	1,000 U	1,000 U
Total TPH - HCID	500	ND	ND	ND
Volatile Organic Compounds (VOCs)(µg/L)				
1,1-Dichloroethylene	7.0	**0.11 J**	0.2 U	0.2 U
cis-1,2-Dichloroethylene	16	**8.97**	0.2 U	0.2 U
Methylene Chloride	5.0	1 U	1 U	1 U
trans-1,2-Dichloroethylene	77	**0.08 J**	0.2 U	0.2 U
Trichloroethylene	0.70	**0.2 J**	0.2 U	0.2 U
Vinyl Chloride	0.18	0.2 U	0.2 U	0.2 U
Semivolatile Compounds (SVOCs) (µg/L)				
1,4-Dioxane	0.44	**0.2 J**	0.2 U	0.2 U
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)				
1-Methylnaphthalene	1.5	**0.003 J**	**0.013**	0.01 U
Benzo(a)anthracene	0.00016	**0.012**	0.01 U	0.01 U
Benzo(a)pyrene	0.000016	**0.015**	0.01 U	0.01 U
Benzo(b)fluoranthene	0.00016	**0.017**	0.01 U	0.01 U
Benzo(k)fluoranthene	0.0016	**0.009 J**	0.01 U	0.01 U
Chrysene	0.016	**0.018**	0.01 U	0.01 U
Dibenzo(a,h)anthracene	0.000016	**0.003 J**	0.01 U	0.01 U
Indeno(1,2,3-c,d)pyrene	0.00016	**0.012**	0.01 U	0.01 U
Naphthalene	1.4	**0.044**	**0.006 J**	0.01 U
Total cPAH TEQ	0.0097	**0.02048 J**	0.00855 U	0.00855 U

Notes:

B = Blank detection

HCID = Hydrocarbon Identification

J = Estimated result

ND = Not detected (calculated)

PAHs = Polycyclic Aromatic Hydrocarbons

PCBs = Polychlorinated Biphenyls

PCUL = Preliminary Cleanup Level provided to GeoEngineers by Washington State Department of Ecology (Ecology) June 3, 2022 as the PCULs for the Remedial Investigation (PFAS PCULs are from Ecology Publication 22-09-058)

PFAS = Per- and Polyfluoroalkyl Substances

SVOCs = Semivolatile Volatile Organic Compounds

Total cPAH TEQ = Total toxic equivalency of cPAHs per WAC 173-340-708(8)(e)

TPH = Total Petroleum Hydrocarbons

U = Not detected

VOCs = Volatile Organic Compounds

µg/L = Microgram per liter

Bold font indicates a detection

Gray shading = Detected exceedance of PCUL

Blue shading = Not detected at a reporting limit above the PCUL

Table 7-5

Contaminants of Concern Evaluation

Precision Engineering, Inc.
Seattle, Washington

Analyte	Soil					Groundwater			COC Evaluation	
	Soil Sample Exceedance Frequency	Maximum Vadose Soil Detection	Vadose Soil PCUL	Maximum Saturated Soil Detection	Saturated Soil PCUL	Groundwater Sample Exceedance Frequency	Maximum Groundwater Detection[1]	Groundwater PCUL	COC	Notes
Metals[1]	%	mg/kg	mg/kg	mg/kg	mg/kg	%	µg/L	µg/L		
Arsenic	17 / 126 = 13%	11.3	7.3	14.7	7.3	76 / 108 = 70%	98.6	8.0	No	Only 13% of soil samples exceed, and only by up to about 2x PCUL. Arsenic in groundwater is elevated in most wells including upgradient wells MW1 (deep), MW12 (shallow), and MW13 (deep). Arsenic in groundwater is lowest in MW5 (typically the "most contaminated" well that is closest to the former chromic acid tanks area), and highest in MW23 that is distant from the property. These data indicate arsenic is generally elevated as a "background" condition and is not elevated due to Precision Engineering operations.
Cadmium	4 / 48 = 8%	2.51	0.77	0.52	0.77	0 / 64 = 0%	0.47 J	1.2	No	Only 8% of soil samples exceed, and only in vadose soil (i.e. there are no soil exceedances in saturated soil). Cadmium did not exceed groundwater PCUL in any of 64 samples collected from 23 monitoring wells.
Chromium	13 / 175 = 7%	6,750	260	1,870	260	8 / 66 = 12%	133,000	100	Yes	Chromium is a COC.
Chromium, Hexavalent	34 / 180 = 19%	3,500	0.018	175	0.00089	10 / 108 = 9%	163,000 J	0.046	Yes	Hexavalent chromium is a COC.
Chromium, Trivalent	17 / 173 = 10%	3,250	548	1,695	48	1 / 43 = 2%	10,100 J	27	No	Total chromium and/or hexavalent chromium exceed in every sample where trivalent chromium exceeds with only two exceptions, so chromium and hexavalent chromium can serve as indicator hazardous substances for trivalent chromium.
Copper	8 / 90 = 9%	113	36	33.9	36	11 / 108 = 10%	44.7[2]	3.1	No	Only 8 soil samples exceed, and only in vadose soil. Only 4 out of 8 of those exceedances are located near Precision's former operational areas. The other 4 samples are in vadose soil in MW22, MW23, HA27, and HA28, which are located in the ditch and likely to be impacted by stormwater runoff from adjacent roadways. Furthermore, wherever copper exceeds in vadose soil, chromium usually exceeds as well, indicating that chromium can serve as an indicator hazardous substance for copper. Finally, only 10% of groundwater samples exceed groundwater PCUL, and with no clear pattern: Exceedances include occasional exceedances in two shallow monitoring wells (MW6 and MW18) and two deep wells (MW7 and MW9).
Lead	0 / 129 = 0%	220	250	56	56	2 / 64 = 3.1%	9.07	5.6	No	No soil exceedances. Only exceeds groundwater in two out of 64 samples (MW18 only), and by less than 2x the PCUL.
Mercury	15 / 89 = 17%	1.1	0.07	0.108	0.07	9 / 64 = 14%	0.801	0.025	Yes	Mercury is a COC.
Nickel	0 / 89 = 0%	46.8	48	47	48	13 / 64 = 20%	66.2	8.2	No	No soil exceedances. Only 20% of groundwater samples exceed PCUL.
Selenium	42 / 123 = 34%	2.21	5.2	1.7	0.26	0 / 108 = 0%	12.4	50	No	No vadose soil exceedances, and no groundwater exceedances. Only saturated soil samples exceed. There is no source for selenium based on historical site use.
Thallium	38 / 64 = 59%	0.129	0.088	0.11 J	0.0044	0 / 64 = 0%	ND	0.062	No	No groundwater exceedances. There is no source for thallium based on historical site use.
Zinc	9 / 89 = 10%	341	101	63.1	85	0 / 64 = 0%	ND	0.062	No	No saturated soil exceedances, and only 10% of vadose samples exceed. All but two soil sample exceedances are less than 2x PCUL (Appendix K). There are no groundwater exceedances.
Total Petroleum Hydrocarbons										
Diesel-range hydrocarbons	2 / 133 = 1.5%	10,000	2,000	5,270	2,000	5 / 108 = 5%	876	500	Yes	Diesel-range hydrocarbons is a COC.
Lube oil-range hydrocarbons	3 / 133 = 2%	12,000	2,000	19,900	2,000	8 / 108 = 7%	810	500	Yes	Lube oil-range hydrocarbons is a COC.
Total TPH	4 / 133 = 3%	22,000	2,000	25,170	2,000	17 / 108 =16%	1290	500	Yes	Total TPH is a COC.

Analyte	Soil					Groundwater			COC Evaluation	
	Soil Sample Exceedance Frequency	Maximum Vadose Soil Detection	Vadose Soil PCUL	Maximum Saturated Soil Detection	Saturated Soil PCUL	Groundwater Sample Exceedance Frequency	Maximum Groundwater Detection[1]	Groundwater PCUL	COC	Notes
Volatile Organic Compounds (VOCs)										
Benzene	2 / 65 = 3%	0.0003 J	0.0088	0.0026	0.00056	0 / 62 = 0%	0.06 J	1.1	No	Only two saturated soil exceedances. No groundwater exceedances.
cis-1,2-Dichloroethylene	5 / 174 = 2.9%	0.0278	0.079	0.149	0.0052	3 / 108 = 2.8%	26.3	16	No	No vadose soil exceedances. Only exceeds in 5 out of 174 saturated soil samples. Only exceeds in 3 out of 108 groundwater samples, and by less than 2x the groundwater PCUL. Cis-1,2-DCE is a breakdown product of TCE, and TCE is a COC that will serve as an indicator hazardous substance.
Methylene Chloride	18 / 90 = 20%	0.0801	0.0052	0.0094	0.0015	3 / 108 = 2.8%	27.7	5.0	No	Only exceeds in 1 vadose soil sample. Does not exceed in any vadose or saturated soil samples inside the Precision Engineering building. MC is a common laboratory contaminant and was present in numerous soil samples at very low concentrations in samples submitted on two days during the 2014/2015 investigation, all from borings outside the building. Method blank contamination was reported for numerous soil samples during the 2014 investigation. Methylene chloride was only detected in 3 out of 108 water samples. The exceedances occurred in different wells during one sampling event only and methylene chloride did not exceed in those wells during any other sampling events.
Trichloroethylene	14 / 173 = 8%	0.0872	0.0044	1.16	0.0021	8 / 108 = 7%	40.3	0.70	Yes	TCE is a COC
Vinyl Chloride	0 / 173 = 0%	ND	0.0011	ND	0.000056	4 / 108 = 3.7%	1.56	0.18	No	No vadose or saturated soil exceedances. Only exceeds in 4 out of 108 groundwater samples. VC is a breakdown product of TCE, and TCE is a COC that can serve as an indicator hazardous substance.
Semivolatile Compounds (SVOCs)										
1,4-Dioxane	1 / 33 = 3%	ND	0.11	0.601	0.00013	17 / 64 = 27%	20.4	0.44	Yes	1,4-Dioxane is a COC.
Bis(2-Ethylhexyl) Phthalate	1 / 9 = 11%	0.0591	0.1	0.0122 J	0.0051	0 / 3 = 0%	ND	0.046	No	Only 1 saturated soil sample exceeds. Phthalates are ubiquitous in the environment and Precision Engineering is not likely the source of the single exceedance.
Diethyl Phthalate	1 / 9 = 11%	ND	0.2	0.345	0.034	0 / 3 = 0%	0.3	93	No	Only 1 saturated soil sample exceeds. Phthalates are ubiquitous in the environment and Precision Engineering is not likely the source of the single exceedance.
Polycyclic Aromatic Hydrocarbons (PAHs)										
1-Methylnaphthalene	2 / 51 = 4%	0.0205	0.082	0.0166	0.0042	0 / 82 = 0%	0.333	1.5	No	No vadose soil exceedances, and no groundwater exceedances. Only two saturated soil samples exceed.
Benzo(a)anthracene	0 / 51 = 0%	0.107	NE	0.0211	NE	4 / 106 = 4%	0.013	0.00016	No	No soil exceedances, and only four groundwater exceedances. The highest groundwater concentration was in MW18, which is far from the Precision contaminant source. Finally, total cPAH TEQ is used as the COC as an indicator hazardous substance.
Benzo(a)pyrene	22 / 51 = 43%	0.139	0.00031	0.0176	0.000016	1 / 106 = 0.9%	0.009	0.000016	No	Total cPAH TEQ is used as the COC as an indicator hazardous substance.
Benzo(b)fluoranthene	0 / 51 = 0%	0.157	NE	0.0261	NE	4 / 106 = 4%	0.011	0.00016	No	No soil exceedances, and only four groundwater exceedances. The highest groundwater concentration was in MW18, which is far from the Precision contaminant source. Total cPAH TEQ is used as the COC as an indicator hazardous substance.
Benzo(k)fluoranthene	0 / 47 = 0%	0.0796	NE	0.0178	NE	1 / 106 = 0.9%	0.007 J	0.0016	No	No soil exceedances, and only one groundwater exceedance. The single groundwater exceedance was in MW18, which is far from the Precision contaminant source. Total cPAH TEQ is used as the COC as an indicator hazardous substance.
Chrysene	0 / 51 = 0%	0.171	NE	0.0449	NE	1 / 106 = 0.9%	0.023	0.016	No	No soil exceedances, and only one groundwater exceedance. The single groundwater exceedance was in MW18, which is far from the Precision contaminant source. Total cPAH TEQ is used as the COC as an indicator hazardous substance.
Dibenzo(a,h)anthracene	0 / 51 = 0%	0.0311	NE	0.001 J	NE	1 / 106 = 1%	0.002 J	0.000016	No	No soil exceedances, and only one groundwater exceedance. Total cPAH TEQ is used as the COC as an indicator hazardous substance.
Indeno(1,2,3-c,d)pyrene	0 / 51 = 0%	0.121	NE	0.0093	NE	3 / 106 = 3%	0.004 J	0.00016	No	No soil exceedances, and only one groundwater exceedance. Total cPAH TEQ is used as the PCOC as an indicator hazardous substance.
Naphthalene	8 / 102 = 8%	0.0955	0.039	0.0084	0.0021	0 / 106 = 0%	1.11	1.4	No	Only 1 vadose soil exceedance, and 7 saturated soil sample exceedances. The majority of vadose soil exceedances are not near Precision's former operational areas but in the ditch, which is likely influenced by stormwater runoff from adjacent roadways. There are no groundwater exceedances.
Total cPAH TEQ (ND=0.5RL)	36 / 51 = 71%	0.2223	0.00031	0.0302	0.000016	1 / 106 = 1%	0.01563 J	0.0097	Yes	Total cPAH TEQ is a COC.

Analyte	Soil					Groundwater			COC Evaluation	
	Soil Sample Exceedance Frequency	Maximum Vadose Soil Detection	Vadose Soil PCUL	Maximum Saturated Soil Detection	Saturated Soil PCUL	Groundwater Sample Exceedance Frequency	Maximum Groundwater Detection[1]	Groundwater PCUL	COC	Notes
Polychlorinated Biphenyls (PCBs)										
Total PCB Aroclors	1 / 9 = 11%	0.0148 J	0.000011	ND	0.00000055	0 / 3 = 0%	0.1 U	0.000007	No	Only detected in one vadose soil sample. Not detected in saturated soil or groundwater.
Per- and Polyfluoroalkyl Substances (PFAS)										
Perfluorohexanesulfonic acid (PFHxS)	0 / 9 = 0%	ND	0.00041	ND	0.000026	1 / 26 = 3.8%	0.24	0.065	No	No soil exceedances. Only 1 groundwater exceedance out of 26 samples. The exceedance was in MW18 which is not near Precision Engineering's former operational areas, suggesting an off site / background source.
Perfluorooctanesulfonic acid (PFOS)	0 / 9 = 0%	ND	0.00017	ND	0.0000099	3 / 26 = 12%	0.07	0.015	No	No soil exceedances. Only 3 groundwater exceedance out of 26 samples. The two of the exceedances were in MW18 and MW20 which are not near Precision Engineering's former operational areas, suggesting an off site / background source.
Perfluorooctanoic acid (PFOA)	0 / 9 = 0%	ND	0.000063	ND	0.000004	10 / 26 = 38%	0.75	0.01	No	No soil exceedances. In groundwater, the highest concentration (0.75 µg/L) is in MW18, away from Precision's operational areas. All other groundwater exceedances were only several times higher than the PCUL.

Notes:

[1] The total (i.e., unfiltered) metals data are used, except for hexavalent chromium and trivalent chromium which are dissolved (filtered) only.

[2] The copper concentration in MW-6 on 7/23/19 was 210 µg/L, however the data point is suspected to be nonrepresentative. The copper concentrations in MW6 during six subsequent sampling events ranged from non-detect to a maximum of 4.38 µg/L. Therefore the next highest copper result of 44.7 µg/L (in MW8 on 7/23/19) is shown in this table.

Cis-1,2-DCE = cis-1,2-Dichloroethylene

COC = Contaminant of concern

ND = Not detected

NE = Not established

PAHs = Polycyclic Aromatic Hydrocarbons

PCBs = Polychlorinated Biphenyls

PCUL = Preliminary Cleanup Level provided to GeoEngineers by Washington State Department of Ecology (Ecology) June 3, 2022 as the PCULs for the Remedial Investigation (PFAS PCULs are from Ecology Publication 22-09-058)

PFAS = Per- and Polyfluoroalkyl Substances

SVOCs = Semivolatile Volatile Organic Compounds

TCE = Trichloroethylene

Total cPAH TEQ = Total toxic equivalency of cPAHs per WAC 173-340-708(8)(e)

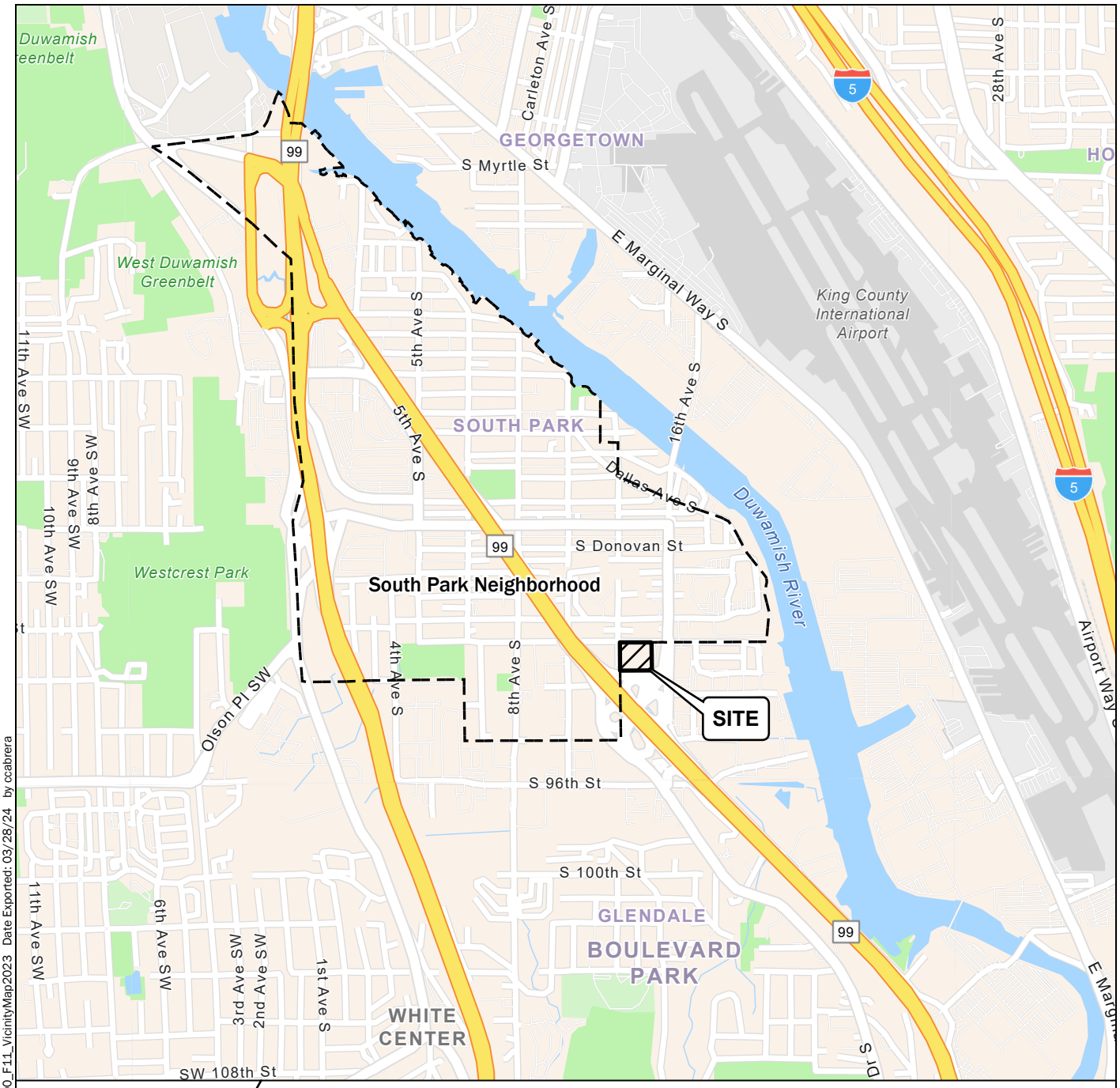
TPH = Total Petroleum Hydrocarbons

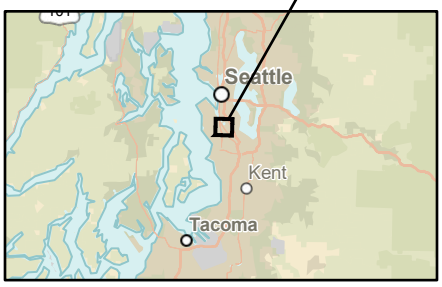
VOCs = Volatile Organic Compounds

µg/L = Microgram per liter

mg/kg = Milligram per kilogram

Figures





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Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 1-1

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Legend

- Former Precision Engineering Property
- Nearby Current and/or Former Contaminated Sites
- King County Parcels

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: 2021 image and GIS data from King County GIS.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

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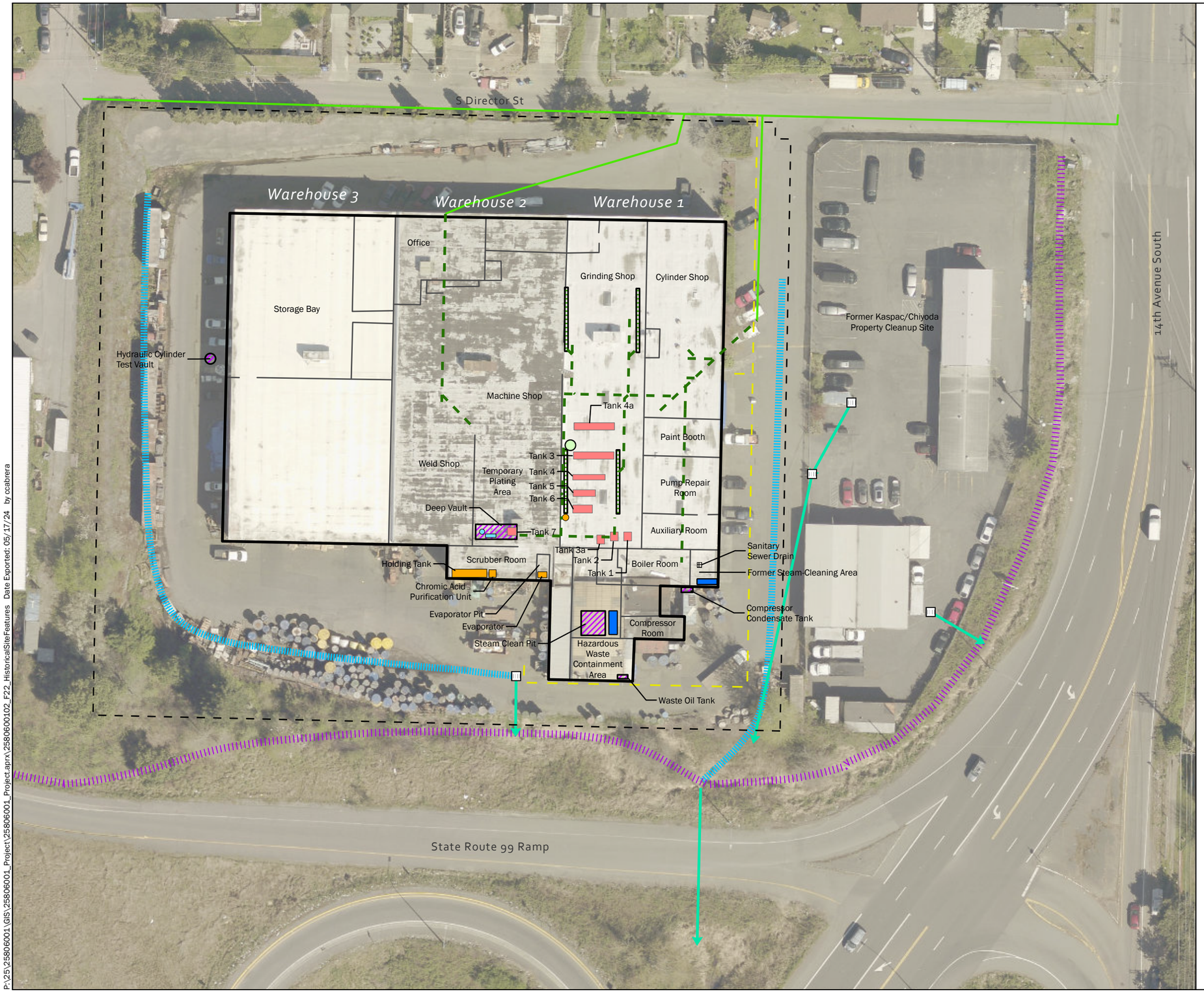
Site and Surroundings

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 2-1

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\25806001_F21_SiteSurroundings Date Exported: 05/17/24 by crabrera



Legend

- Chromic Acid Plating Tank
- Other Tanks/Equipment Containing Chromic Acid
- Sodium Hydroxide Tank
- Sodium Carbonate Tank
- Trichloroethene Tank
- Other Site Features
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Sanitary Sewer
- Former Sanitary Sewer
- Sanitary Sewer Drain
- Natural Gas
- Trench Drain
- Property Parcel

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: 2021 image from King County GIS.
MFA and Kennedy Jenks report figures 2005 to 2021 (see report text).

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

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Feet

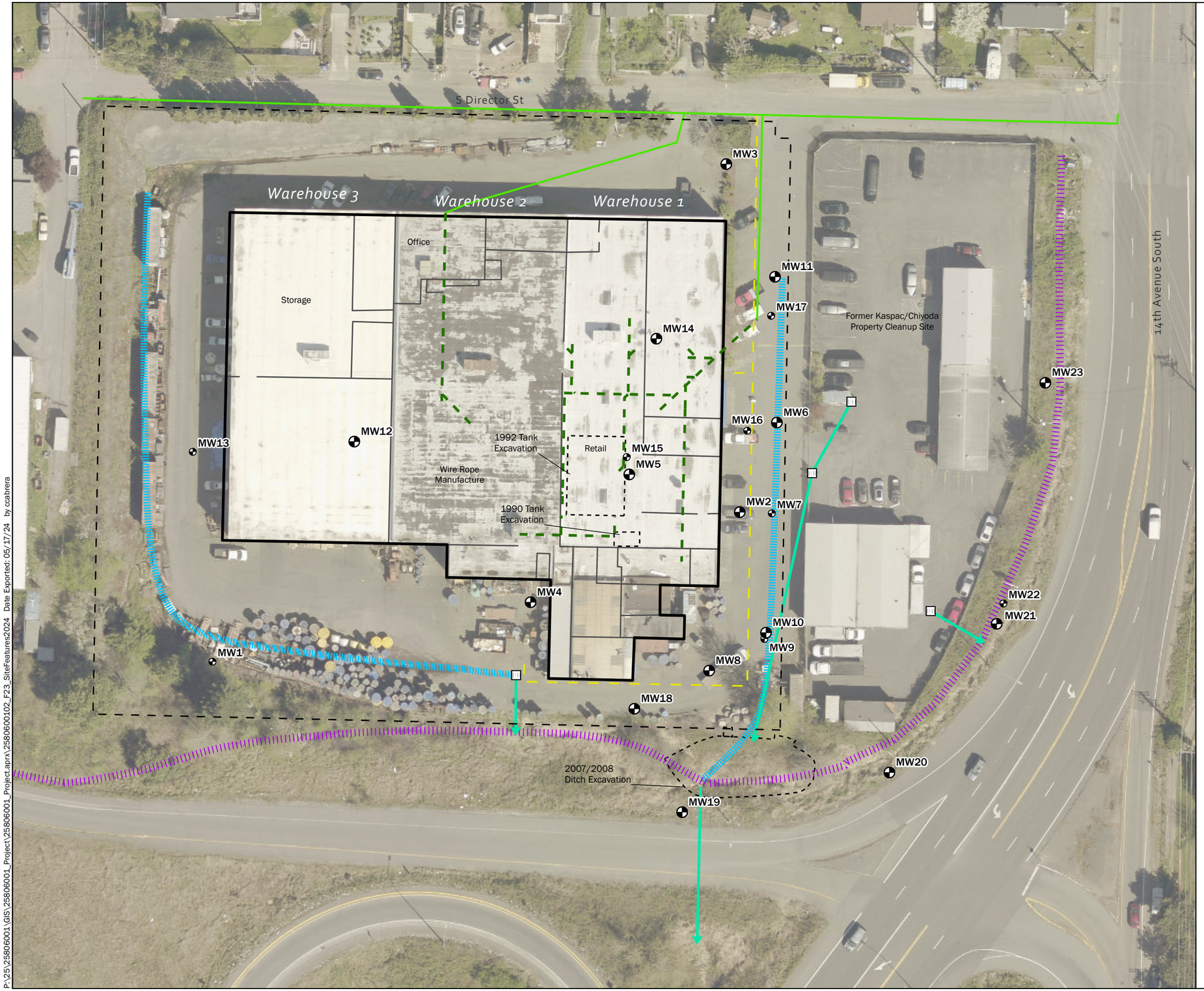
Historical Site Features

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 2-2

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\25806001_F22_HistoricalSiteFeatures Date Exported: 05/17/24 by ccabrera



Legend

- Deep Monitoring Well
- Shallow Monitoring Well
- Former Sanitary Sewer
- Former Tank/Ditch Excavation Area
- Drainage Ditch
- Stormwater Runoff
- Catch Basin
- Stormwater Piping with Outfall
- Sanitary Sewer
- Natural Gas
- Property Parcel

Notes:

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Data Source: 2021 image from King County GIS.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N W E S

60 0 60

Feet

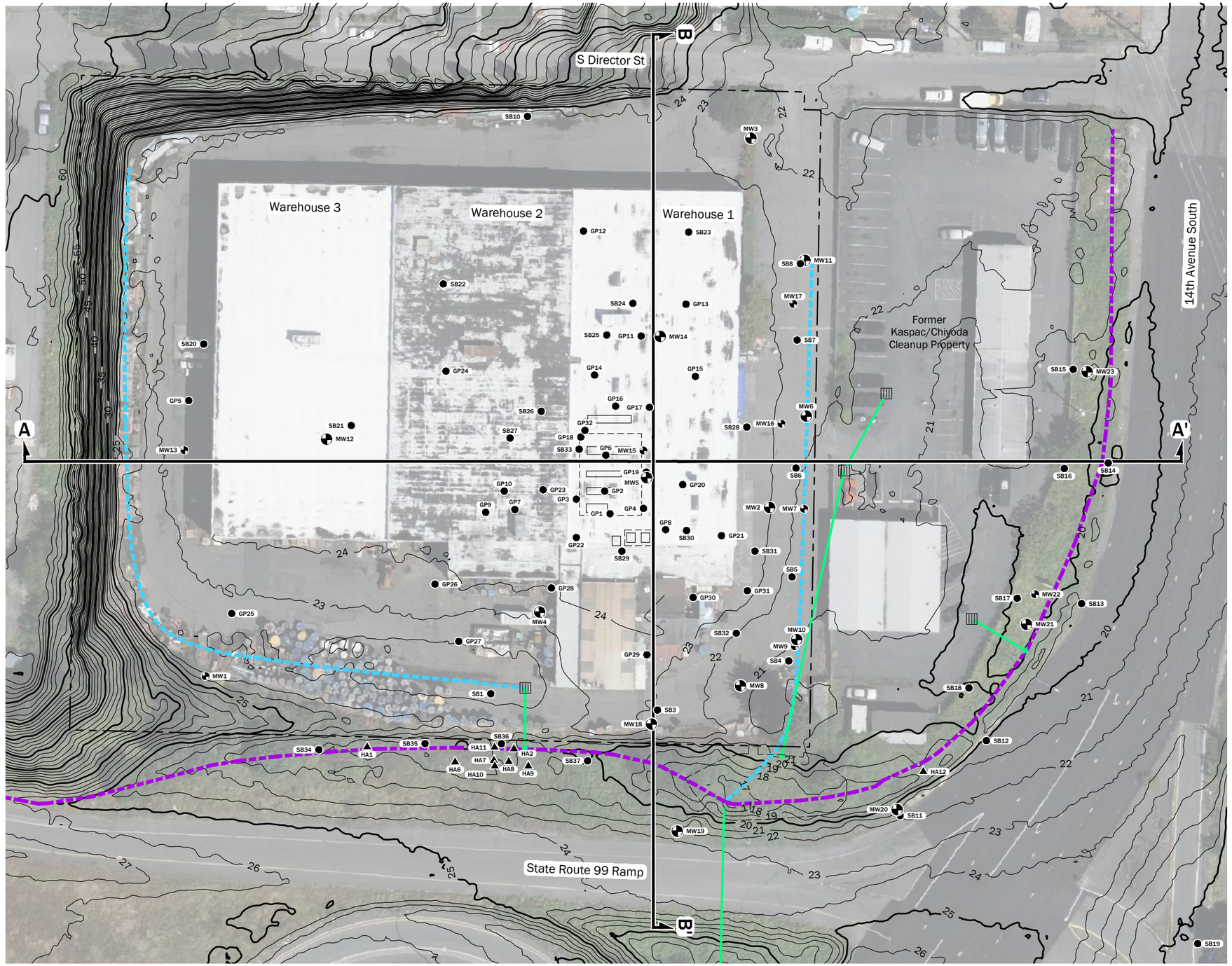
Site Features - 2024

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 2-3

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\2580600102_F23_SiteFeatures2024 Date Exported: 05/17/24 by ccabrera



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- A — A' Cross Section Location (see Figures 3-2 and 3-3)
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Source(s):

- Aerial from Microsoft Bing, 2022
- Lidar from King County, collected 2021

Projection: WA State Plane, North Zone, NAD83, US Foot

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0 60

Feet

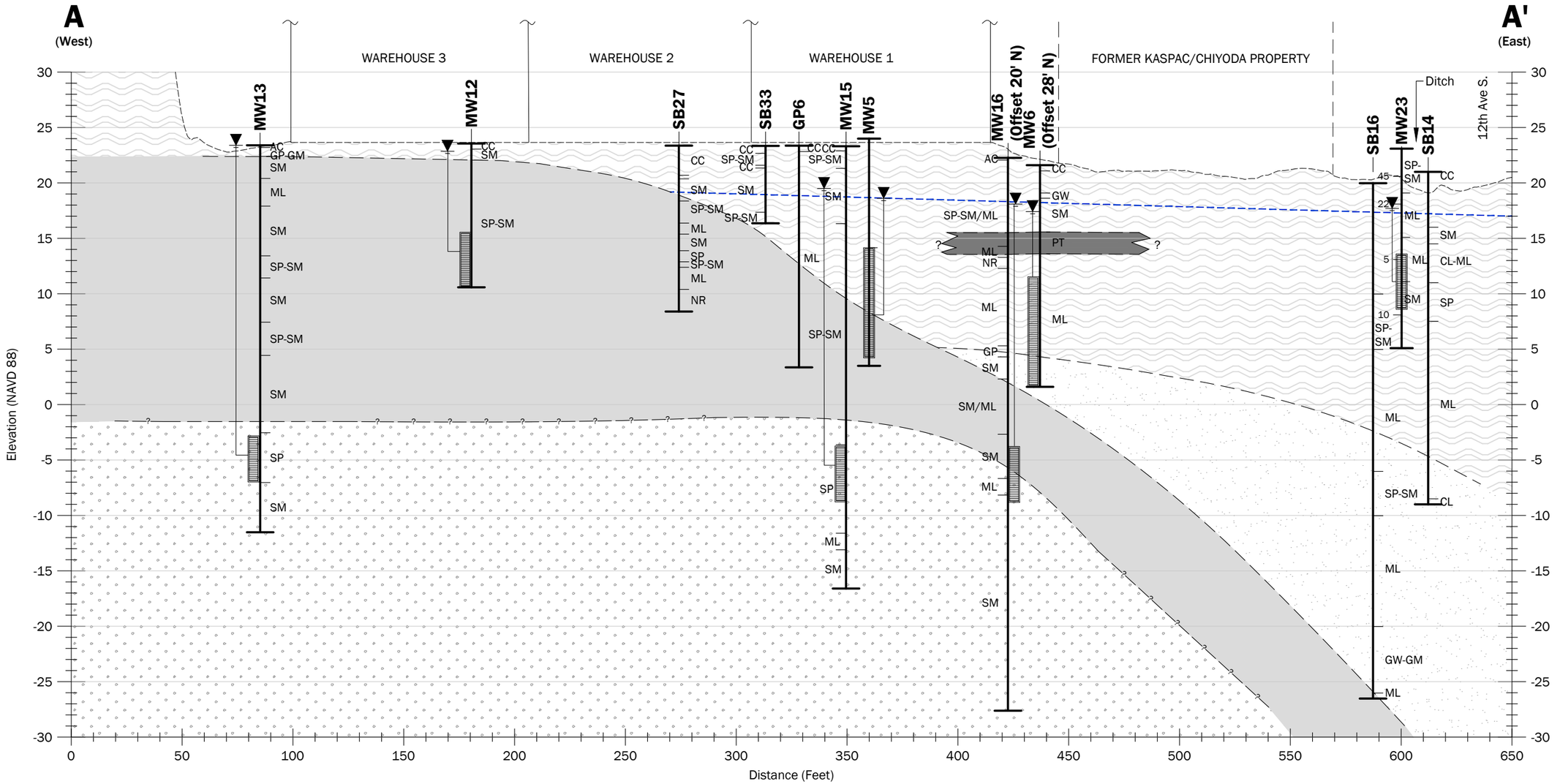
Borings and Monitoring Wells Used for Geology/Hydrogeology

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3-1

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806600102_F3-1_Site Plan.dwg 3-1 Date Exported:5/30/2024 3:48 PM - by Michael R. Woods



Notes:

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. Borings are located within 15 feet of cross section unless noted otherwise.
4. Ground surface from from King County West Lidar 2021.

Datum: NAVD 88

Legend

Boring ID (Offset)

Inferred Soil Contact

SM Soil Classification

Shallow WBZ Seasonal High Groundwater Elevation

Groundwater Elevation December 2023

Well Screen

Silts, Clays, Silt with Sand (Inferred Recessional Outwash and Recent Alluvium and Fill)

Wood, Peat, Woody Organic Material

Sand and Silt with Shell Fragments

Dense to Very Dense Silt, Sand and Gravel (Inferred Glacial Till)

Sand and Gravel with Some Fines (Inferred Advance Outwash Deposits or Lens/Interbed Within the Glacial Sequence)

50 0 50
Horizontal Scale in Feet

10 0 10
Vertical Scale in Feet
Vertical Exaggeration = 5X

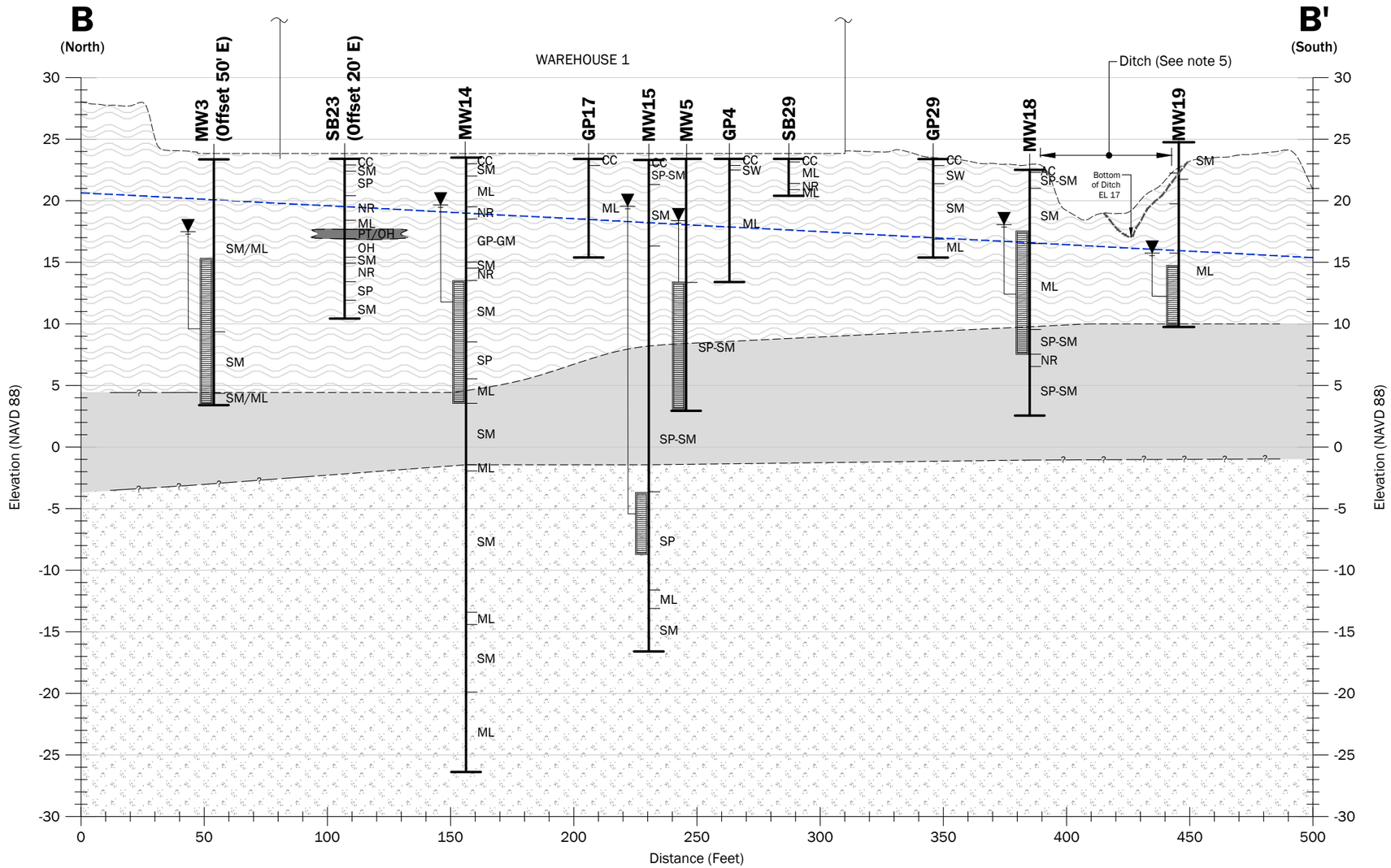
Cross Section A-A'

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3-2

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806000102_F3-2_F3-3_Cross Sections.dwg 3-2 Date Exported\5/24/2024 2:40 PM - by Michael R. Woods

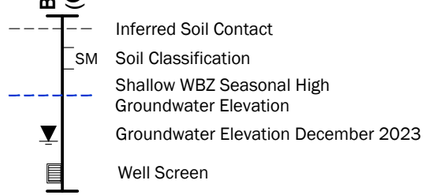


Notes:

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3. Borings are located within 15 feet of cross section unless noted otherwise.
4. Ground surface from from King County West Lidar 2021.
5. Lowest point of ditch is elevation 17', offset 54' east.

Datum: NAVD 88

Legend



- Silts, Clays, Silt with Sand (Inferred Recessional Outwash and Recent Alluvium and Fill)
- Wood, Peat, Woody Organic Material
- Dense to Very Dense Silt, Sand and Gravel (Inferred Glacial Till)
- Sand and Gravel with Some Fines (Inferred Advance Outwash Deposits or Lens/Interbed Within the Glacial Sequence)

50 0 50
Horizontal Scale in Feet

10 0 10
Vertical Scale in Feet
Vertical Exaggeration = 5X

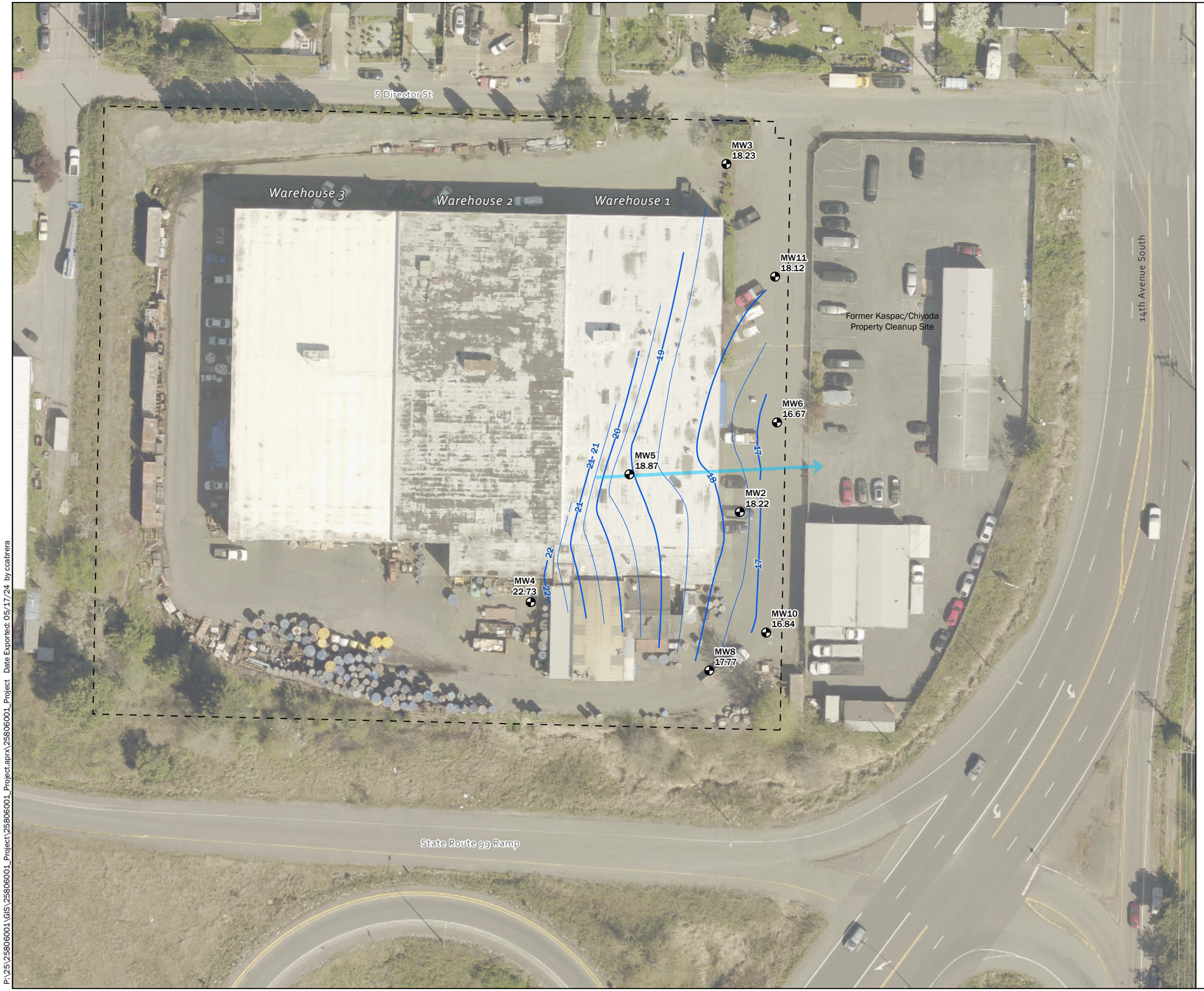
Cross Section B-B'

Precision Engineering, Inc.
Seattle, Washington

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Figure 3-3

\\geoengineers.com\WAN Projects\25\25806001\CAD\02\RI Report\25806001_02_F3-2 - F3-3_Cross Sections.dwg 3-3 Date Exported5/24/2024 3:10 PM - by Michael R. Woods



Legend

- Shallow Monitoring Well
- Shallow Groundwater Elevation Contours (NAVD88)
- Inferred Groundwater Flow Direction
- Property Parcel

Notes:

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3. Contours generated by Natural Neighbors method with selected contours smoothed by hand.
4. Depth to water measured in all wells on January 29th 2020.

Data Source: 2021 image from King County GIS.
Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N
W E
S

60 0 60
Feet

Shallow Groundwater Contours - January 2020

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3-4

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\25806001_Project Date Exported: 05/17/24 by ccabrera



Legend

- Deep Monitoring Well
- Deep Groundwater Elevation Contours (NAVD88)
- Inferred Groundwater Flow Direction
- Property Parcel

Notes:

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3. Contours hand drawn due to only 3 points.
4. Depth to water measured in all wells on January 29th 2020.

Data Source: 2021 image from King County GIS.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N W E S

60 0 60

Feet

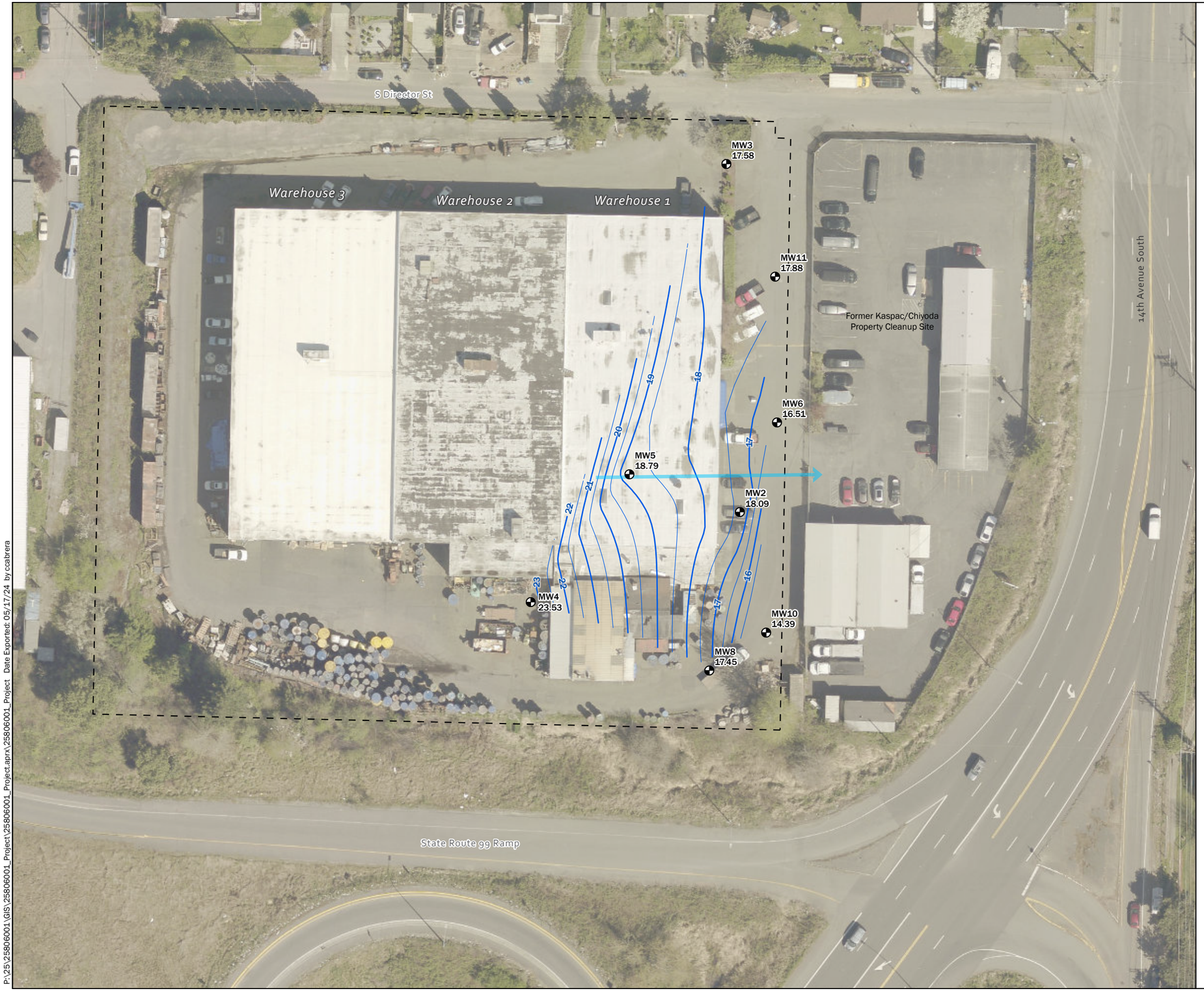
Deep Groundwater Contours - January 2020

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3-5

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\25806001_Project Date Exported: 05/17/24 by ccabrera



Legend

- Shallow Monitoring Well
- Shallow Groundwater Elevation Contours (NAVD88)
- Inferred Groundwater Flow Direction
- Property Parcel

Notes:

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3. Contours generated by Natural Neighbors method with selected contours smoothed by hand.
4. Depth to water measured in all wells on April 28th 2020.

Data Source: 2021 image from King County GIS.
Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N
W E
S

60 0 60
Feet

Shallow Groundwater Contours - April 2020

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3-6

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\25806001_Project Date Exported: 05/17/24 by:ccabrera



Legend

- Deep Monitoring Well
- Deep Groundwater Elevation Contours (NAVD88)
- Inferred Groundwater Flow Direction
- Property Parcel

Notes:

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3. Contours hand drawn due to only 3 points.
4. Depth to water measured in all wells on April 28th 2020.

Data Source: 2021 image from King County GIS.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N
W E
S

60 0 60
Feet

Deep Groundwater Contours - April 2020

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3-7

P:\25\258060001\GIS\258060001_Project\258060001_Project.aprx\258060001_Project Date Exported: 05/17/24 by ccabrera



Legend

- Shallow Monitoring Well
- Shallow Groundwater Elevation Contours (NAVD88)
- Inferred Groundwater Flow Direction
- Property Parcel

Notes:

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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Contours generated by Natural Neighbors method with selected contours smoothed by hand.
4. Depth to water measured in all wells on May 31nd 2022.

Data Source: 2021 image from King County GIS.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N
W E
S

60 0 60
Feet

Shallow Groundwater Contours - May 2022

Precision Engineering, Inc.
Seattle, Washington

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Figure 3-8

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\25806001_Project Date Exported: 05/17/24 by ccabrera



Legend

- Deep Monitoring Well
- Deep Groundwater Elevation Contours (NAVD88)
- Inferred Groundwater Flow Direction
- Property Parcel

Notes:

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3. Contours generated by Natural Neighbors method with selected contours smoothed by hand.
4. Depth to water measured in all wells on June 1st 2022.

Data Source: 2021 image from King County GIS.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N
W E
S

60 0 60
Feet

Deep Groundwater Contours - May 2022

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3-9

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\25806001_Project Date Exported: 05/17/24 by ccabrera



Legend

- Shallow Monitoring Well
- Shallow Groundwater Elevation Contours (NAVD88)
- Inferred Groundwater Flow Direction
- Property Parcel

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Contours generated by Natural Neighbors method with selected contours smoothed by hand.
4. Depth to water measured in all wells on May 31nd 2022.

Data Source: 2021 image from King County GIS.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N W E S

60 0 60

Feet

Shallow Groundwater Contours - July 2023

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3-10

P:\25\258060001\GIS\258060001_Project\258060001_Project.aprx\258060001_Project Date Exported: 05/17/24 by ccabrera



Legend

- Deep Monitoring Well
- Deep Groundwater Elevation Contours (NAVD88)
- Inferred Groundwater Flow Direction
- Property Parcel

Notes:

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3. Contours generated by Natural Neighbors method with selected contours smoothed by hand.
4. Depth to water measured in all wells on June 1st 2022.

Data Source: 2021 image from King County GIS.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N
W E
S

60 0 60
Feet

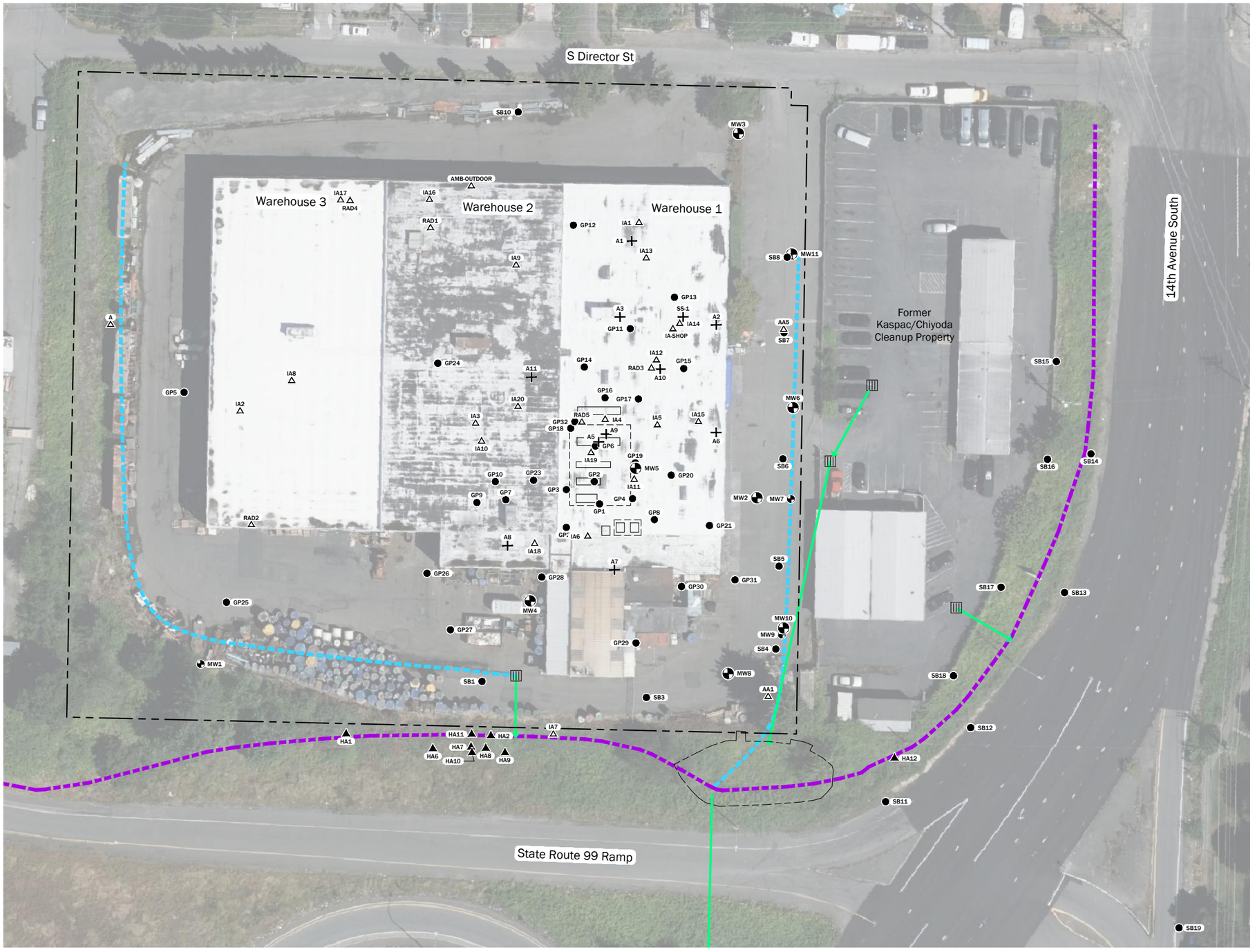
Deep Groundwater Contours - July 2023

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3-11

P:\25\258060001\GIS\258060001_Project\258060001_Project.aprx\258060001_Project Date Exported: 05/17/24 by ccabrera



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Sub-slab soil gas sample
- Indoor/outdoor air sample
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Source(s):

- Aerial from Microsoft Bing, 2022

Projection: WA State Plane, North Zone, NAD83, US Foot

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Feet

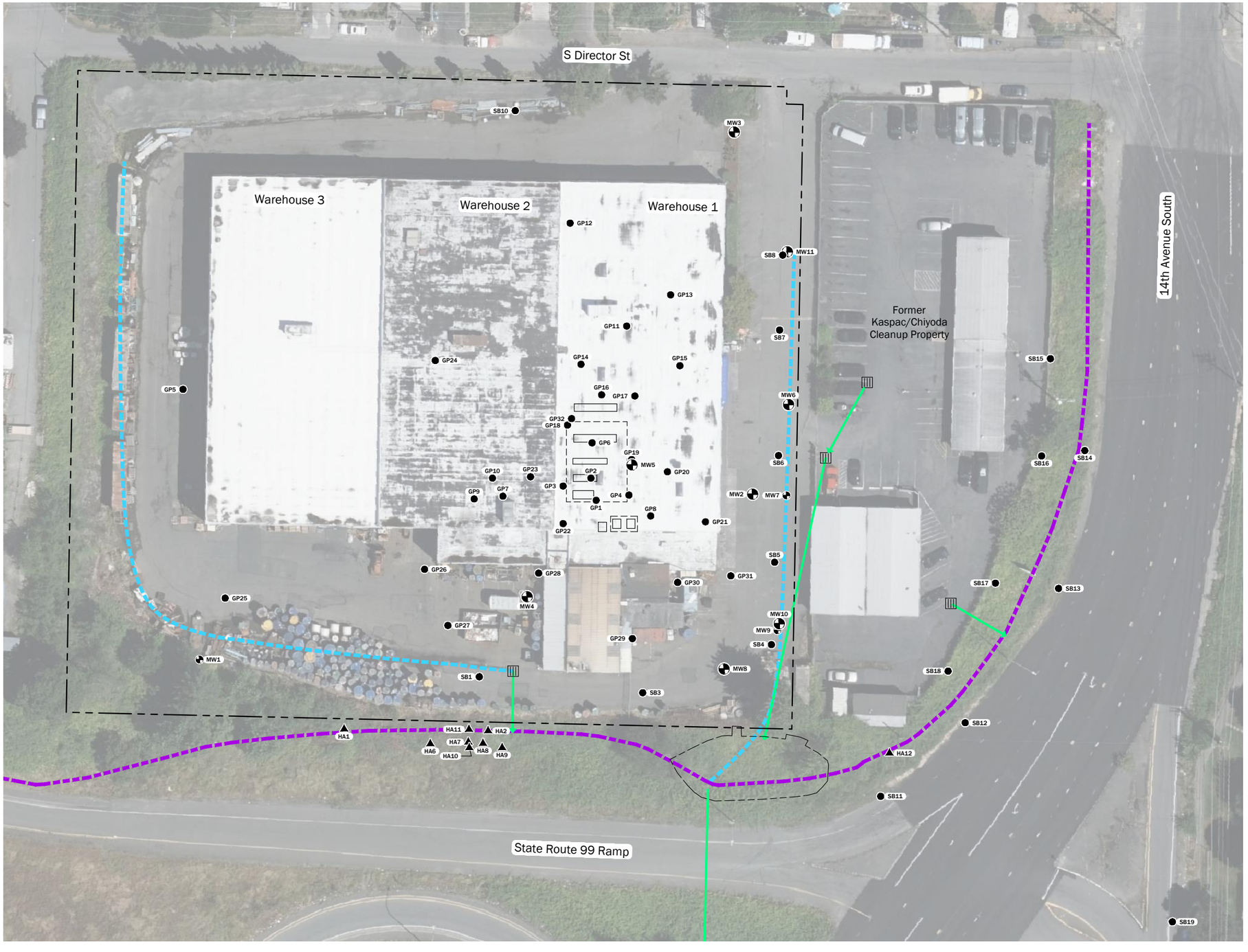
Investigation Locations 2005 – 2021

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 4-1

\\geoengineers.com\WAN Projects\25\25806001\CAD\02\RI Report\25806001_F4-1 - F4-3_Site Plans.dwg 4-1 Date Exported:5/30/2024 3:42 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Source(s):

- Aerial from Microsoft Bing, 2022

Projection: WA State Plane, North Zone, NAD83, US Foot

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N

0 60

Feet

Soil and Groundwater Investigation Locations 2005 – 2021

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 4-2

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\2580600102_F4-1 - F4-3_Site Plans.dwg 4-2 Date Exported:5/30/2024 3:42 PM - by Michael R. Woods



Legend

- Sub-slab soil gas sample
- Indoor/outdoor air sample
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Source(s):

- Aerial from Microsoft Bing, 2022

Projection: WA State Plane, North Zone, NAD83, US Foot

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Feet

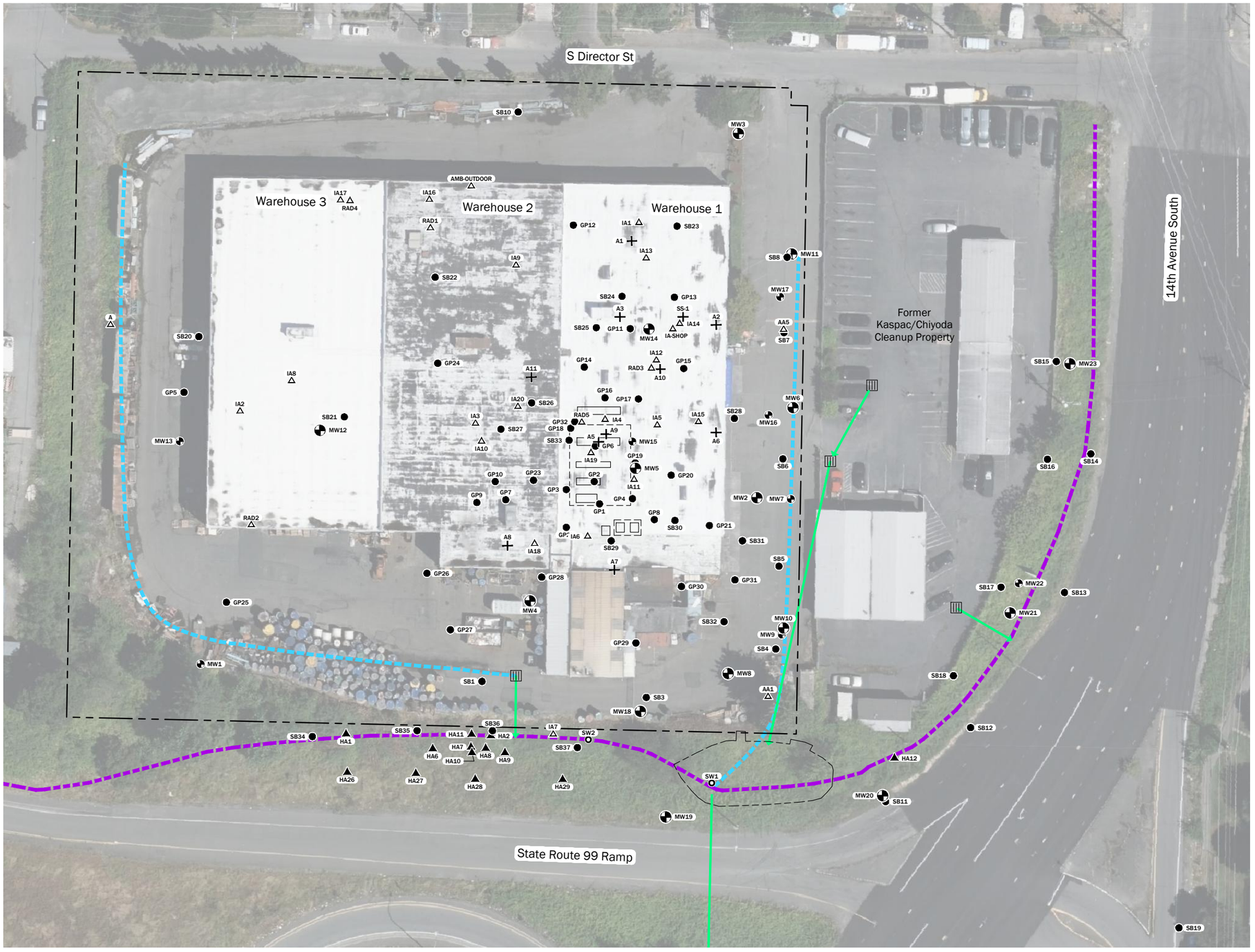
Air/Soil Gas Investigation Locations
2005 - 2021

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 4-3

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001020_F4-1 - F4-3_Site Plans.dwg 4-3 Date Exported:5/30/2024 3:42 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Ditch Water Sample
- Sub-slab soil gas sample
- Indoor/outdoor air sample
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Source(s):

- Aerial from Microsoft Bing, 2022

Projection: WA State Plane, North Zone, NAD83, US Foot

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N

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Feet

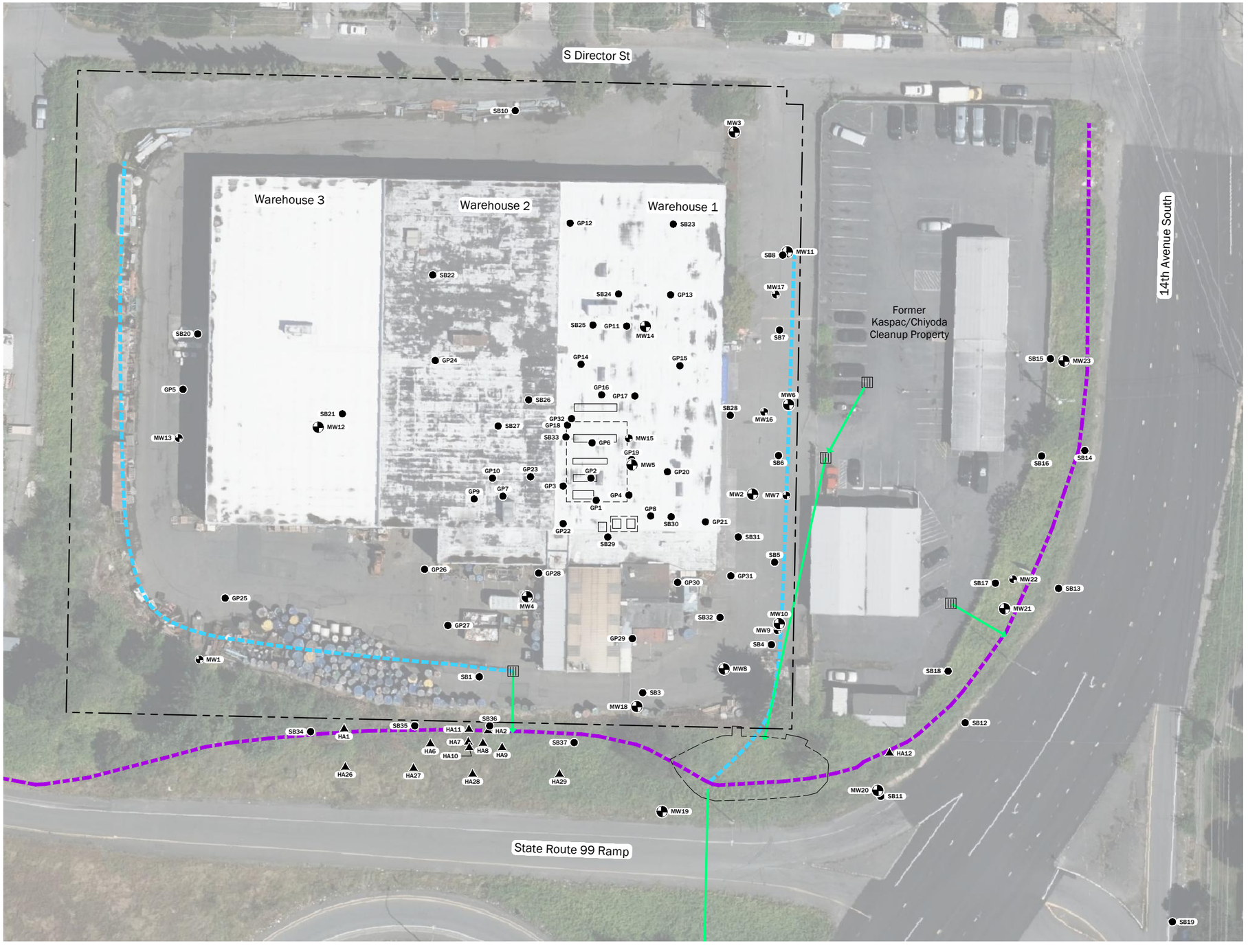
Investigation Locations 2005 - 2023

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 5-1

\\geoengineers.com\WAN Projects\25\25806001\CAD\02\RI Report\25806001_02_F5-1_F5-3_Site Plans.dwg 5-1 Date Exported:5/30/2024 3:40 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Source(s):

- Aerial from Microsoft Bing, 2022

Projection: WA State Plane, North Zone, NAD83, US Foot

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N

0 60

Feet

Soil and Groundwater Investigation Locations 2005 – 2023

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 5-2

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\2580600102_F5-1 - F5-3_Site Plans.dwg 5-2 Date Exported:5/30/2024 3:41 PM - by Michael R. Woods



Legend

- Sub-slab soil gas sample
- Indoor/outdoor air sample
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Source(s):

- Aerial from Microsoft Bing, 2022

Projection: WA State Plane, North Zone, NAD83, US Foot

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N

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Feet

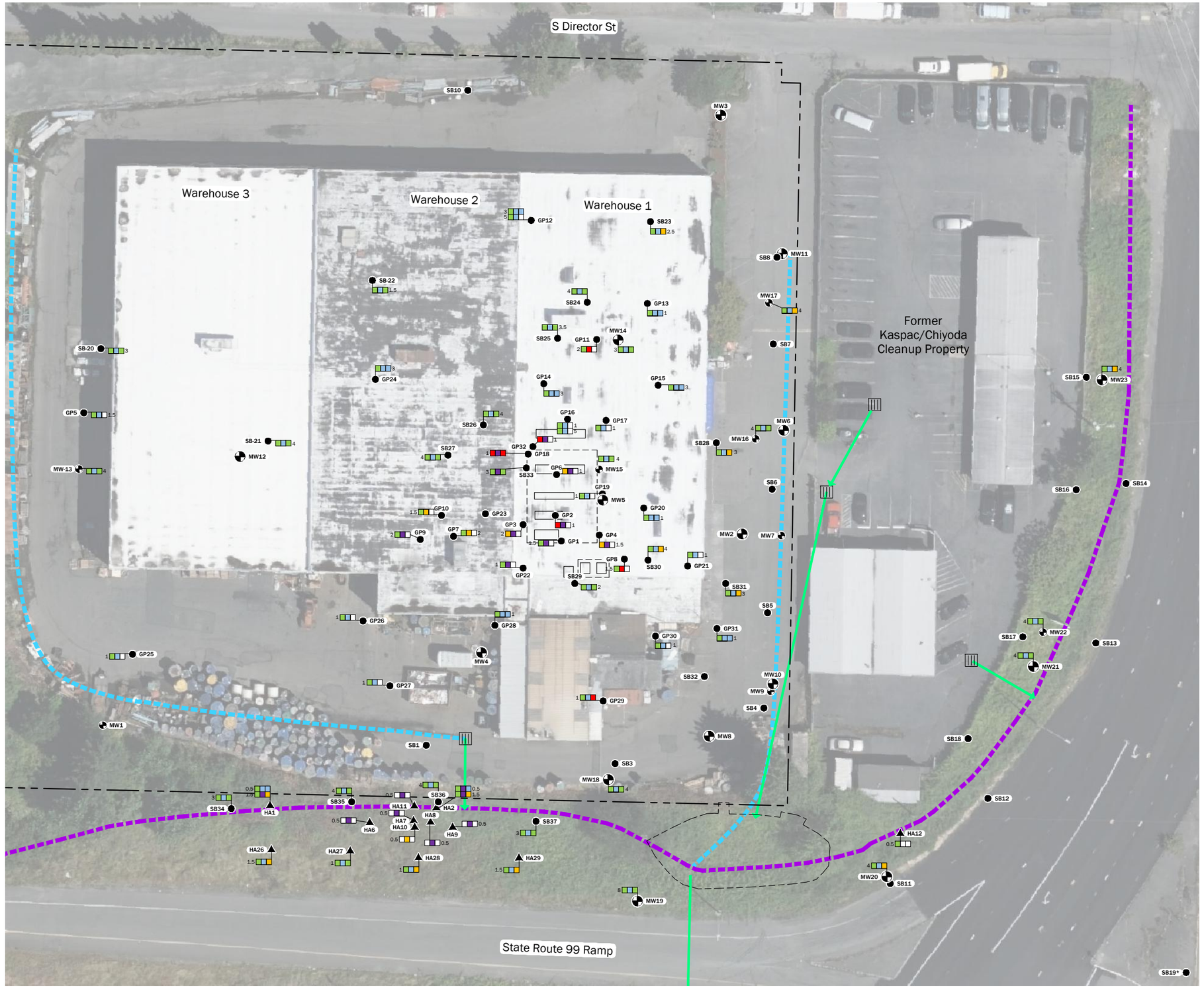
Air/Soil Gas Investigation Locations
2005 - 2023

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 5-3

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001_02_F5-1 - F5-3_Site Plans.dwg 5-3 Date Exported:5/30/2024 3:41 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Vadose Soil Chemical Analytical Results

Total Chromium
Hexavalent Chromium
Mercury

Soil Sample Depth (feet bgs): 3 / 5 / 7

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
bgs = Below Ground Surface

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

0 50
Feet

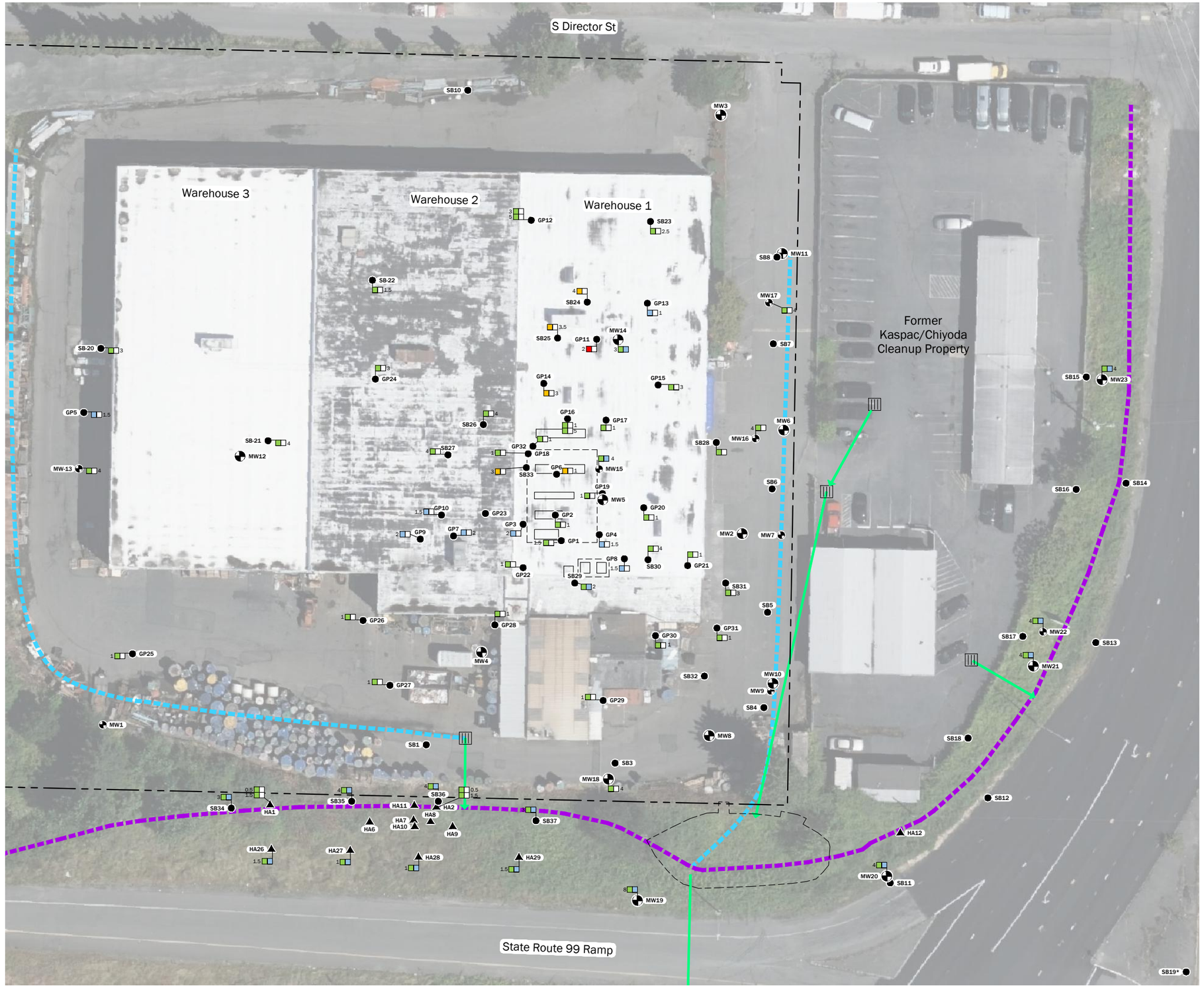
Chromium and Mercury in Vadose Soil

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-1A

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001O2_F7-1A - F7-3D_Site Plans.dwg 7-1A Date Exported:5/30/2024 3:31 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Vadose Soil Chemical Analytical Results

Trichloroethylene
1,4-Dioxane

Soil Sample Depth (feet bgs): 3 5 7

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
bgs = Below Ground Surface
TCE = Trichloroethylene

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

0 50
Feet

TCE and 1,4-Dioxane in Vadose Soil

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-1B

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001O2_F7-1A - F7-3D_Site Plans.dwg 7-1B Date Exported:5/30/2024 3:31 PM - by Michael R. Woods

S Director St

Warehouse 3

Warehouse 2

Warehouse 1

Former Kaspac/Chiyoda Cleanup Property

State Route 99 Ramp

SB10 MW3 SB23 GP12 SB8 MW11 MW17 SB-22 SB24 GP13 SB25 GP11 MW14 SB7 SB-20 GP24 GP14 GP15 SB15 MW23 GP5 SB26 GP16 GP17 MW6 SB-21 MW12 SB27 GP32 GP18 SB28 MW16 MW-13 SB33 GP6 MW15 SB6 SB16 SB14 GP19 MW5 GP10 GP23 GP2 GP20 GP9 GP7 GP3 GP4 GP1 MW2 MW7 GP8 SB30 GP21 GP22 SB29 SB31 SB5 GP26 GP28 GP30 GP31 SB17 MW22 SB13 GP25 MW4 MW21 GP27 SB32 MW10 MW9 GP29 SB4 MW1 MW8 SB18 SB1 SB3 MW18 SB12 SB34 SB35 SB36 HA11 HA2 HA1 HA8 SB37 HA6 HA7 HA10 HA9 HA12 HA26 HA27 HA28 HA29 MW20 SB11 MW19 SB19*

Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Vadose Soil Chemical Analytical Results

Total Diesel+Oil
Total cPAH TEQ
Soil Sample Depth (feet bgs): 3 5 7

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
bgs = Below Ground Surface
cPAHs = Carcinogenic Polycyclic Aromatic Hydrocarbons
TEQ = Toxic Equivalent Concentration

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

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Feet

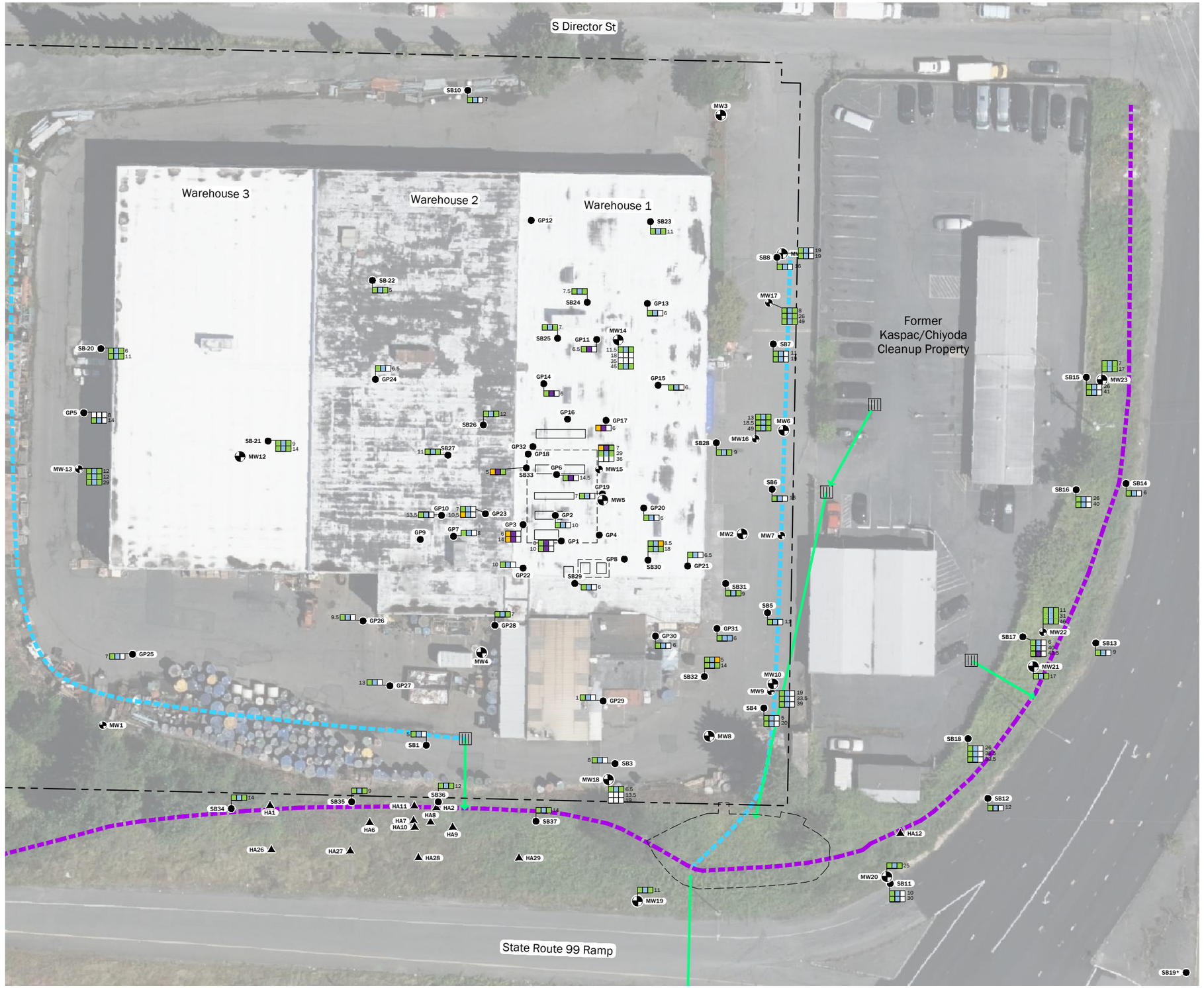
Petroleum Hydrocarbons and cPAHs in Vadose Soil

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-1C

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806000102_F7-1A - F7-3D_Site Plans.dwg 7-1C Date Exported:5/30/2024 3:31 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Saturated Soil Chemical Analytical Results

Total Chromium
Hexavalent Chromium
Mercury
Soil Sample Depth (feet bgs) 3 5 7

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
bgs = Below Ground Surface

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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Feet

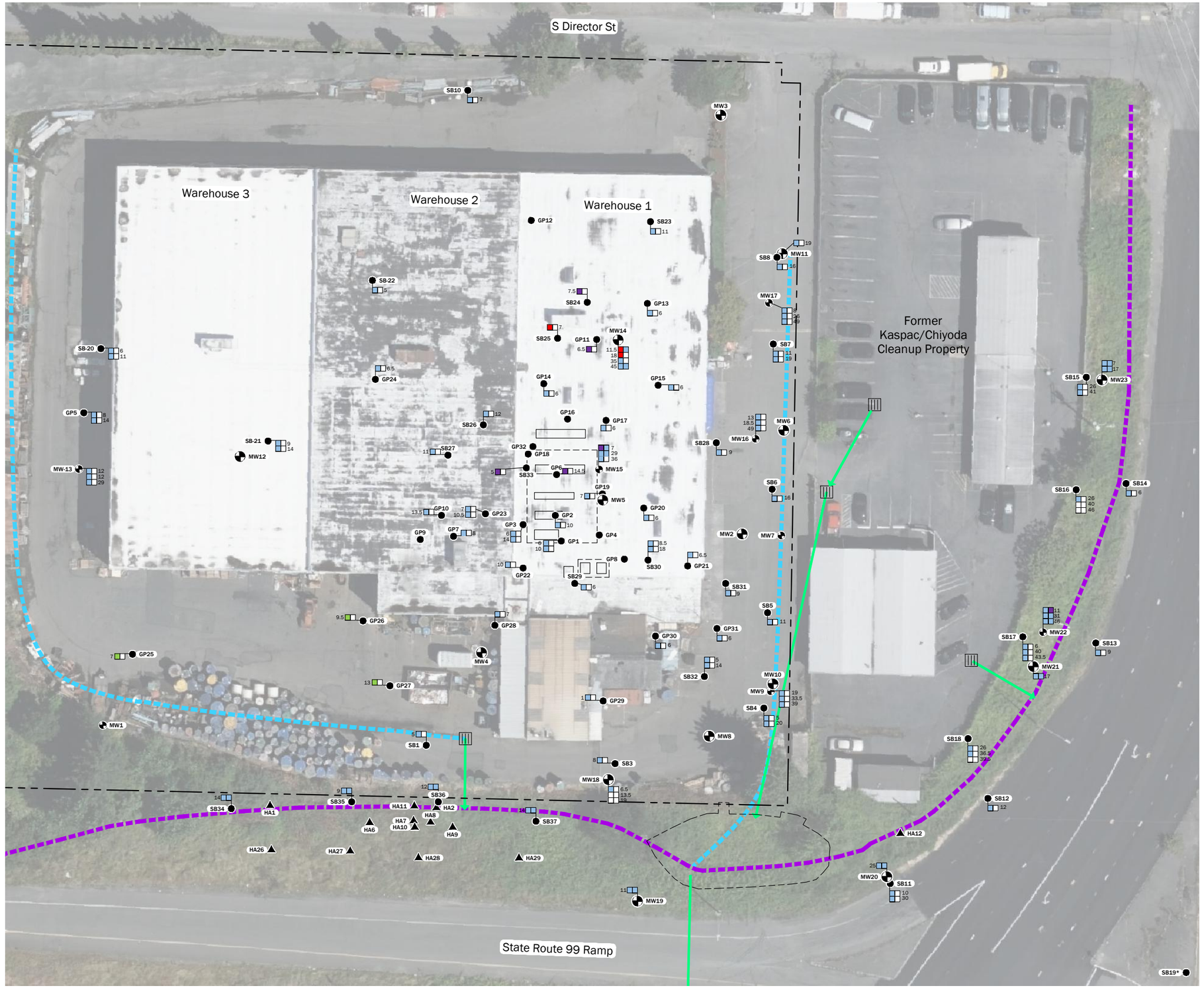
Chromium and Mercury in Saturated Soil

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-2A

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001O2_F7-1A - F7-3D_Site Plans.dwg 7-2A Date Exported:5/30/2024 3:31 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Saturated Soil Chemical Analytical Results

Trichloroethylene
1,4-Dioxane
Soil Sample Depth (feet bgs): 3 / 5 / 7

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
bgs = Below Ground Surface
TCE = Trichloroethylene

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

0 50
Feet

TCE and 1,4-Dioxane in Saturated Soil

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-2B

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001O2_F7-1A - F7-3D_Site Plans.dwg 7-2B Date Exported:5/30/2024 3:31 PM - by Michael R. Woods

S Director St

Warehouse 3

Warehouse 2

Warehouse 1

Former
Kaspac/Chiyoda
Cleanup Property

State Route 99 Ramp

Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Saturated Soil Chemical Analytical Results

Total Diesel+Oil
Total cPAH TEQ

Soil Sample Depth (feet bgs)

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
bgs = Below Ground Surface
cPAHs = Carcinogenic Polycyclic Aromatic Hydrocarbons
TEQ = Toxic Equivalent Concentration

Sources:

- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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Feet

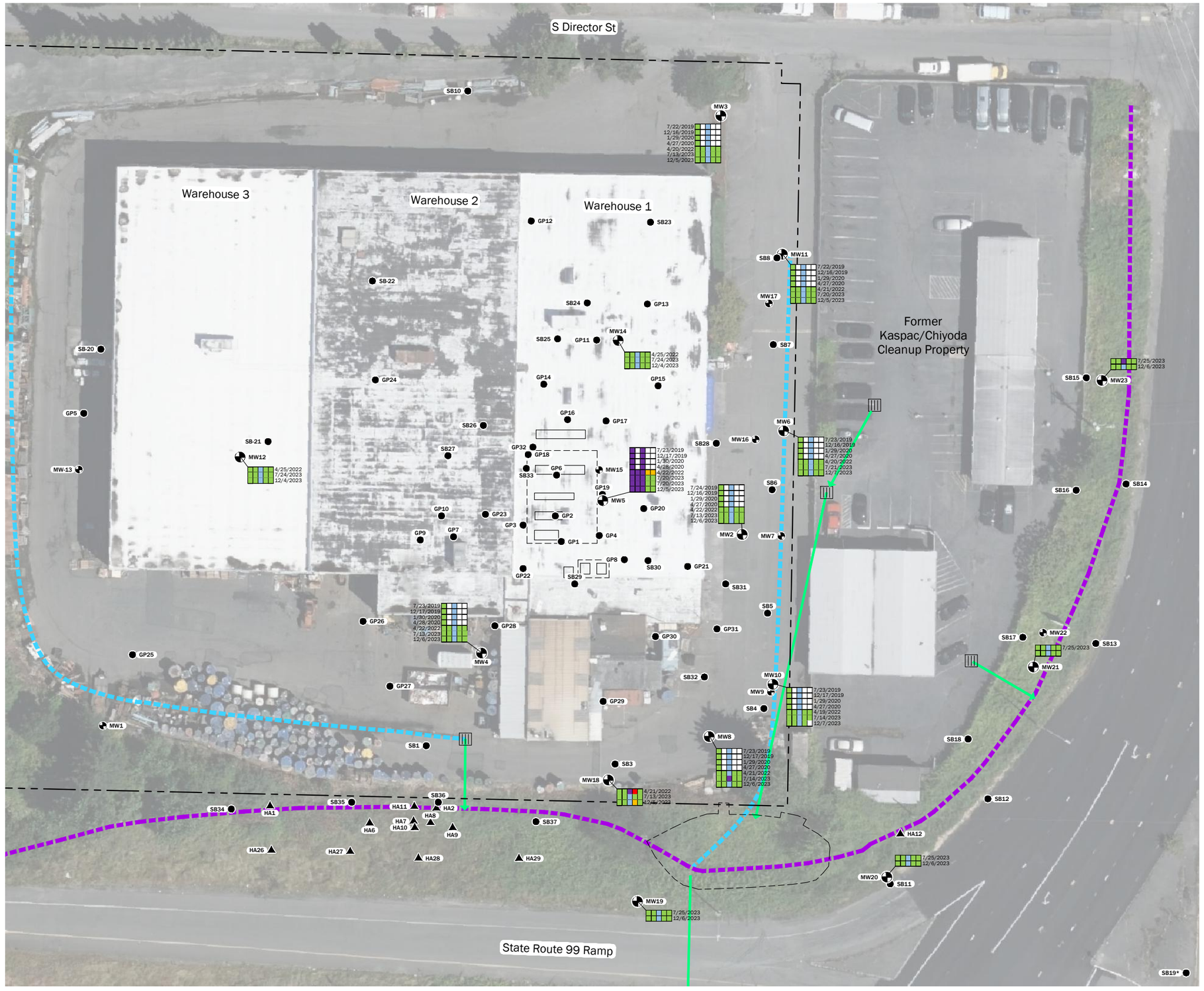
Petroleum Hydrocarbons and cPAHs in Saturated Soil

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-2C

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\258060102_F7-1A - F7-3D_Site Plans.dwg 7-2C Date Exported:5/30/2024 3:31 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Shallow Groundwater Chemical Analytical Results

Total Chromium
Dissolved Chromium
Hexavalent Chromium
Mercury
Dissolved Mercury

7/24/2019
12/16/2019
1/29/2020
Groundwater Sample Date

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

0 50
Feet

Chromium and Mercury in Shallow Groundwater

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-3A

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806000102_F7-1A - F7-3D_Site Plans.dwg 7-3A Date Exported:5/30/2024 3:31 PM - by Michael R. Woods



\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001O2_F7-1A - F7-3D_Site Plans.dwg 7-3B Date Exported:5/30/2024 3:31 PM - by Michael R. Woods

Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Shallow Groundwater Chemical Analytical Results

Trichloroethylene
1,4-Dioxane

7/24/2019
12/16/2019
1/29/2020
Groundwater Sample Date

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
TCE = Trichloroethylene

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

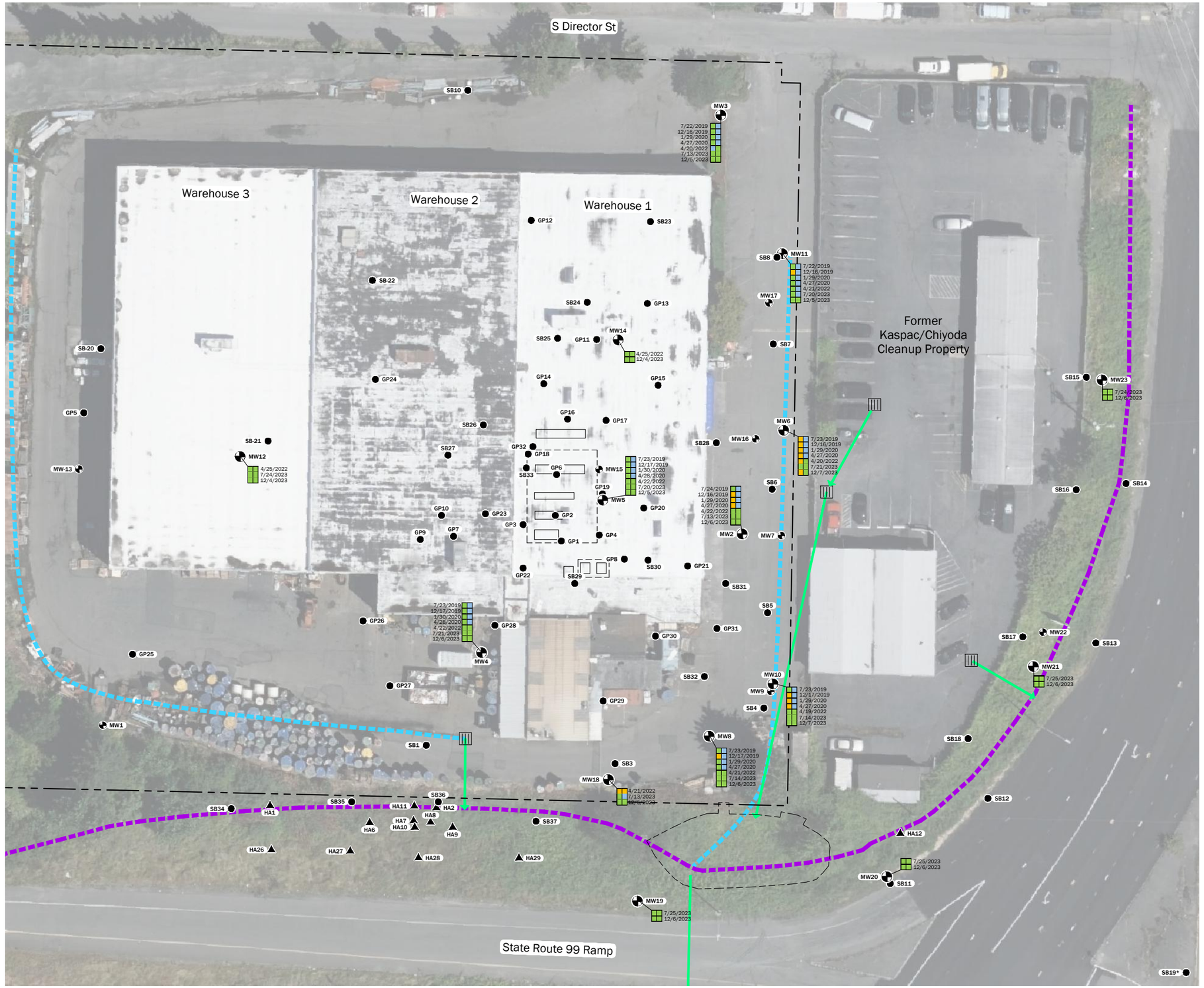
0 50
Feet

TCE and 1,4-Dioxane in Shallow Groundwater

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-3B



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Shallow Groundwater Chemical Analytical Results

Total Diesel+Oil
Total cPAH TEQ

7/24/2019
12/16/2019
1/29/2020
Groundwater Sample Date

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
cPAHs = Carcinogenic Polycyclic Aromatic Hydrocarbons
TEQ = Toxic Equivalent Concentration

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

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Feet

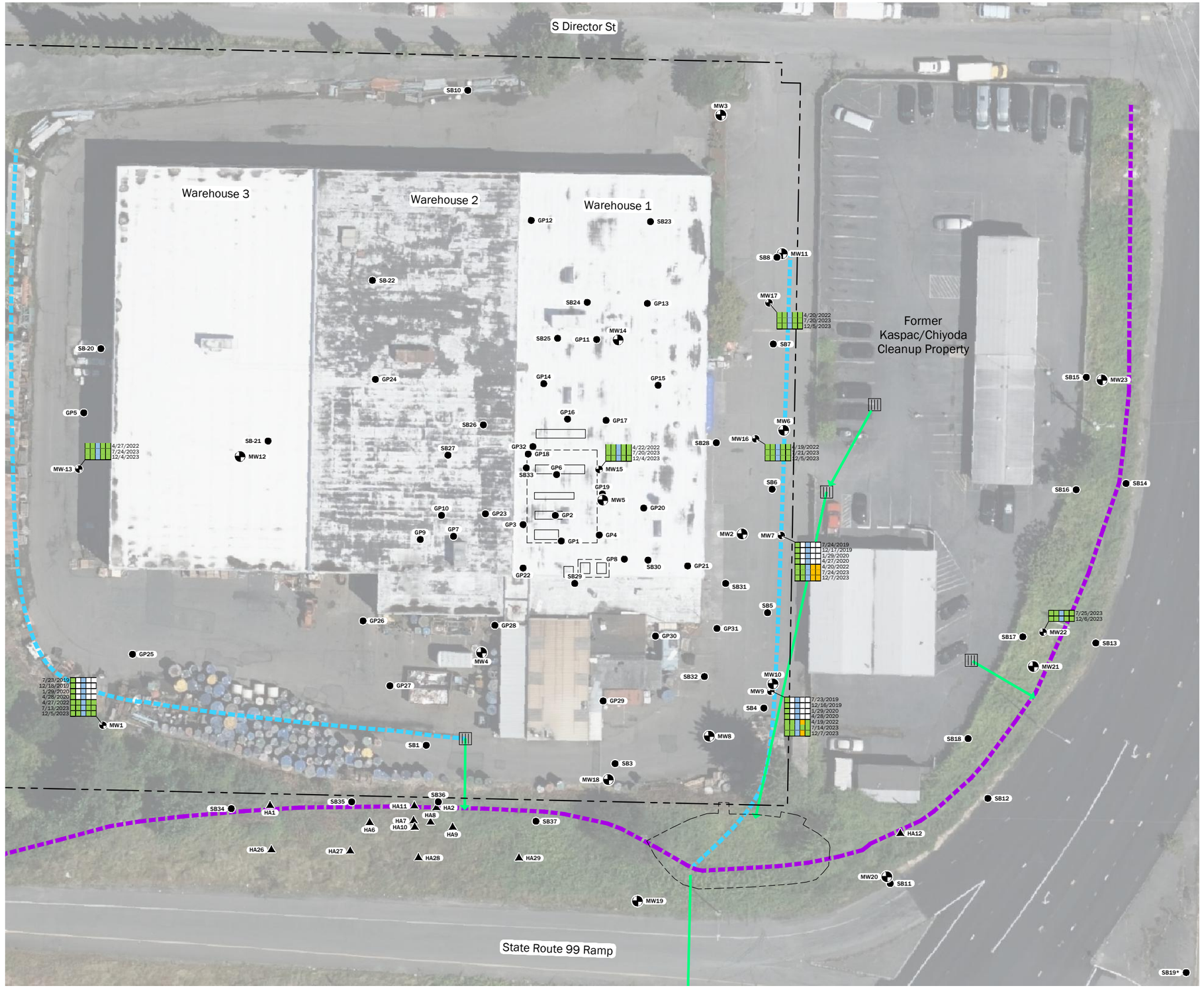
Petroleum Hydrocarbons and cPAHs in Shallow Groundwater

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-3C

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806000102_F7.1A - F7.3D_Site Plans.dwg 7-3C Date Exported:5/30/2024 3:31 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Deep Groundwater Chemical Analytical Results

- Total Chromium
- Dissolved Chromium
- Hexavalent Chromium
- Mercury
- Dissolved Mercury

7/24/2019
12/16/2019
1/29/2020
Groundwater Sample Date

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

0 50
Feet

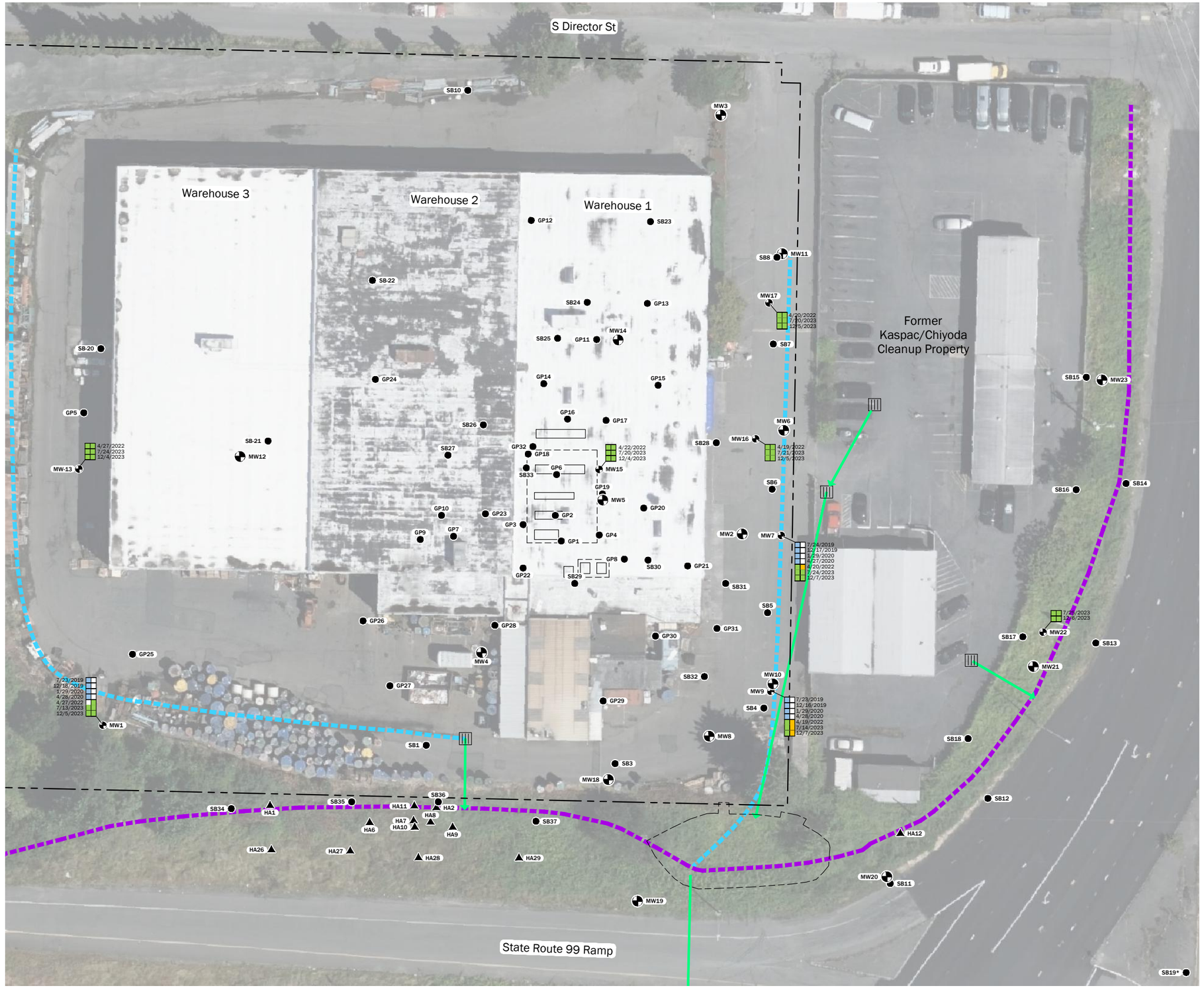
Chromium and Mercury in Deep Groundwater

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-4A

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001O2_F7-1A - F7-3D_Site Plans.dwg 7-4A Date Exported:5/30/2024 3:31 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Deep Groundwater Chemical Analytical Results

Trichloroethylene Results
1,4-Dioxane

7/24/2019
12/16/2019
1/29/2020
} Groundwater Sample Date

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
TCE = Trichloroethylene

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

0 50
Feet

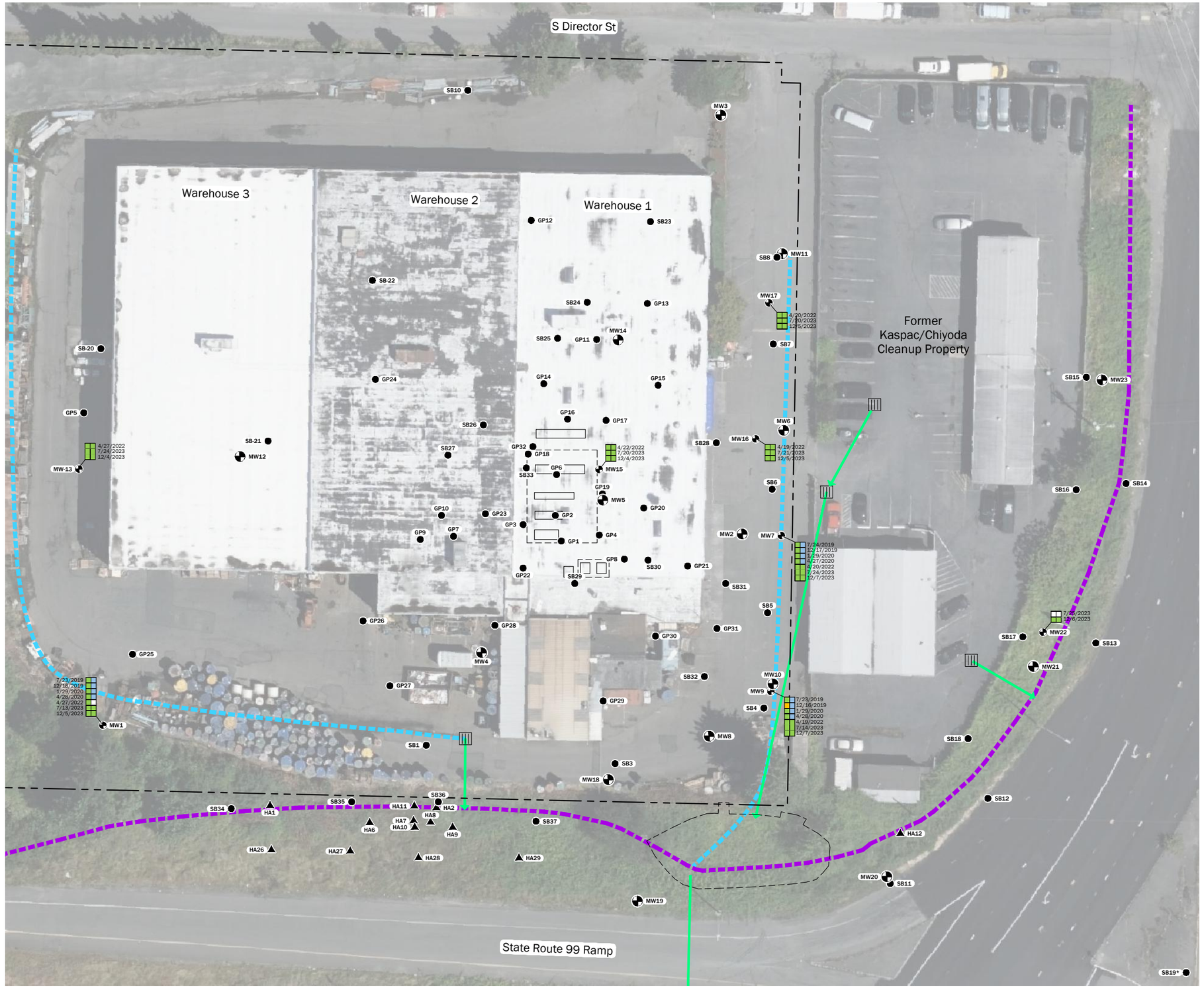
TCE and 1,4-Dioxane in Deep Groundwater

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-4B

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001_F7-1A - F7-3D_Site Plans.dwg 7-4B Date Exported:5/30/2024 3:31 PM - by Michael R. Woods



Legend

- Soil Boring
- Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Stormwater Runoff
- Drainage Ditch
- Catch Basin
- Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Deep Groundwater Chemical Analytical Results

Total Diesel+Oil
Total cPAH TEQ

7/24/2019
12/16/2019
1/29/2020
} Groundwater Sample Date

- Detect >100X most stringent PCUL
- Detect >10X most stringent PCUL
- Detect >most stringent PCUL
- ND >most stringent PCUL
- ND or detect <= most stringent PCUL
- Not analyzed at this location

PCUL = Preliminary Cleanup Level
ND = Not Detected
cPAHs = Carcinogenic Polycyclic Aromatic Hydrocarbons
TEQ = Toxic Equivalent Concentration

Sources:
- Aerial from Microsoft Bing, 2022

*SB19 located 30' Southeast of marked location. (See F4-1)
Projection: WA State Plane, North Zone, NAD83, US Foot

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N

0 50
Feet

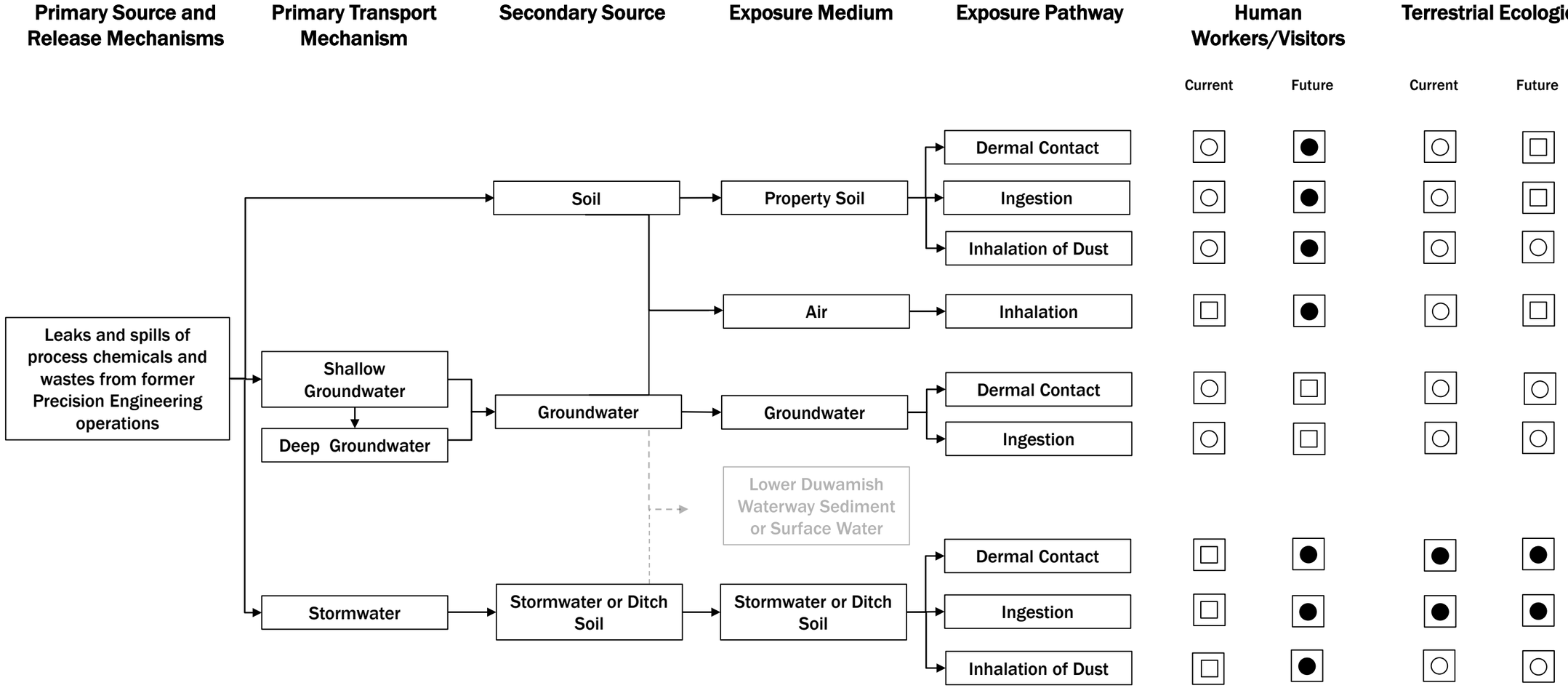
Petroleum Hydrocarbons and cPAHs in Deep Groundwater

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 7-4C

\\geoengineers.com\WAN\Projects\25\25806001\CAD\02\RI Report\25806001_F7.1A - F7.3D_Site Plans.dwg 7-4C Date Exported:5/30/2024 3:31 PM - by Michael R. Woods



Legend

- Complete Exposure Pathway
- Incomplete Exposure Pathway
- Complete but Minor/Unlikely Exposure Pathway

N

Not to Scale

Conceptual Site Model

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 8-1

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25806-001-02 Date Exported: 5/24/24

Appendices

Appendix A
Historical Aerial Photographs


INQUIRY #: 7100075.1
YEAR: 2017
= 500'
N
EDR


INQUIRY #: 7100075.1
YEAR: 2013
= 500'
N
EDR


INQUIRY #: 7100075.1
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 7100075.1
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 7100075.1
YEAR: 1990
= 500'
N
EDR


INQUIRY #: 7100075.1
YEAR: 1985
= 500'
N
EDR


INQUIRY #: 7100075.1
YEAR: 1980
= 500'
N
EDR



INQUIRY #: 7100075.1

YEAR: 1977

= 500'

N

EDR


INQUIRY #: 7100075.1
YEAR: 1969
= 500'
N
EDR



INQUIRY #: 7100075.1

YEAR: 1965

= 500'

N

EDR


INQUIRY #: 7100075.1
YEAR: 1956
= 500'
N
EDR



INQUIRY #: 7100075.1

YEAR: 1953

= 500'

N

EDR


INQUIRY #: 7100075.1
YEAR: 1943
= 500'
N
EDR



INQUIRY #: 7100075.1

YEAR: 1936

= 500'

N

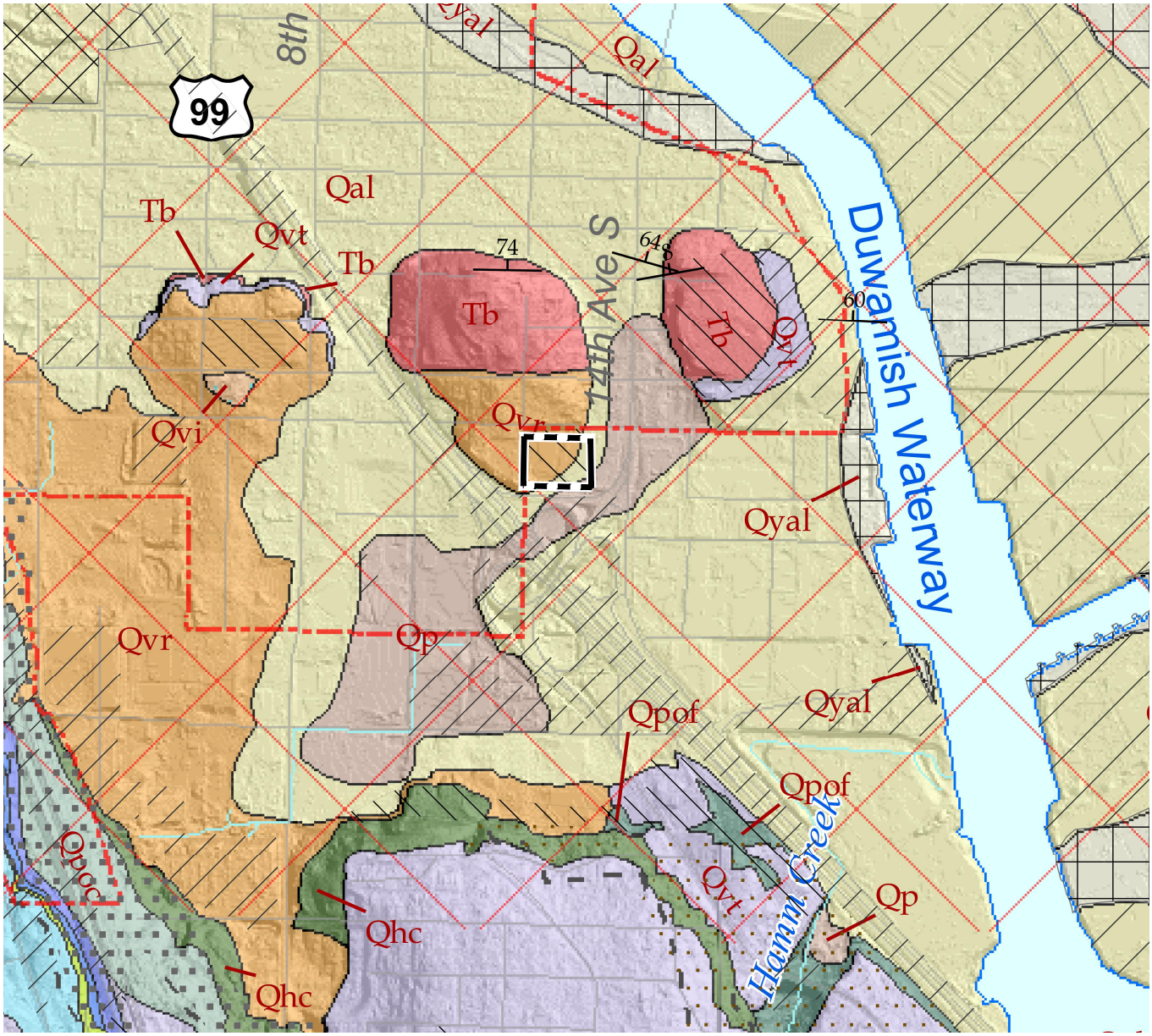
EDR

Appendix B
WSDOT Drainage Map



122.3232337°W 47.5184389°N

Appendix C
Geologic Map



Legend

- Property Boundary
- Qal (Alluvium)
- Qyal (Younger alluvium)
- Qvr (Vashon recessional outwash deposits)
- Tb (Blakely Formation: sandstone, conglomerate, siltstone, scattered marine shells)
- Qp (Peat)
- Qvt (Vashon subglacial till)
- Qhc (Hamm Creek formation)
- Artificial fill or modified land
- Filled river channels

0 1000 Feet

N

Notes:

Source(s):

- Geologic map from The Geologic Map of Seattle – a Progress Report, by Kathy Goetz Troost, Derek P. Booth, Aaron P. Wisher, and Scott A. Shimel, 2005. Symbology displayed on the map but not referenced in the legend can be found in the original map.

Coordinate System: XX State Plane, XX Zone, NAD83, US Foot

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

Geology Map

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure C-1

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Appendix D
Boring and Monitoring Well Logs

1988 Investigation

LOG OF EXPLORATORY BORING

PROJECT NAME	Phase I Site Assessment	BORING NO.	MW-1
LOCATION	Precision Engineering	PAGE	1 OF 2
DRILLED BY	Tacoma Pump & Drill	REFERENCE ELEV.	99.87'
DRILL METHOD	H.S. Auger	TOTAL DEPTH	40.00'
LOGGED BY	Stu Ryman	DATE COMPLETED	6/16/88

SAMPLE NUMBER	SAMPLE TYPE	PENE-TRATION RATE/TIME	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-LOGIC COLUMN	WELL DETAILS	LITHOLOGIC DESCRIPTION
S-1	SS	50/2"		5				0 - 28 feet: GRAVELLY SANDY SILT (TILL); light grey; fine to coarse; dry to moist, very dense. (SM/ML)
S-2	SS	50/2"		10				
S-3	SS	50/2"		15				
								--- @ 18 feet: Ground water encountered.
S-4	SS	50/2"		20				
S-5	SS	50/0"		25				
								28 - 39 feet: SAND; grey; medium grained with some subrounded gravels; very dense. (SP)
S-6	SS	50/1"		30				
S-7	SS	50/4"		35				
				40				39 - 40 feet: GRAVELLY SANDY SILT; grey;

REMARKS

1) Dual completion monitoring well and piezometer. 2) See LITHLOGIC DESCRIPTION for Well and Piezometer Completion Details.

SWEET-EDWARDS/EMCON

S20-01.04.PENGR.CJE.09/06/8

LOG OF EXPLORATORY BORING

PROJECT NAME	Phase I Site Assessment	BORING NO.	MW-1
LOCATION	Precision Engineering	PAGE	2 OF 2
DRILLED BY	Tacoma Pump & Drill	REFERENCE ELEV.	99.87'
DRILL METHOD	H.S. Auger	TOTAL DEPTH	40.00'
LOGGED BY	Stu Ryman	DATE COMPLETED	6/16/88

SAMPLE NUMBER	SAMPLE TYPE	PENE-TRATION RATE/TIME	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-LOGIC COLUMN	WELL DETAILS	LITHOLOGIC DESCRIPTION
				45				fine to coarse; dense. (GM)
				50				Bottom of boring at 40 feet. Well and Piezometer Completion Details: Monitoring well constructed of 2-inch Schedule 40 PVC with 10-foot, 0.010-inch slot screen. Piezometer constructed of 1-inch Schedule 80 PVC with 5-foot, 0.010-inch slot screen. Cement surface seal, 0-2 feet; bentonite chips, 2-13 feet and 20-28 feet; washed pea gravel, 13-20 feet and 28-40 feet.
				55				
				60				
				65				
				70				
				75				
				80				

REMARKS

1) Dual completion monitoring well and piezometer. 2) See LITHLOGIC DESCRIPTION for Well and Piezometer Completion Details.

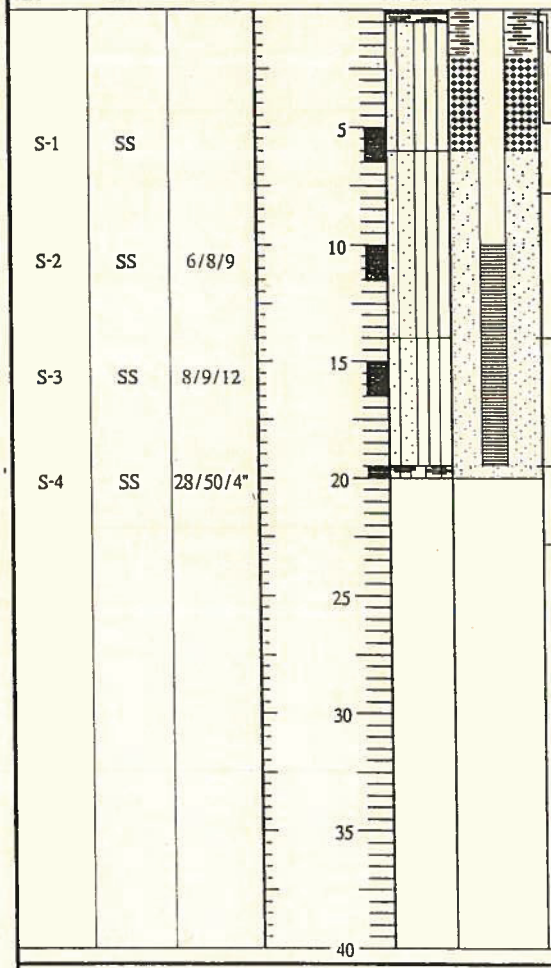
SWEET-EDWARDS/EMCON

S20-01.04.PENGR.CJF.02/06/

LOG OF EXPLORATORY BORING

PROJECT NAME	Phase I Site Assessment	BORING NO.	MW-2
LOCATION	Precision Engineering	PAGE	1 OF 1
DRILLED BY	Tacoma Pump & Drill	REFERENCE ELEV.	99.03'
DRILL METHOD	H.S. Auger	TOTAL DEPTH	20.00'
LOGGED BY	Stu Ryman	DATE COMPLETED	6/15/88

SAMPLE NUMBER	SAMPLE TYPE	PENE-TRATION RATE/TIME	LITHOLOGIC DESCRIPTION
			0 - 0.17 foot: ASPHALT. (AS.)
			0.17 - 0.5 foot: GRAVELLY SAND; grey; base coarse. (GP)
S-1	SS		0.5 - 6 feet: SILTY SAND; dark grey; fine to medium; wet; loose. (SM/ML)
S-2	SS	6/8/9	6 - 14 feet: SILTY SAND; black; fine; interbedded organic debris; loose. (SM/ML)
S-3	SS	8/9/12	14 - 19.5 feet: SILTY SAND; grey brown; fine; interbedded silts and sands; loose to medium dense. (SM/ML)
S-4	SS	28/50/4"	19.5 - 20 feet: GRAVELLY SANDY SILT (TILL); blue grey; dense. (GM)
			Bottom of boring at 20 feet.



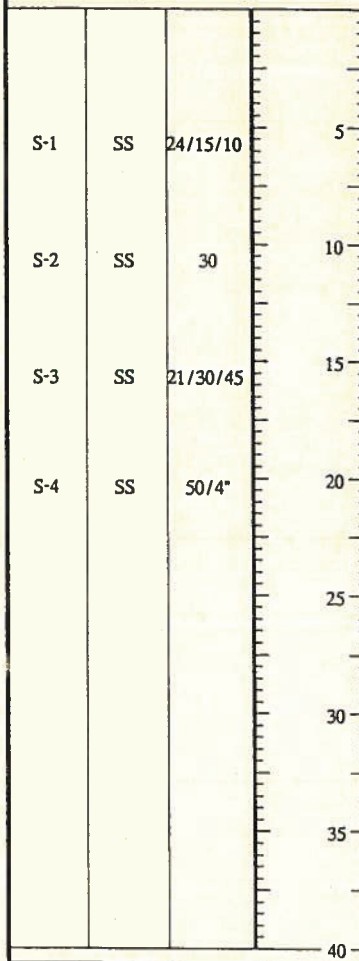
REMARKS

1) Monitoring well consturcted of 2" Schedule 40 PVC with 10', 0.01" slot screen. 2) Cement surface seal; 0-2'; bentonite chips, 2-6'; 8x12 Colorado Silica Sand, 6-20'.

LOG OF EXPLORATORY BORING

PROJECT NAME	Phase I Site Assessment	BORING NO.	MW-3
LOCATION	Precision Engineering	PAGE	1 OF 1
DRILLED BY	Tacoma Pump & Drill	REFERENCE ELEV.	99.74'
DRILL METHOD	H.S. Auger	TOTAL DEPTH	20.00'
LOGGED BY	Stu Ryman	DATE COMPLETED	6/15/88

SAMPLE NUMBER	SAMPLE TYPE	PENE-TRATION RATE/TIME	LITHOLOGIC DESCRIPTION
S-1	SS	24/15/10	0 - 14 feet: SILTY SAND; dark grey to black; fine, moist; medium dense. (SM/ML)
			--- Interbedded organics.
S-2	SS	30	
S-3	SS	21/30/45	14 - 19 feet: SILTY SAND; grey; fine; medium dense. (SM/L)
S-4	SS	50/4"	19 - 20 feet: SILTY GRAVELLY SAND (TILL); grey; brown weathered surface; fine to coarse; very dense. (SM/ML)
			Bottom of boring at 20 feet.



REMARKS

1) Monitoring well consturcted of 2" Schedule 40 PVC with 10', 0.010" slot screen. 2) Cement surface seal, 0-3'; bentonite chips, 3-6.5'; 8x12 Colorado Silica Sand, 6.5-19.5'.

LOG OF EXPLORATORY BORING

PROJECT NAME	Phase I Site Assessment	BORING NO.	MW-4
LOCATION	Precision Engineering	PAGE	1 OF 1
DRILLED BY	Tacoma Pump & Drill	REFERENCE ELEV.	101.47'
DRILL METHOD	H.S. Auger	TOTAL DEPTH	25.00'
LOGGED BY	Stu Ryman	DATE COMPLETED	6/16/88

SAMPLE NUMBER	SAMPLE TYPE	PENE-TRATION RATE/TIME	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-LOGIC COLUMN	WELL DETAILS	LITHOLOGIC DESCRIPTION
				5, 10, 15, 20, 25, 30, 35, 40				

0 - 0.17 foot: ASPHALT. (AS)

0.17 - 0.5 foot: GRAVELLY SAND; brown, base coarse. (GP)

0.5 - 25 feet: GRAVELLY SILTY SAND (TILL); grey; fine to very fine sand; dry to moist; very dense. (SM/ML)

--- @ 18 feet: increased moisture.

Bottom of boring at 25 feet.

Well Completion Details:

Monitoring well constucted of 2-inch Schedule 40 PVC with 10-foot, 0.010-inch slot screen.

Cement surface seal, 0-2 feet; bentonite chips, 2-14 feet; 8x12 Colorado silica sand, 14-25 feet.

REMARKS

1) Soil sample not attempted due to dense till. 2) See LITHLOGIC DESCRIPTION column for Well Completion Details.

SWEET-EDWARDS/EMCON

S20-01.04.PENGR.C.IF.09/05/8

2005 Investigation

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	MW5	1 of 2

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	
Start/End Date	12/15/05 to 12/15/05	Northing	
Driller/Equipment	Cascade Drilling/Hollow Stem Auger	Easting	
Geologist/Engineer	Merideth Gibson	Hole Depth	20.5-feet
Sample Method	Split Spoon	Outer Hole Diam	10.25-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1–9									0 to 10.0 feet: See boring log for GP19.
10–11			10%	SS			50/2"		10.0 to 20.5 feet: SANDY SILT with GRAVEL; grayish brown; 70% fines, low plasticity; 20% sand, fine to medium; 10% gravel, fine to medium; wet.
12–13			25%	SS			50/4"		
14–15			25%	SS			50/4"		@ 15.0 feet: Large Gravel, subrounded.
16–17			28%	SS			50/5"		@ 17.5 feet: Large Gravel approximately 3-inches in diameter; damp.
18–20									

NOTES: 1.) SS = 2.5-inch x 1.5-foot long steel split spoon sampler. 2.) bgs = below ground surface.

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Maul Foster & Alongi, Inc.	Geologic Borehole Log/Well Construction		
	Project Number: 8006.08.04	Well Number: MW5	Sheet: 2 of 2

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			100%	SS			50/6"		@ 20.0 feet: Dry.
									Total Depth: 20.5 feet bgs.

NOTES: 1.) SS = 2.5-inch x 1.5-foot long steel split spoon sampler. 2.) bgs = below ground surface.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	MW6	1 of 2

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	
Start/End Date	12/15/05 to 12/15/05	Northing	
Driller/Equipment	Cascade Drilling/Hollow Stem Auger	Easting	
Geologist/Engineer	Merideth Gibson	Hole Depth	20.8-feet
Sample Method	Split Spoon	Outer Hole Diam	10.25-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0									0 to 0.5 feet: ASPHALT.
3			56%	SS			19 50/6"		2.5 to 3.0 feet: SANDY GRAVEL (GW); dark brown with lenses of green and black; 40% sand, fine to medium; 60% gravel, fine to medium; damp.
5			100%	SS			11 12 13		3.0 to 6.0 feet: SILTY SAND (SM); dark gray; 35% fines, non plastic; 65% sand, fine, dense; moist.
6									6.0 to 8.0 feet: WOODY DEBRIS.
8			90%	SS			10 11 10		8.0 to 20.0 feet: SILT with SAND (ML); light grayish brown with spots of black; 90% fines, low plasticity; 10% sand, fine; trace organics; wet.
10			100%	SS			10 11 15		@ 10.0 feet: Color change to pinkish grayish brown.
13			100%	SS			24 20 19		@ 12.5 feet: Increase in stiffness.
15			90%	SS					@ 15.0 feet: Color change to grayish brown with spots of black.
16									@ 16.5 feet: Trace woody debris.
18			100%	SS			20 19 12		
20									

NOTES: 1.) SS = 2.5-inch x 1.5-foot long steel split spoon sampler. 2.) bgs = below ground surface.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	MW6	2 of 2

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			100%	SS					20.0 to 20.75 feet: SILTY GRAVEL with SAND (GM); grayish brown; 20% fines, medium plasticity; 15% sand, fine to course; 65% gravels, fine to medium, approximately 3-inches in diamete; wet.

Total Depth: 20.75 feet bgs.

NOTES: 1.) SS = 2.5-inch x 1.5-foot long steel split spoon sampler. 2.) bgs = below ground surface.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	MW7	1 of 2

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	
Start/End Date	12/16/05 to 12/16/05	Northing	
Driller/Equipment	Cascade Drilling/Hollow Stem Auger	Easting	
Geologist/Engineer	Merideth Gibson	Hole Depth	35.5-feet
Sample Method	Split Spoon	Outer Hole Diam	10.25-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1									0 to 0.5 feet: ASPHALT.
2									
3			67%	SS			4 5 5		2.5 to 3.5 feet: GRAVELLY SAND (SW); dark brown; trace fines; 70% sand, fine to course; 30% gravels, fine; dry to damp.
4									3.5 to 5.0 feet: SILTY SAND (SM); dark grayish brown; 30% fines, low plasticity; 70% sand, fine; damp.
5			100%	SS			3 6 5		5.0 to 7.5 feet: SANDY SILT with GRAVEL (ML); light grayish brown; 70% fines, non plastic; 20% sand, fine; 10% gravels, fine to medium; trace organics; damp to moist.
6									
7									
8			100%	SS			1 2 4		7.5 to 13.5 feet: SANDY SILT (ML); light grayish brown; 70% fines, non plastic; 30% sand, fine, dense; trace organics; moist. @ 8.5 feet: Wet.
9									
10									
11			100%	SS			3 4 4		
12									@ 11.5 feet: Woody debris.
13			100%	SS			5 6 7		@ 12.5 feet: Color change to light pinkish grayish brown; increase in fines, some clay.
14									13.5 to 16.0 feet: SAND with SILT (SP-SM); dark brown; 15% fines, non plastic; 85% sand, fine; trace shells; wet.
15			100%	SS			3 3 3		
16									16.0 to 18.0 feet: SILT with SAND (ML); grayish brown; 85% fines, low to medium plasticity; 15% sand, fine; trace shells; wet.
17									
18			67%	SS			8 10 26		18.0 to 28.8 feet: GRAVELLY SAND with SILT (SW); greenish gray; 10% fines, non plastic; 50% sand, fine to course; 40% gravels, fine to medium, some approximately 3-inches in diameter, subrounded; dry to damp.
19									
20									

NOTES: 1.) SS = 2.5-inch x 1.5-foot long steel split spoon sampler. 2.) bgs = below ground surface.

GBLWC W:\GINT\GINTWPROJECTS\8006.08\MW5 - MW8.GPJ 8/25/07

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	MW7	2 of 2

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
21									
22			50%	SS			50/6"		
23									@ 22.5 feet: Increase in sand, decrease in fines; dry to damp.
24			50%	SS			50/6"		
25									
26			50%	SS			50/5"		@ 25.5 feet: Color change to yellowish brown with iron staining; increase in fines to 15%; dry.
27									
28			50%	SS			50/5"		
29									28.8 to 29.0 feet: SAND with SILT (SP-SM); dark gray; 15% fines; 85% sand, fine; dry.
30			90%	SS			50/6"		29.0 to 32.5 feet: SAND with GRAVEL (SW); dark gray; trace fines; 85% sand, medium; 15% gravels, fine, subangular to subrounded; wet.
31									
32									
33			90%	SS			17 50/6"		32.5 to 33.5 feet: SAND (SP); dark gray; 100% sand, medium; trace gravels; wet.
34									33.5 to 35.5 feet: GRAVELLY SAND with SILT (SW); dark brown; 10% fines; 60% sand, fine; 30% gravels; dry.
35			100%	SS			50/6"		

Total Depth: 35.5 feet bgs.

NOTES: 1.) SS = 2.5-inch x 1.5-foot long steel split spoon sampler. 2.) bgs = below ground surface.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	MW8	1 of 2

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	
Start/End Date	12/15/05 to 12/15/05	Northing	
Driller/Equipment	Cascade Drilling/Hollow Stem Auger	Easting	
Geologist/Engineer	Merideth Gibson	Hole Depth	20.2-feet
Sample Method	Split Spoon	Outer Hole Diam	10.25-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1									0 to 0.5 feet: ASPHALT.
2									
3			75%	SS			14 23 13		2.5 to 3.5 feet: SAND with GRAVEL; greenish gray; trace fines; 85% sand, fine; 15% gravels, fine to medium; dry.
4									3.5 to 5.0 feet: SAND with SILT (SP-SM); gray with spots of black; 30% fines, non plastic; 70% sand, fine; trace hard substance with beads of white material in the center, strong odor; damp to moist.
5			100%	SS			2 6 9		5.0 to 8.0 feet: SANDY SILT (ML); dark blackish brown with lenses of greenish gray; 70% fines, non plastic; 30% sand; moist. @ 6.0 feet: Color change to dark brown.
6									
7									
8			100%	SS			5 8 8		8.0 to 11.0 feet: SILT with SAND (ML); light grayish brown; 85% fines, medium plasticity; 15% sand, fine; trace organics; wet.
9									
10									
11			100%	SS			7 8 14		11.0 to 15.0 feet: SILT (ML); grayish brown; 95% fines, low plasticity; 5% sand, fine; wet.
12									
13			67%	SS			17 50/6"		
14									
15									
16			67%	SS			22 50/6"		15.0 to 17.5 feet: GRAVELLY SAND with SILT NODULES(SW); dark brownish gray; 10% fines; 60% sand, medium; 30% gravels, fine to medium; wet.
17									
18			34%	SS			50/3"		17.5 to 20.2 feet: GRAVEL with SILT and SAND (GW-GM); dark brownish gray; 10% fines; low plasticity; 10% sand, fine to medium; 80% gravels, medium to course; wet.
19									
20									

NOTES: 1.) SS = 2.5-inch x 1.5-foot long steel split spoon sampler. 2.) bgs = below ground surface.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	MW8	2 of 2

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			100%	SS			50/2"		Total Depth: 20.2 feet bgs.

NOTES: 1.) SS = 2.5-inch x 1.5-foot long steel split spoon sampler. 2.) bgs = below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-1	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	--
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	--
Start/End Date	6/7/05 to 6/9/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	S. Mauldin	Hole Depth	15.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0									0 to 0.5 feet: CONCRETE.
1			100%	GP					0.5 to 13.0 feet: SANDY SILT with GRAVEL (SM); dark yellowish brown; 50% fines, nonplastic; 40% sand, fine to coarse; 10% gravel, fine, rounded to subrounded; micaceous; stiff; dry.
2						GP1-S-1.5			
3									
4			100%	GP					
5									
6			100%	GP					@ 5.5 to 6.0 feet: Reddish brown mottling.
			100%	GP		GP1-S-6.0			
7									
8			78%	GP					
9									
10						GP1-S-10.0			
11									
12									
13			100%	GP					13.0 to 15.0 feet: SILT (ML); dark gray; 100% fines, nonplastic; very stiff; dry.
14									
15									Total Depth : 15.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed.

GBLWC W:\GINT\GINTWPROJECTS\0053.01\GP1-GP11.GPJ 8/25/07

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-2	1 of 2

Project Name	Precision Engineering	TOC Elevation (feet)	–
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	–
Start/End Date	6/7/05 to 6/9/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	S. Mauldin	Hole Depth	30.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0									0 to 0.5 feet: CONCRETE.
1			69%	GP		GP2-S-1.0			0.5 to 7.0 feet: SANDY SILT with GRAVEL (SM); dark yellowish brown; 50% fines, nonplastic; 40% sand, fine to coarse; 10% gravel, fine, rounded to subrounded; micaceous; stiff; dry.
2									
3									
4			100%	GP					
5									
6			100%	GP					
7									7.0 to 30.0 feet: SILT with SAND (ML); gray; 85% fines, nonplastic; 15% sand, fine; trace medium to coarse gravel; very stiff; dry.
8									
9									
10			64%	GP		GP2-S-10.0			
11									
12									
13									
14									
15			76%	GP GW					@ 15.0 feet: Dark gray; low plasticity; percentages 95% fines and 5% sand.
16									
17									
18						GP2-W-17.5-recon			
19									
20									

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed.

GBLWC W:\GINT\GINTWPROJECTS\0053.01\GP1-GP11.GPJ 8/25/07

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-2	2 of 2

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
21			78%	GP					
22									
23									
24									
25			100%	GP					
26									
27									
28									
29									
30									

Total Depth : 30.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-3	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	--
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	--
Start/End Date	6/9/05 to 6/9/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	S. Mauldin	Hole Depth	15.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0			70%	GP					0 to 0.5 feet: CONCRETE.
1									0.5 to 2.0 feet: SANDY SILT with GRAVEL (SM); dark yellowish brown; 50% fines, nonplastic; 40% sand, fine to coarse; 10% gravel, fine, angular; micaceous; stiff; dry.
2						GP3-S-2.0			2.0 to 5.0 feet: SILT (ML); gray; 100% fines, nonplastic; very stiff; dry.
3									
4									
5			95%	GP					5.0 to 8.0 feet: SANDY SILT with GRAVEL (SM); grayish brown with orangish mottling; 50% fines, nonplastic; 30% sand, fine to coarse; 20% gravel, fine, angular; micaceous; stiff; dry.
6						GP3-S-6.0			
7									
8			83%	GP					8.0 to 15.0 feet: SILT with GRAVELS (ML); dark gray; 100% fines, nonplastic; trace gravel; very stiff; dry.
9									
10									
11									
12			100%	GP					@ 12.0 feet: Damp.
13									
14						GP3-S-14.0			
15									

Total Depth : 15.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-4	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	--
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	--
Start/End Date	6/16/05 to 6/16/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	A. Hughes	Hole Depth	10.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			68%	GP					0 to 0.5 feet: CONCRETE.
1									0.5 to 0.9 feet: GRAVELLY SAND (SW); dark yellowish brown; 10% fines; 70% sand, fine to medium; 20% gravel, fine, subround; micaceous; damp.
2						GP4-S-1.5			0.9 to 9.7 feet: SANDY SILT (ML); dark yellowish brown; 65% fines, non to low plasticity; 35% sand, fine; micaceous; damp to moist.
3									@ 1.2 feet: Dark gray to dark grayish brown.
4									
5			70%	GP					@ 5.0 feet: Wet; trace organics.
6	▽			GW					
7									
8						GP5-W-8.0			
9									
10									9.7 to 10.0 feet: SILT (ML); dark grayish brown with reddish brown mottling; 100% fines, nonplastic; firm; moist to wet.
									Total Depth : 10.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed. 4) DTW = depth to water in feet (ft) below ground surface (bgs). The water levels are approximate.

▽ **DTW = 6.2 feet bgs**

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-5	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	--
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	--
Start/End Date	6/16/05 to 6/16/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	A. Hughes	Hole Depth	20.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0			98%	GP					0 to 0.3 feet: ASPHALT.
1									0.3 to 2.5 feet: GRAVELLY SILT (ML): dark grayish brown; 80% fines, nonplastic; 20% gravel, fine to coarse, subangular; trace fine sand; damp.
2						GP5-S-1.5			
3									2.5 to 20.0 feet: SILT with GRAVEL (ML); dark grayish brown; 90 to 95% fines, nonplastic; 5 to 10% gravel, fine; trace fine sand; very stiff; dry to damp.
4									
5			98%	GP					
6									
7									
8						GP5-S-8.0			
9									
10			100%	GP					
11									
12									@ 11.2 to 12.0 feet: Percentages change to 80% fines and 20% gravels.
13									
14	▽		100%	GP		GP5-S-14.0			@ 14.0 feet: Moist to wet.
15									
16				GW					
17									
18			50%	GP		GP5-W-18.0			
19									
20									Total Depth : 20.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed. 4) DTW = depth to water in feet (ft) below ground surface (bgs). The water levels are approximate.

▽ **DTW = 14.0 feet bgs**

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-6	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	--
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	--
Start/End Date	6/16/05 to 6/16/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	A. Hughes	Hole Depth	20.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			100%	GP					0 to 0.5 feet: CONCRETE.
1						GP6-S-1.0			0.5 to 20.0 feet: SANDY SILT with GRAVEL (ML); dark yellowish brown; 65% fines, nonplastic; 20% sand, fine; 15% gravel, fine to coarse, subangular to angular; micaceous; very stiff; dry to damp.
2									@ 0.5 to 1.0 feet: Greenish yellow staining.
3									
4									
5			100%	GP					
6									
7									@ 7.0 feet: Dark gray to dark brownish gray.
8			100%	GP		GP6-S-8.0			@ 8.0 to 11.5 feet: Percentage change to 60% fines, 15% sand, and 25% gravel.
9									
10									
11									
12			100%	GP					
13									
14									
15			100%	GP		GP6-S-14.5			@ 14.5 to 20.0 feet: Sluff in samplers is moist to wet while soil is dry to damp.
16	▽			GW					
17									
18			100%	GP		GP6-W-18.0			
19									
20									Total Depth : 20.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed. 4) DTW = depth to water in feet (ft) below ground surface (bgs). The water levels are approximate.

▽ **DTW = 15.9 feet bgs**

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Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-7	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	--
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	--
Start/End Date	6/16/05 to 6/16/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	A. Hughes	Hole Depth	16.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0			25%	GP					0 to 0.5 feet: CONCRETE.
1									0.5 to 1.5 feet: Void below concrete.
2						GP7-S-2.0			1.5 to 16.0 feet: SILTY SAND (SM); dark yellowish brown; 20 to 25% fines, low plasticity; 70% sand, fine; 5 to 10% gravel, fine, subrounded; micaceous; damp.
3									
4									
5			50%	GP					@ 5.0 feet: Damp to moist.
6									
7									
8						GP7-S-8.0			
9									
10			40%	GP					@ 10.0 feet: Wet.
11									
12	▽			GW					
13									
14						GP7-W-14.0			
15									
16									Total Depth : 16.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed. 4) DTW = depth to water in feet (ft) below ground surface (bgs). The water levels are approximate. 5) Becuase of the large void below the concrete the borehole was only abandoned to the top of the soil.

▽ **DTW = 12.3 feet bgs**

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Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number	Well Number	Sheet
0053.01.03	GP-8	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	--
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	--
Start/End Date	6/16/05 to 6/16/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	A. Hughes	Hole Depth	12.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0			60%	GP					0 to 0.5 feet: CONCRETE.
1									0.5 to 1.0 feet: GRAVELLY SAND (SW); dark yellowish brown; 10% fines; 60% sand, fine to coarse; 30% gravel, fine to medium, subangular; micaceous; damp.
2						GP8-S-1.5			0.9 to 9.7 feet: SANDY SILT (ML); dark brownish gray; 65% fines, non to low plasticity; 35% sand, fine; micaceous; damp to moist.
3									
4									
5			46%	GP					@ 5.0 feet: Trace organics and from approximately 9.6 feet to 9.8 feet below ground surface 100% organics.
6									
7									
8	▽			GW					
9									
10			100%	GP		GP8-W-10.0			9.8 to 11.6 feet: SILT (ML); dark grayish brown; 100% fines, nonplastic; trace fine sand; firm; moist to wet.
11									
12									11.6 to 12.0 feet: GRAVELLY SILT (ML); dark grayish brown; 70% fines, nonplastic; 10% sand, fine; 20% gravel, fine, subround; stiff; damp to moist.

Total Depth : 12.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed. 4) DTW = depth to water in feet (ft) below ground surface (bgs). The water levels are approximate.

▽ DTW = 7.7 feet bgs

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Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-9	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	--
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	--
Start/End Date	6/17/05 to 6/17/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	A. Hughes	Hole Depth	10.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1			28%	GP					0 to 0.5 feet: CONCRETE.
									0.5 to 1.5 feet: Void below concrete.
2						GP9-S-2.0			1.5 to 10.0 feet: SILTY SAND (SM); dark yellowish brown; 40% fines, low plasticity; 55% sand, fine; 5% gravel, medium, subangular; damp.
3									
4									
5			4%	GP					@ 4.9 feet: Wet.
6									
7									
8									
9									
10									Total Depth : 10.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed. 4) Becuase of the large void below the concrete the borehole was only abandoned to the top of the soil.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-10	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	–
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	–
Start/End Date	6/17/05 to 6/17/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	A. Hughes	Hole Depth	15.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0			75%	GP					0 to 0.4 feet: CONCRETE.
1									0.4 to 15.0 feet: SANDY SILT with GRAVEL (ML); dark yellowish brown; 60% fines, nonplastic; 25% sand, fine; 15% gravel, fine to coarse, subround to angular; micaceous; stiff; dry to damp.
2						GP10-S-1.5			@ 1.5 feet: Brownish gray.
3									
4			100%	GP					
5									
6									
7			100%	GP		GP10-S-7.0			@ 7.0 to 12.0 feet: Percentages 65% fines, 30% sand, and 5% gravel.
8									
9									
10			100%	GP					
11									
12									
13			100%	GP					
14						GP10-S-13.5			@ 14.0 feet: Moist to wet and percentages 65% fines, 30% sand, and 5% gravel.
15									Total Depth : 15.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed.

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Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0053.01.03	GP-11	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	--
Project Location	1231 S. Director Street, Seattle, WA 98108	Surface Elevation (feet)	--
Start/End Date	6/17/05 to 6/17/05	Northing	
Driller/Equipment	Boart Longyear/Geoprobe	Easting	
Geologist/Engineer	A. Hughes	Hole Depth	7.0-feet
Sample Method	Direct Push	Outer Hole Diam	2-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			95%	GP					0 to 0.4 feet: CONCRETE.
1									0.4 to 4.0 feet: SILTY SAND with GRAVEL (SM); dark yellowish brown; 30% fines, nonplastic; 55% sand, fine to coarse; 15% gravel, fine to coarse, subangular to angular; firm; dry.
2						GP11-S-2.0			
3									
4			100%	GP					4.0 to 7.0 feet: SANDY SILT (ML); dark yellowish brown with reddish brown mottling; 70% fines, nonplastic; 30% sand, fine; trace fine, subrounded gravel; damp to moist.
5									
6									
7			100%	GP		GP11-S-6.5			@ 6.5 feet: Moist to wet.
									Refusal at 7.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe. 3) Borings were not surveyed.

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Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number	Well Number	Sheet
8006.08.04	GP12	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/13/05 to 12/13/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	8.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1			50%	GP					0 to 0.5 feet: CONCRETE.
2									0.5 to 8.0 feet: GRAVELLY SAND with SILT (SW); 15% fines, nonplastic; 60% sand, fine to medium; 25% gravels, fine to medium, angular to subrounded; dry.
3						GP12-S-3.0			
4			100%	GP					@ 4.0 feet: Increase in courseness; sand, course; gravel, fine to medium.
5						GP12-S-5.0			@ 5.0 feet: Wet.
6									
7									
8									Total Depth: 8.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP13	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/14/05 to 12/14/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	10.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			75%	GP		GP13-S-1.0			0 to 0.5 feet: CONCRETE.
1									0.5 to 3.5 feet: SILTY SAND (SM); dark brown; 30% fines, nonplastic; 70% sand, fine, dense; damp.
2									
3									
4			75%	GP					3.5 to 4.5 feet: SILT with SAND (ML); dark brown; 85% fines, low plasticity; 15% sand, fine; moist.
5									4.5 to 8.0 feet: GRAVELLY SILT with SAND (ML); dark grayish brown; 70% fines, low to medium plasticity; 10% sand, fine; 20% gravels, fine to medium; moist.
6				GW		GP13-S-6.0			@ 6.0 feet: Wet.
7									
8						GP13-W-8.0			
9									
10									

Total Depth: 10.0 feet bgs

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number	Well Number	Sheet
8006.08.04	GP14	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/13/05 to 12/13/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	8.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0									0 to 0.5 feet: CONCRETE.
1			100%	GP					0.5 to 1.0 feet: SILTY SAND with GRAVEL (SM); brown; 30% fines, nonplastic; 60% sand, fine; 10% gravels, fine to medium, subangular; dry.
2									1.0 to 7.0 feet: SANDY SILT with GRAVEL (ML); yellowish brown; 70% fines, nonplastic; 20% sand, fine; 10% gravels, fine to medium, subangular; dry.
3						GP14-S-3.0			
4			100%	GP					
5									
6			100%	GP		GP14-S-6.0			
7									7.0 to 8.0 feet: SILTY SAND with GRAVEL (SM); light yellowish brown; 30% fines, nonplastic; 60% sand, fine to course; 10% gravels, fine to medium; wet.
8									Total Depth: 8.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP15	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/13/05 to 12/13/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	10.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1			100%	GP					0 to 0.5 feet: CONCRETE.
2									0.5 to 8.0 feet: SILTY SAND (SM); dark gray; 20% fines, nonplastic; 80% sand, fine; trace gravels, fine; damp.
3						GP15-S-3.0			
4			100%	GP					
5									@ 5.0 feet: Organic debris; black; wet.
6				GW		GP15-S-6.0			
7									
8						GP15-W-8.0			
9									
10									

Total Depth: 10.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number	Well Number	Sheet
8006.08.04	GP16	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/13/05 to 12/13/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	10.5-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
									0 to 0.5 feet: CONCRETE.
1			100%	GP		GP16-S-1.0			0.5 to 8.0 feet: SILTY SAND with GRAVEL (SM); gray with iron staining; 20% fines, nonplastic; 65% sand, fine; 15% gravels, fine to medium, angular to subrounded; damp.
2									
3									@ 3.0 feet: Color change to yellowish brown; dry.
4			100%	GP					@ 4.0 feet: Water in the top of the sample.
5						GP16-S-5.0			
6									@ 6.0 feet: Dry.
7			100%	GP					@ 7.0 feet: Wet.
8									8.0 to 10.5 feet: SANDY SILT with GRAVEL (ML); light gray; 70% fines, nonplastic, stiff; 20% sand, fine; 10% gravels, fine to medium, subrounded; dry.
9									
10									@ 9.5 feet: Color change to yellowish brown.
									Total Depth: 10.5 feet bgs. Hit refusal.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP17	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/13/05 to 12/13/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	8.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			100%	GP					0 to 0.5 feet: CONCRETE.
1						GP17-S-1.0			0.5 to 7.0 feet: SANDY SILT with GRAVEL(ML); dark brown; 70% fines, nonplastic; 20% sand, fine; 10% gravels, fine to medium; angular to subrounded; damp.
2									
3									
4									
			100%	GP					
5									
6						GP17-S-6.0			@ 6.0 feet: Color change to gray; wet.
7									7.0 to 8.0 feet: SANDY SILT (ML); yellowish brown with iron staining; 70% fines, nonplastic; 30% sand, fine to medium; damp.
8									Total Depth: 8.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number	Well Number	Sheet
8006.08.04	GP18	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/13/05 to 12/13/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	4.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1			100%	GP		GP18-S-1.0			0 to 0.5 feet: CONCRETE.
2									0.5 to 4.0 feet: SILTY SAND with GRAVEL (SM); light gray; 20% fines, nonplastic; 70% sand, fine, dense; 10% gravels, fine to medium; odor; damp.
3			100%	GP					@ 2.0 feet: Color change to dark brown; dry.
4									@ 2.5 feet: Color change to yellowish brown.

Total Depth: 4.0 feet bgs. Hit refusal.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number	Well Number	Sheet
8006.08.04	GP19	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/13/05 to 12/13/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	9.5-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			100%	GP					0 to 0.5 feet: CONCRETE.
1						GP19-S-1.0 GPDUP-S-1.0			0.5 to 2.0 feet: SILTY SAND with GRAVEL (SM); gray with brown mottling; 30% fines, nonplastic; 60% sand, fine; 10% gravels, fine to medium, angular to subrounded; damp.
2									2.0 to 8.0 feet: SANDY SILT (ML); dark brown; 60% fines, low plasticity, stiff; 40% sand, fine; damp to moist.
3									
4			100%	GP					
5									@ 5.0 feet: Trace gravels, fine to medium.
6									
7						GP19-S-7.0			@ 7.0 feet: Wet.
8			100%	GP					8.0 to 9.5 feet: SILTY SAND with GRAVEL (SM); yellowish brown; 30% fines, nonplastic; 60% sand, fine; 10% gravels, fine to medium; dry.
9									

Total Depth: 9.5 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number	Well Number	Sheet
8006.08.04	GP20	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/14/05 to 12/14/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	8.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			80%	GP					0 to 0.5 feet: CONCRETE.
1						GP20-S-1.0			0.5 to 1.5 feet: SILTY SAND with GRAVEL (SM); brownish gray; 20% fines, nonplastic; 70% sand, fine; 10% gravels, fine to medium, subrounded; slight odor; damp to moist.
2									1.5 to 8.0 feet: SILTY SAND (SM); dark blackish brown; 35% fines, nonplastic; 65% sand, fine; trace organics at top of sample; slight odor; moist
3									
4			100%	GP					
5									Grades to sandy silt.
6						GP20-S-6.0			
7									@ 7.0 feet: Wet.
8									Total Depth: 8.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP21	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/14/05 to 12/14/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	8.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			50%	GP					0 to 0.5 feet: CONCRETE.
1						GP21-S-1.0			0.5 to 4.0 feet: SILTY SAND with GRAVEL (SM); light yellowish brown; 20% fines, nonplastic; 70% sand, fine; 10% gravels, fine, subangular; dry to damp.
2									@ 2.0 feet: Color change to gray; damp.
3									
4									
			100%	GP					4.0 to 8.0 feet: SILTY SAND (SM); dark blackish brown; 35% fines, low to medium plasticity; 65% sand, fine; moist.
5									
6									
7						GP21-S-6.5			@ 7.0 feet: Wet.
8									

Total Depth: 8.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP22	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/13/05 to 12/13/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	12.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			100%	GP					0 to 0.5 feet: CONCRETE.
1						GP22-S-1.0			0.5 to 12.0 feet: SILTY SAND with GRAVEL (SM); brown; 20% fines, nonplastic; 70% sand, fine; 10% gravels, fine to medium, angular to subrounded; dry.
2									
3									@ 3.0 feet: Color change to yellowish brown.
4			100%	GP					
5						GP22-S-5.0			@ 5.0 feet: Color change to gray; increase in density.
6			100%	GP					
7									
8			100%	GP					
9									
10			100%	GP		GP22-S-10.0			@ 10.0 feet: Color change to brown; wet.
11									@ 11.0 feet: Color change to yellowish brown; dry.
12									

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP23	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/14/05 to 12/14/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	11.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1			100%	GP		GP23-S-1.0			0 to 0.5 feet: CONCRETE.
2									0.5 to 11.0 feet: SILTY SAND with GRAVEL (SM); light yellowish brown; 20% fines, nonplastic; 70% sand, fine, loose; 10% gravels; dry.
3									@ 2.0 feet: Color change to gray; dense.
4			100%	GP					
5									
6			100%	GP					
7						GP23-S-7.0			
8			100%	GP					
9									
10			100%	GP					
11						GP23-S-10.5			

Total Depth: 11.0 feet bgs. Hit refusal.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number	Well Number	Sheet
8006.08.04	GP24	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/14/05 to 12/14/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	10.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0									0 to 0.5 feet: CONCRETE.
1			100%	GP					0.5 to 5.5 feet: SILTY SAND with GRAVEL (SM); gray; 20% fines, nonplastic; 70% sand, fine; 10% gravels, fine to medium, subangular to subrounded; dry.
2									
3						GP24-S-3.0 GPDUP-S-3.0			
4			100%	GP					
5									
6									5.5 to 6.5 feet: SANDY SILT (ML); gray; 70% fines, nonplastic, very stiff; 30% sand, fine; dry.
7			100%	GP		GP24-S-6.5			6.5 to 9.5 feet: SILTY SAND with GRAVEL (SM); gray; 20% fines, nonplastic; 70% sand, fine; 10% gravels, fine to medium, subangular to subrounded; dry.
8									
9						GP24-S-9.0			
10									9.5 to 10.0 feet: SANDY SILT (ML); gray; 70% fines, nonplastic, very stiff; 30% sand, fine; dry.
									Total Depth: 10.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP25	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/12/05 to 12/12/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	10.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0			100%	GP					0 to 0.5 feet: ASPHALT.
1						GP25-S-1.0			0.5 to 7.0 feet: SAND with GRAVEL (SW); light gray; trace fines; 85% sand, fine, dense; 15% gravels, fine to medium, angular to subrounded; dry.
2									
3			100%	GP					
4									
5									
6									
7			100%	GP		GP25-S-7.0			7.0 to 10.0 feet: SANDY SILT (ML); brownish gray; 70% fines; 30% sand, fine to medium; wet.
8									
9									
10									

Total Depth: 10.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP26	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/12/05 to 12/12/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	9.5-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
									0 to 0.5 feet: ASPHALT.
1			100%	GP		GP26-S-1.0			0.5 to 9.5 feet: SAND with GRAVEL (SW); light gray with spots of brownish yellow; 85% sand, fine, dense; 15% gravel, fine to medium; dry.
2									
3									
4			100%	GP					
5									
6									@ 6.0 feet: Color change to spots of greenish yellow.
7			100%	GP		GP26-S-7.0			
8			100%	GP					
9									
						GP26-S-9.5			Total Depth: 9.5 feet bgs. Hit refusal.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP27	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/12/05 to 12/12/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	13.5-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0			100%	GP					0 to 0.5 feet: ASPHALT.
1						GP27-S-1.0			0.5 to 13.5 feet: SAND with GRAVEL (SW); light gray; trace fines; 85% sand, fine, dense; 15% gravels, fine to medium, angular to subrounded; dry.
2									
3									
4			100%	GP					
5									
6									@ 6.0 feet: Color change to slight pinkish color with spots of yellow.
7						GP27-S-6.5			
8			100%	GP					@ 8.0 feet: Decrease in courseness; gravels, fine.
9									
10									
11			100%	GP					
12									
13			100%	GP					
						GP27-S-13.0			

Total Depth: 13.5 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP28	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/12/05 to 12/12/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	9.5-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0									0 to 0.5 feet: ASPHALT
1			100%	GP		GP28-S-1.0			0.5 to 4.0 feet: SILTY SAND with GRAVEL (SM); light brownish gray; 30% fines, nonplastic; 60% sand, fine; 10% gravels, fine to medium, angular to subrounded; damp to moist.
2									
3			100%	GP					
4									
5									4.0 to 9.5 feet: SAND with GRAVEL (SW); light gray with spots of brown; trace fines; 85% sand, fine; 15% gravels, fine to medium, angular to subrounded; dry.
6									
7			100%	GP		GP28-S-7.0			
8									@ 7.5 feet: Moist to Wet.
9									

Total Depth: 9.5 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP29	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/12/05 to 12/12/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	8.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
0									0 to 0.5 feet: ASPHALT.
1			100%	GP		GP29-S-1.0			0.5 to 2.0 feet: GRAVELLY SAND with SILT (SW); greenish gray; 5% fines, nonplastic; 70% sand, fine; 25% gravels, fine to medium; damp.
2									
3									2.0 to 6.5 feet: SILTY SAND (SM); dark brown; 30% fines, nonplastic; 70% sand, fine; damp.
4			100%	GP					
5									
6						GP29-S-6.0			
7									6.5 to 8.0 feet: SANDY SILT with GRAVEL (ML); brown; 60% fines, medium plasticity; 30% sand, fine to medium; 10% gravels, fine; trace organics and woody debris; wet.
8									

Total Depth: 8.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP30	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/12/05 to 12/12/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	8.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			100%	GP					0 to 0.5 feet: ASPHALT.
1						GP30-S-1.0			0.5 to 8.0 feet: SILTY SAND (SM); greenish gray; 30% fines, nonplastic; 70% sand, fine; trace gravels, fine; damp.
2									
3									
4									@ 3.5 feet: Color change to dark brown; some organics.
			100%	GP					
5									
6						GP30-S-6.0			
7									@ 6.5 feet: Color change to blackish brown; wet.
8									Total Depth: 8.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP31	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/12/05 to 12/12/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	8.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
			50%	GP					0 to 0.5 feet: ASPHALT.
1						GP31-S-1.0			0.5 to 3.0 feet: SILTY SAND with GRAVEL (SM); greenish gray; 20% fines, nonplastic; 70% sand, fine; 10% gravels, fine; damp.
2									
3									3.0 to 8.0 feet: SILTY SAND (SM); dark brown; 20% fines, nonplastic; 80% sand, fine; damp to moist.
4			100%	GP					
5									
6						GP31-S-6.0			
7									@ 6.5 feet: Color change to blackish brown; wet.
8									7.5 to 8.0 feet: WOODY DEBRIS.
									Total Depth: 8.0 feet bgs.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
8006.08.04	GP32	1 of 1

Project Name	Precision Engineering	TOC Elevation (feet)	
Project Location	1231 S. Director Street, Seattle, Washington 98108	Surface Elevation (feet)	
Start/End Date	12/14/05 to 12/14/05	Northing	
Driller/Equipment	Cascade Drilling/Geoprobe	Easting	
Geologist/Engineer	M. Gibson	Hole Depth	3.0-feet
Sample Method	Direct Push	Outer Hole Diam	3 1/4-inch

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1			100%			GP32-S-1.0			0 to 0.5 feet: CONCRETE.
2									0.5 to 3.0 feet: SILTY SAND with GRAVEL (SM); orangish brown; 20 % fines, nonplastic; 70% sand, fine, dense; 10% gravels, fine to medium; odor; damp.
3									@ 1.0 feet: Color change to yellowish brown; dry.

Total Depth: 3.0 feet bgs. Hit refusal.

NOTES: 1) Abandon borehole with 3/8-inch bentonite chips hydrated with potable water. 2) GP = geoprobe.

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2014/2015 Investigation

Boring & Well Construction Log

Kennedy/Jenks Consultants

BORING LOCATION: Near SE corner of site		**Well Name**	MW9
DRILLING COMPANY: Holt	DRILLER	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Hollow Stem Auger	DRILL BIT(S) SIZE: 9-inch	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: ground surface	TOTAL DEPTH: 46.0 ft. bgs
BLANK CASING: 2" Schedule 40 PVC Pipe	FROM 0 TO 31 FT.	DATE STARTED: 8/16/14	DATE COMPLETED: 8/16/14
SLOTTED CASING: 2" Schedule 40 PVC Pipe 0.010" Slots	FROM 31 TO 36 FT.	INITIAL WATER DEPTH (FT): 7.0	
SIZE AND TYPE OF FILTER PACK: Colorado 10/20 Silica Sand	FROM 29 TO 38 FT.	LOGGED BY: DKM	
SEAL: 3/8" Bentonite Chips	FROM 1 TO 29 FT. 38 46	SAMPLING METHODS: Split spoon	WELL COMPLETION: ■ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: Concrete	FROM 0 TO 1 FT.		

SAMPLES TYPE	RECOV. (FEET)	PENETR. RESIST. BLOWS/6"	DEPTH (FEET)	SAMPLE NUMBER	PID	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Asphalt and crushed rock base
							Silty SAND Medium brown with gray, fine sand with ~30% silt, trace gravel, sandier intervals below ~5' bgs, medium dense, moist, no odor, no sheen
SS	1	1 3 4			0.0	SM	
			5				
SS	1.3	0 1 1			0.3		
						ML/ CL	**Clayey SILT** Brown, clayey silt with trace sand, ~1" of peat at top of unit, medium stiff, medium plasticity, moist, no odor, no sheen
SS	1.3	1 3 2			0.3		**Silty SAND** Brown, fine sand with 30% silt, discrete thinly-bedded intervals with increased sand or silt content, medium dense, wet, no odor, no sheen
			10				
SS	1.5	1 1 2			0.2	SM	
SS	1.5	1 1 2			0.0		
			15				
SS	1.3	1 1 6			0.0	SP/ SM	**Poorly graded SAND with silt** Dark gray to brown, fine to medium sand with 15% silt, silt content decreases to 17.5 ft. bgs and becomes siltier below, medium dense, wet, no odor, no sheen
SS	1.3	0 1 12		MW9-18-19	0.0	SM	**Silty SAND with gravel** Dark gray, silty fine sand with abundant shell fragments, ~3-inch coarse gravel layer with grains over 1 in. diameter at ~19 feet bgs, medium dense, wet, "tideflats" odor, no sheen
			20				
SS	0.5	50-5			0.0	SP/ SM	**Poorly graded SAND with silt and gravel** Greenish gray transitioning to medium gray at 23 ft. bgs, silty fine sand with 5-15% gravel, 20-30% silt, glacial till, dense to very dense, moist, no odor, no sheen

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Boring & Well Construction Log

Kennedy/Jenks Consultants

Project Name Ecology Precision Engineering **Project Number** 1396024.00 **Well Name** MW9

SAMPLES TYPE	SAMPLES RECOV. (FEET)	SAMPLES PENETR. RESIST. BLOWS/6"	DEPTH (FEET)	SAMPLE NUMBER	PID	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Poorly graded SAND with silt and gravel
SS	1	25 50			0.0		Greenish gray transitioning to medium gray at 23 ft. bgs, silty fine sand with 5-15% gravel, 20-30% silt, glacial till, dense to very dense, moist, no odor, no sheen ***(Continued)***
SS	0	50-3	25				
						SP/SM	
SS	0.8	35 50-5			0.0		brown, sandier than above and slighly less dense, faint odor, no sheen
SS	1	41 50-5	30		0.0		abrupt color change to gray, angular gravel below ~31' bgs, no odor, no sheen
						SW	**Well-graded SAND with gravel**
SS	1	45 50		MW9-32.5-33.5	0.0		Gray, medium to coarse sand with gravel, trace silt, medium dense, wet, no odor, no sheen
						SP/SM	**Poorly graded SAND with silt**
SS	1	50-5	35		0.0		Medium brown, medium to fine sand with up to 15% silt and 10% gravel (texture varies locally), medium dense, wet, no odor, no sheen
						SM	
							Silty SAND with gravel
							Brown, silty fine sand with gravel, glacial till, dense, moist, no odor, no sheen
						SP	**Poorly graded SAND**
SS	0.7	50		MW9-38-39	0.0		Gray, medium sand with trace silt and gravel, medium dense, wet, no odor, no sheen
							Poorly graded SAND with silt and gravel
SS	0.7	41 50-1	40		0.0		Gray to greenish gray, medium to fine sand with 20% silt and up 15% gravel, glacial till, dense, moist, no odor, no sheen
						SP/SM	
SS	0.4	50			0.0		
SS	1	25 50-3	45		0.0		

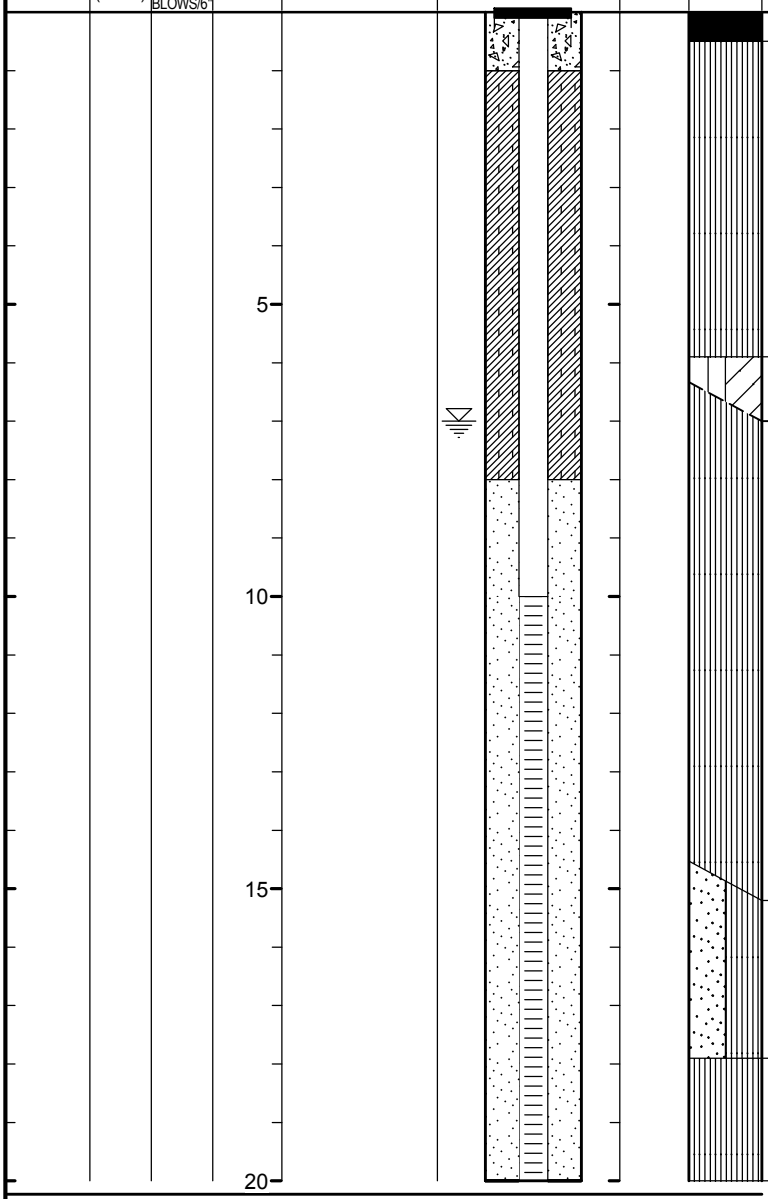
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(6-87) (3-88) (8-90)

Boring & Well Construction Log

Kennedy/Jenks Consultants

BORING LOCATION: Near SE corner of site		**Well Name**	MW10
DRILLING COMPANY: Holt	DRILLER:	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Hollow Stem Auger	DRILL BIT(S) SIZE: 9-inch	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: ground surface	TOTAL DEPTH: 20.0 ft. bgs
BLANK CASING: 2" Schedule 40 PVC Pipe	FROM 0 TO 10 FT.	DATE STARTED: 8/16/14	DATE COMPLETED: 8/16/14
SLOTTED CASING: 2" Schedule 40 PVC Pipe 0.010" Slots	FROM 10 TO 20 FT.	INITIAL WATER DEPTH (FT): 7.0	
SIZE AND TYPE OF FILTER PACK: Colorado 10/20 Silica Sand	FROM 8 TO 20 FT.	LOGGED BY: DKM	
SEAL: 3/8" Bentonite Chips	FROM 1 TO 8 FT.	SAMPLING METHODS: Split spoon	WELL COMPLETION: ■ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: Concrete	FROM 0 TO 1 FT.		



SAMPLES TYPE	SAMPLES RECOV. (FEET)	SAMPLES PENETR. RESIST. BLOWS/6"	DEPTH (FEET)	SAMPLE NUMBER	WELL CONSTRUCTION	PID	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
									Asphalt and crushed rock base
								SM	**Silty SAND** Medium brown with gray, fine sand with ~30% silt, trace gravel, sandier intervals below ~5' bgs, medium dense, moist, no odor, no sheen
			5					ML/ CL	**Clayey SILT** Brown, clayey silt with trace sand, ~1" of peat at top of unit, medium stiff, medium plasticity, moist, no odor, no sheen
								SM	**Silty SAND** Brown, fine sand with 30% silt, discrete thinly-bedded intervals with increased sand or silt content, medium dense, wet, no odor, no sheen
			10						
			15					SP/ SM	**Poorly graded SAND with silt** Dark gray to brown, fine to medium sand with 15% silt, silt content decreases to 17.5 ft. bgs and becomes siltier below, medium dense, wet, no odor, no sheen
								SM	**Silty SAND with gravel** Dark gray, silty fine sand with abundant shell fragments, ~3-inch coarse gravel layer with grains over 1 in. diameter at ~19 feet bgs, medium dense, wet, "tideflats" odor, no sheen
			20						

NOTES

1. Lithology based on MW-9; MW-9 and MW-10 installed at same location as a shallow and deep well pair.
2. Top of glacial till at ~20 ft. bgs based on lithology from MW-9.

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SHEET 1 OF 1

Boring & Well Construction Log

Kennedy/Jenks Consultants

BORING LOCATION: NE part of site in driveway		**Well Name**	MW11
DRILLING COMPANY: Holt	DRILLER:	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Hollow Stem Auger	DRILL BIT(S) SIZE: 9-inch	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: ground surface	TOTAL DEPTH: 20.0 ft. bgs
BLANK CASING: 2" Schedule 40 PVC Pipe	FROM 0 TO 10 FT.	DATE STARTED: 8/16/14	DATE COMPLETED: 8/16/14
SLOTTED CASING: 2" Schedule 40 PVC Pipe 0.010" Slots	FROM 10 TO 20 FT.	INITIAL WATER DEPTH (FT): 6.0	
SIZE AND TYPE OF FILTER PACK: Colorado 10/20 Silica Sand	FROM 8 TO 20 FT.	LOGGED BY: DKM	
SEAL: 3/8" Bentonite Chips	FROM 1 TO 8 FT.	SAMPLING METHODS: Split spoon	WELL COMPLETION: ■ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: Concrete	FROM 0 TO 1 FT.		

SAMPLES TYPE	RECOV. (FEET)	PENETR. RESIST. BLOWS/6"	DEPTH (FEET)	SAMPLE NUMBER	WELL CONSTRUCTION	PID	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
									Asphalt and crushed rock base
									Silty SAND Medium brown transitioning to dark gray at 3 ft. bgs, silty fine sand with up to 30% silt, "shiny" surface appearance to some grains below 3 ft. bgs, up to 40% silt locally below 5 ft. bgs, medium dense, moist, no odor, no sheen
SS	1	2 4 5				0.6		SM	
			5						
SS	1.5	2 1 4				0.0		Pt	**PEAT** Brown, woody material (2 in.), soft
						0.0		ML	**Sandy SILT** Medium gray, silt with 40% fine sand and some woody material, trace gravel, medium stiff, wet, no odor, no sheen
SS	1.5	1 1 1				0.0		Pt	**PEAT** Brown, woody material (1 in.), soft
			10					CL/ ML	**Silty CLAY** Medium to light gray transitioning to brownish gray below 9 ft. bgs, silty clay with some root-like woody material, medium stiff above 9 ft. bgs then moderately soft, medium to high plasticity, moist to wet, no odor, no sheen
SS	1.5	1 0 0				0.0			
SS	1.5	1 1 0				0.0		ML/ CL	**Clayey SILT** Medium brown, medium stiff, medium to high plasticity, moist to wet, no odor, no sheen
			15						
SS	1.5	1 3 4				0.0		ML	**SILT with sand** Medium brown, silt with some fine sand and clay, becomes sandier with depth, medium stiff, low plasticity, wet, no odor, no sheen
SS	1	7 27 36		MW11-18-19 DUP MW100		0.0		SP	**Poorly graded SAND** Gray, medium sand, medium dense, wet, no odor, no sheen
SS	1	34 42				0.0		SP	**Poorly graded SAND** Greenish gray, fine to medium sand with up to 10% silt and 10% gravel, weathered glacial till, medium dense, moist to wet, no odor, no sheen
			20					SP/ SM	**Poorly graded SAND with silt** Greenish gray, medium to fine sand with 15-20% silt and 5-10% gravel, glacial till, dense, moist, no odor, no sheen

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Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: South side of current facility building		**Boring Name**	SB1
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 7.0 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/8/14	DATE COMPLETED: 8/8/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 7 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Solid	**Asphalt and crushed rock base**
	4.5							**Well-graded GRAVEL with silt and sand** Gray, glacial till, dry, no odor, no sheen
			5	SB1-5	0.0		GW/GM	moist at 5 ft. bgs
	1.5							Drilling refusal at 7 ft. bgs

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

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(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: South side of current facility building		**Boring Name**	SB2
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 4.8 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/8/14	DATE COMPLETED: 8/8/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 4.8 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Solid	**Asphalt and crushed rock base** Asphalt, gravel, road grade material
	4.2				0.0		GW/GM	**Well-graded GRAVEL with silt and sand** Gray, glacial till, moist Run 1 refusal at 4.8 ft. bgs; Run 2 refusal at 3.5 ft bgs

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface
3. No soil samples analyzed due to low recovery

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Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: South East side of current facility building		**Boring Name**	SB3
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 20.0 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/8/14	DATE COMPLETED: 8/8/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 20 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
	4.5		0	SB3-2	91		Solid	**Asphalt and crushed rock base** odor, sheen at 2 ft. bgs
			5		1.0			**Sandy SILT** Brown to brown gray, 60 % silt, 40% sand, some clay lenses, stiff at top becoming soft towards bottom, moist, no odor, no sheen
	3			SB3-8			ML	
			10		0.0			
	4.8						CL/ML	**Silty CLAY** Brown to brown gray, firm, medium plasticity, no odor, no sheen
				SB3				
			15		0.1			**Silty SAND with gravel** Light gray to gray, unable to cut with a knife in places, very dense, moist, no odor, no sheen
	5						SM	wet from 15 ft. to 15.6 ft. bgs.
			20		0.2			

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface

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(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: South East side of current facility building		**Boring Name**	SB4
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 20.0 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/7/14	DATE COMPLETED: 8/7/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 20 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Solid	**Asphalt and crushed rock base**
	4		5	SB4-5	0.0			**Well-graded SAND with silt** Brown to gray, very fine to fine sand, 20% silt, 20% clay, dense, dry to moist, no odor, no sheen
	3.8		10	SB4	0.0		SW/SM	Soft, wet at 10 ft. bgs
	5		15		0.0			
	5		20	SB4-20	0.0		SM	**Silty SAND** Red brown to brown mottled with gray, soft, wet, no odor, no sheen
							CL	**Lean CLAY** Brown mottled with gray, some shell fragments, stiff, medium, moist, no odor, no sheen
							SW	**Well-graded SAND with gravel** Gray, glacial till, moist to wet, no odor, no sheen

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: East side of current facility building	**Boring Name** SB5
DRILLING COMPANY: Cascade Drilling, L.P. / DRILLER: Kasey Goble	**Project Name** Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String / DRILL BIT(S) SIZE: 2.25	**Project Number** 1396024.00
ISOLATION CASING: N/A — FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs / TOTAL DEPTH: 23.5 ft. bgs
BLANK CASING: N/A — FROM N/A TO N/A FT.	DATE STARTED: 8/8/14 / DATE COMPLETED: 8/8/14
SLOTTED CASING: N/A — FROM N/A TO N/A FT.	EASTING (FT): N/A / NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A — FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey
SEAL: 3/8" Bentonite chips (hydrated in place) — FROM 0 TO 23.5 FT.	SAMPLING METHODS: Continuous Core / WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A — FROM N/A TO N/A FT.	

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Solid	**Asphalt and crushed rock base**
	3.5							**Silty SAND** Dark brown to dark gray, up to 35% silt, dense, moist, no odor, no sheen
			5		0.0		SM	
	4.5							Wood debris with clay at 7.5 ft. bgs (2 inches) Wood debris with clay at 8.0 ft. bgs (1 inch)
			10	SB5-11	0.0		GW/GM	**Well-graded GRAVEL with silt and sand** Brown, well graded gravel with silt and very fine to fine sand, wet, no odor, no sheen
	5			SB5				**Silty SAND** Reddish brown to reddish gray, silty sand with zones of sandy silt, medium stiff to stiff, moist, no odor, no sheen
			15		0.0		SM	
	5							
			20		0.0		SM	**Silty SAND with gravel** Light gray to green gray, abundant shell fragments, hard, dry, no odor, no sheen
	3.5						SW	**Well-graded SAND** Light gray to green gray, well graded fine sand, 5% to 10% silt, trace gravel, brittle, hard, dry, no odor, no sheen
					0.0		SP	**Poorly graded SAND** Light brown, poorly graded fine sand, very dense, dry, no odor, no sheen
								Drilling refusal @ 23.5' bgs

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

F-40.1
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Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: East side of current facility building	**Boring Name** SB6
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25
	Project Name Ecology Precision Engineering
	Project Number 1396024.00

	FROM	TO	FT.
ISOLATION CASING: N/A	N/A	N/A	
BLANK CASING: N/A	N/A	N/A	
SLOTTED CASING: N/A	N/A	N/A	
SIZE AND TYPE OF FILTER PACK: N/A	N/A	N/A	
SEAL: 3/8" Bentonite chips (hydrated in place)	0	20	
GROUT: N/A	N/A	N/A	

ELEVATION AND DATUM: bgs	TOTAL DEPTH: 20.0 ft. bgs
DATE STARTED: 8/8/14	DATE COMPLETED: 8/8/14
EASTING (FT): N/A	NORTHING (FT): N/A
LOGGED BY: J. Sawdey	
SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Solid	**Asphalt and crushed rock base**
	4.0						SM	**Silty SAND** Brown to dark brown mottled with gray, poorly graded fine sand, up to 40% silt, dense, moist, no odor, no sheen
			5		0.6			**Sandy clayey SILT** Brown to dark brown mottled with gray, stiff, medium, moist, no odor, no sheen
	4.5						ML/CL	
			10		0.0			
	5			SB6				
			15	SB6-16	0.0			**Silty SAND** Brown, silty sand, soft, wet, no odor, no sheen
	5						SM	
							SM	**Silty SAND with gravel** Gray to green, well graded silty sand with gravel, abundant shells, hard, dry, no odor, no sheen
			20		0.0			

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface

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F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: East side of current facility building	**Boring Name** SB7
DRILLING COMPANY: Cascade Drilling, L.P. / DRILLER: Kasey Goble	**Project Name** Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String / DRILL BIT(S) SIZE: 2.25	**Project Number** 1396024.00
ISOLATION CASING: N/A — FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs / TOTAL DEPTH: 20.0 ft. bgs
BLANK CASING: N/A — FROM N/A TO N/A FT.	DATE STARTED: 8/8/14 / DATE COMPLETED: 8/8/14
SLOTTED CASING: N/A — FROM N/A TO N/A FT.	EASTING (FT): N/A / NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A — FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey
SEAL: 3/8" Bentonite chips (hydrated in place) — FROM 0 TO 20 FT.	SAMPLING METHODS: Continuous Core / WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A — FROM N/A TO N/A FT.	

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Solid	**Asphalt and crushed rock base**
	3.5							**Silty SAND** Brown, gray brown, very fine to fine sand, silt, some clay, dense, moist, no odor, no sheen
			5		0.3		SM	
	4.5							Woody debris layer from 7.5 ft. to 7.8 ft. bgs Clay lens from 7.8 ft. to 8.0 ft. bgs
			10	SB7-11	0.0		SM	**Silty SAND with gravel** Light brown to brown with gray, silty sand with gravel, well graded, soft, wet, no odor, no sheen
	5						ML	**Sandy SILT** Brown, stiff, moist, no odor, no sheen
			15		0.0			
	5			SB7 SB7-19			SM	**Silty SAND with gravel** Brown to light brown with gray, sand with up to 30% silt, up to 15% gravel, gravel grains up to 0.25 in. diameter, moist to wet, no odor, no sheen
			20		0.0			Greenish gray, silty sand with abundant gravel and shells at 19 ft. bgs, hard, dry, no odor, no sheen

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: East side of current facility building		**Boring Name**	SB8
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 20.0 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/8/14	DATE COMPLETED: 8/8/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 20 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Solid	**Asphalt and crushed rock base**
	4.5							**Silty SAND** Brown to brown with gray, silty clayey sand, trace gravel, dense, moist to wet, no odor, no sheen
			5		0.0		SM	
	5							Woody debris layer at 8 ft. bgs
								Clay lens
			10		0.0			**Silty CLAY** Brown, stiff, moist, wet in places, no odor, no sheen
	5							
			15	SB8-16	0.0		CL/ML	
	5							
			20		0.0		GW/GM	**Well-graded GRAVEL with silt and sand** Gray, well graded gravel with silt and fine sand, glacial till, hard, very dense, no odor, no sheen

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface
3. Groundwater not sampled at this location

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

F-40.1
(6-87) (3-88) (8-90)

SB9 not drilled

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: North side of current facility building		**Boring Name**	SB10
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 14.5 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/8/14	DATE COMPLETED: 8/8/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 14.5 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Solid	**Asphalt and crushed rock base**
	4.5						GW/GM	**Well-graded GRAVEL with silt and sand** Gray to blue gray, moist, no odor, no sheen
			5		0.0			
				SB10-7			SP	**Poorly graded SAND** Gray to dark gray, dense, wet, no odor, no sheen
	4.5							**Well-graded GRAVEL with silt and sand** Light gray to dark gray, wet, no odor, no sheen
				SB10				
			10		0.0		GW/GM	
	3.5							
					0.0			

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface
3. Groundwater grab sample SB10 collected at 10 ft. bgs

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: South-bound shoulder of 14th Avenue South		**Boring Name**	SB11
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 30.0 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/7/14	DATE COMPLETED: 8/7/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 30 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
			0				Solid	**Asphalt and crushed rock base**
	4						ML	**SILT** Dark red to brown transitioning to gray, silt with 10% sand and trace gravel, moist, no odor, no sheen Blue gray, clay lens
	4.8		5	SB11	0.0		SM	**Silty SAND** Light brown mottled with gray, up to 30% silt, trace gravel, wet, no odor, no sheen
			10	SB11-10	0.0		CL/ML	**Silty CLAY** Light brown mottled with gray, clay is lean in places, some organic material, medium plasticity, no odor, no sheen
	5						SM	**Silty SAND** Grades to silty sand with clay, dense, moist, no odor, no sheen
			15		0.0			Medium sand layer (2.5 in.), wet
	5						ML	**SILT** Light brown mottled with gray, Silt with up to 10% sand, trace clay, no odor, no sheen
	0		20		0.0			
			25		0.0			
	3.5						ML	**SILT with sand** Green mottled with gray, becomes sandier with depth, abundant shell fragments, wet, no odor, no sheen
			30	SB11-30	0.0			

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface
3. Groundwater grab sample SB11 collected at 7 ft. bgs

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: South-bound shoulder of 14th Avenue South		**Boring Name**	SB12
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 20.0 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/7/14	DATE COMPLETED: 8/7/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 20 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
							Solid	**Asphalt and crushed rock base**
	4						CL/ML	**Sandy silty CLAY** Gray to blue gray, dense, low, moist, no odor, no sheen
			5		0.4			**Sandy SILT** Brown to red brown mottled with gray, trace clay with thin clay stringers, local trace gravel, trace wood, medium dense, moist, no odor, no sheen
	4							Wet Clay lens from 8 ft. to 10 ft.
			10	SB12	0.0			
				SB12-12			ML	
	5							
			15		0.0			
	2.5							Less dense, soft
			20		0.0			

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: South-bound shoulder of 14th Avenue South		**Boring Name**	SB13
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 20.0 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/7/14	DATE COMPLETED: 8/7/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 20 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
	4.5		0				Solid	**Asphalt and crushed rock base**
			5		0.0		SP	**Poorly graded SAND with gravel** Brown mottled with gray, moist, no odor, no sheen
	4			SB13 SB13-9			CL	**Lean CLAY** Brown to red brown mottled with gray, lean clay with trace sand, medium stiff, moist, no odor, no sheen
			10		0.0		SM	**Silty SAND** Dark gray to dark brown, coarser sand at base, wet, no odor, no sheen
	5							**Clayey SILT with sand** Dark gray to dark brown, up to 40% clay, up to 25% sand, medium stiff transitioning to stiff, moist to wet, no odor, no sheen
			15		0.0		ML/CL	
	4							
			20		0.0			

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: South-bound shoulder of 14th Avenue South		**Boring Name**	SB14
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Kasey Goble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Direct Push Geoprobe MC-5 Drill String	DRILL BIT(S) SIZE: 2.25	**Project Number**	1396024.00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 30.0 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 8/7/14	DATE COMPLETED: 8/7/14
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: 3/8" Bentonite chips (hydrated in place)	FROM 0 TO 30 FT.	SAMPLING METHODS: Continuous Core	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME	PID / ST	LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
	2						Solid	**Asphalt and crushed rock base**
	4.5		5	SB14-6	44.5 53.1		SM	**Silty SAND** Brown gray to gray, very fine to medium sand, moist to wet
				SB14			CL/ML	**Sandy silty CLAY** Brown gray to gray, high organic (black) in part, stiff, medium plasticity, moist
	5		10		1.2		SP	**Poorly graded SAND** Brown to red brown, fine to medium sand, trace silt, wet
	2.5		15		0.0		ML	**SILT with sand** Brown, silt with 15% to 20% sand, trace clay, stiff, moist sand lens at 17 ft. bgs
	0		20		0.0			
	5		25		0.0			
			30		0.0		ML	**Sandy SILT** Olive green, sandy silt, abundant shells, moist to wet
							CL	**Lean CLAY** Blue green mottled with gray, abundant shells, hard, moist

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface

KJ PNW BORING N&E AUG 2014 DIRECT PUSH.GPJ KJ PNW.GDT 6/25/15

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: West side of 14TH AVE S		**Boring Name**	SB15
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: James Gobble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Hollow-stem Auger	DRILL BIT(S) SIZE: 8-inch	**Project Number**	1396024*00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 50.5 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 4/15/15	DATE COMPLETED: 4/15/15
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J.Sawdey / J. Schwarz	
SEAL: N/A	FROM N/A TO N/A FT.	SAMPLING METHODS: Split spoon	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
			0					Air Vac clearance to 5-feet. Fill material with gravel, coarse sands, and concrete debris.
			5					
SS	1.5	8 10 10	10		0.4 / NS			**SILT with sand** Brown gray to dark brown gray, approximately 5-10% very fine to fine sand, dense, weak plasticity, damp, wet in sandier sections, no odor or sheen
SS	1.5	8 12 10	15		0.5 / NS		ML	Increased density and stiffness, no localized sandier sections, no odor or sheen
SS	1.5	6 4 6	20		0.4 / NS			Trace of shells, decrease in sand content, no odor or sheen
SS	1.5	15 11 10	25	SB15-26	0.5 / NS		SW/SM	**Well-graded SAND with silt** Gray, greenish gray, abundant shell matierial (up to 20%), fine to medium sand with silt, briney marine odor, low density, no plasticity, wet, no odor or sheen
			30					

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F-40.1
(6-87) (3-88) (8-90)

Project Name Ecology Precision Engineering **Project Number** 1396024*00 **Boring Name** SB15

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
SS	1.5	9 15 11			0.2 / NS		SW/SM	**Well-graded SAND with silt** Gray, greenish gray, abundant shell matierial (up to 20%), fine to medium sand with silt, briney marine odor, low density, no plasticity, wet, no odor or sheen ***(Continued)***
SS	0.1	15 21 22	35		0.3 / NS			**Well-graded GRAVEL with silt and sand** Gray, gray brown, tan, approximately 20% silt and 15% fine sand, subrounded gravel up to 1/2-inch diameter, wet, no odor or sheen
SS	1.5	~~19~~ ~~21~~ ~~31~~	40	SB15-41	0.4 / NS		GW/GM	
SS	0.5	~~50~~	45	SB15-45 SB15	0.3 / NS		ML	**Sandy SILT with gravel** Gray, slight blueish gray, glacial till, well rounded to rounded gravel up to 1.5-inch diameter, firm, hard, brittle, very dense, no plasticity, dry, no odor or sheen
			50					

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface
3. ST = sheen test. NS = no sheen, WS = weak sheen, MS = moderate sheen, SS = strong sheen

KJ PNW BORING N&E APRIL 2015 HSA.GPJ KJ PNW.GDT 6/25/15

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: West side of 14TH AVE S		**Boring Name**	SB16
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: James Gobble	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Hollow-stem Auger	DRILL BIT(S) SIZE: 8-inch	**Project Number**	1396024*00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 46.5 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 4/16/15	DATE COMPLETED: 4/16/15
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J.Sawdey / J. Schwarz	
SEAL: N/A	FROM N/A TO N/A FT.	SAMPLING METHODS	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
			0					Air Vac clearance to 5-feet. Fill material with gravel, coarse sands, and concrete debris.
			5					
SS	1.5	15 16 15	10		2.2 / NS		SP/SM	**Poorly graded SAND with silt** Gray to dark gray, higher silt content in upper 1-foot of sample (~50%), decreased silt content in lower 0.5-foot of sample (~10%), siltier zones are damp, sand zones are dry, some organic staining, no odor or sheen
SS	1.5	27 31 24	15		1.4 / NS		ML	**SILT** Brown gray to dark brown gray, traces of very fine sand (<5%), moderately dense, stiff, moderate plasticity, damp, no odor or sheen
SS	1.5	8 7 6	20		0.4 / NS			Sparse amounts of shells
SS	1.5	11 12 14	25	SB16-26	0.4 / NS		SP/SM	Decreasing density, more damp, increasing shells **Poorly graded SAND with silt** Gray to green gray, fine to coarse sand with approximately 10% silt, abundant shells, wet, briney odor, no sheen
			30					

KJ PNW BORING N&E APRIL 2015 HSA.GPJ KJ PNW.GDT 6/25/15

F-40.1
(6-87) (3-88) (8-90)

Project Name Ecology Precision Engineering **Project Number** 1396024*00 **Boring Name** SB16

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
SS	1.5	21 27 30			0.4 / NS		ML	**SILT with sand** Gray to blue gray, traces of very fine to fine sand (<5%), trace amount of shells, traces of sand pockets with pyrite, very dense and firm, moderate plasticity, damp, no odor or sheen
SS	1.5	18 21 30	35		0.2 / NS		ML	**Sandy SILT with gravel** Gray mottled with brown, some fine to medium sand (up to 30%), some gravel (up to 10%) up to 1/4-inch diameter, dense, low plasticity, damp, no odor or sheen
SS	0.5	60	40	SB16-40 SB16	0.3 / NS		GW/GM	**Well-graded GRAVEL with silt and sand** Gray to dark gray, gray brown, approximately 30% medium to very coarse sand, some silt, wet, no odor or sheen
SS	0.5	150	45	SB16-46	0.3 / NS		ML	**Sandy SILT with gravel** Gray to blue gray, glacial till, includes cobbles up to 3-inches in diameter, very hard, difficult to break by hand, damp to dry, no odor or sheen

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface
3. ST = sheen test. NS = no sheen, WS = weak sheen, MS = moderate sheen, SS = strong sheen

KJ PNW BORING N&E APRIL 2015 HSA.GPJ KJ PNW.GDT 6/25/15

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: West side of 14TH AVE S	**Boring Name** SB17
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: James Gobble
	Project Name Ecology Precision Engineering
DRILLING METHOD(S): Hollow-stem Auger	DRILL BIT(S) SIZE: 8-inch
	Project Number 1396024*00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.
BLANK CASING: N/A	FROM N/A TO N/A FT.
SLOTTED CASING: N/A	FROM N/A TO N/A FT.
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.
SEAL: N/A	FROM N/A TO N/A FT.
GROUT: N/A	FROM N/A TO N/A FT.

ELEVATION AND DATUM: bgs	TOTAL DEPTH: 44.0 ft. bgs
DATE STARTED: 4/16/15	DATE COMPLETED: 4/17/15
EASTING (FT): N/A	NORTHING (FT): N/A
LOGGED BY: J.Sawdey / J. Schwarz	
SAMPLING METHODS	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.

SAMPLES TYPE	RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
								Air Vac clearance to 5-feet. Fill material with gravel, coarse sands, and concrete debris.
			5					
SS	1.5	17 21 20	10		1.4 / NS		SP/SM	**Poorly graded SAND with silt** Brown gray to dark brown gray, traces of silt, soft, damp, no odor or sheen
SS	1.5	6 8 7	15		1.2 / NS			**SILT with sand** Brown gray, 10-15% sand, trace amount of shells, moderately firm, medium plasticity, damp, no odor or sheen
SS	1.5	12 15 13	20		0.9 / NS		ML	Less sand
SS	1.5	15 15 15	25	SB17-26	0.6 / NS		SP/SM	**Poorly graded SAND with silt** Brown gray mottled with greenish gray, moderate amount shells, soft to firm, damp, no odor or sheen
							ML	**SILT with sand** Brown gray, trace amounts of sand, moderate amount of shells, soft, medium plasticity, damp, no odor or sheen
			30					

KJ PNW BORING N&E APRIL 2015 HSA.GPJ KJ PNW.GDT 6/25/15

F-40.1
(6-87) (3-88) (8-90)

Project Name Ecology Precision Engineering **Project Number** 1396024*00 **Boring Name** SB17

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
SS	1.5	14 251 19			0.7 / NS		ML	**SILT with sand** Brown gray, trace amounts of sand, moderate amount of shells, soft, medium plasticity, damp, no odor or sheen ***(Continued)*** Color changes to gray to greenish gray, coarse sand, pockets of sand and pyrite, firm, trace of cobbles
			35		0.5 / NS			
SS	1.5	~~19~~ ~~23~~ 27		SB17			ML	**Sandy SILT with gravel** Light to dark gray, well graded, fine to coarse sand, subrounded to rounded gravel up to 1/2-inch diameter, damp to wet in more gravelly areas, no odor or sheen
			40		0.5 / NS			
SS	1.5	~~27~~ ~~18~~ 31		SB17-40				
SS	0.5	~~150~~		SB17-43.5	0.3 / NS		GW/GM	**Well-graded GRAVEL with silt and sand** Gray to tan gray, glacial till, very hard and dense, dry, no odor or sheen

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface
3. ST = sheen test. NS = no sheen, WS = weak sheen, MS = moderate sheen, SS = strong sheen

KJ PNW BORING N&E APRIL 2015 HSA.GPJ KJ PNW.GDT 6/25/15

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: West side of 14TH AVE S	**Boring Name** SB18
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: James Gobble
	Project Name Ecology Precision Engineering
DRILLING METHOD(S): Hollow-stem Auger	DRILL BIT(S) SIZE: 8-inch
	Project Number 1396024*00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.
BLANK CASING: N/A	FROM N/A TO N/A FT.
SLOTTED CASING: N/A	FROM N/A TO N/A FT.
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.
SEAL: N/A	FROM N/A TO N/A FT.
GROUT: N/A	FROM N/A TO N/A FT.

ELEVATION AND DATUM: bgs	TOTAL DEPTH: 39.5 ft. bgs
DATE STARTED: 4/17/15	DATE COMPLETED: 4/17/15
EASTING (FT): N/A	NORTHING (FT): N/A
LOGGED BY: J. Sawdey	
SAMPLING METHODS	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
								Air Vac clearance to 5-feet. Fill material with gravel, coarse sands, and concrete debris.
			5					
SS	1.5	10 12 12	10		0.3 / NS		SW/SM	**Well-graded SAND with silt and gravel** Light brown to brown, brown gray, some gravel, traces of silt, wet, no odor or sheen
								Wood layer
								SILT with sand Brown to maroonish brown, organic woody layers, decreasing very fine to fine sand with depth, moderately dense, firm, medium plasticity, damp, no odor or sheen
SS	1.5	7 8 8	15		0.5 / NS		ML	
SS	1.5	8 7 9	20		0.3 / NS			
SS	1.5	9 12 12	25	SB18-26	0.4 / NS		SW/SM	**Well-graded SAND with silt** Gray to greenish gray, abundant shells, soft, wet, briney odor, no sheen
			30	SB18				

KJ PNW BORING N&E APRIL 2015 HSA.GPJ KJ PNW.GDT 6/25/15

F-40.1
(6-87) (3-88) (8-90)

Project Name Ecology Precision Engineering **Project Number** 1396024*00 **Boring Name** SB18

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
SS	1.5	10 9 9			0.4 / NS		ML	**SILT with sand** Gray to greenish gray, sand occurs in lenses with pyrite, some organic material, very hard and dense, dry, no odor or sheen
			35	SB18	0.3 / NS			
SS	1.5	12 13 19		SB18-36.5			SW/SM	**Well-graded SAND with silt** White quartzitic sand with brown gray silt, medium to coarse sand with muscovite in part (beach sand), soft, damp, no odor or sheen
SS	0.5	200		SB18-39.5	0.1 / NS		GW/GM	**Well-graded GRAVEL with silt and sand** Glacial till, very hard, brittle, dry, no odor or sheen

NOTES

1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface
3. ST = sheen test. NS = no sheen, WS = weak sheen, MS = moderate sheen, SS = strong sheen

KJ PNW BORING N&E APRIL 2015 HSA.GPJ KJ PNW.GDT 6/25/15

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION: East side of 14TH AVE S		**Boring Name**	SB19
DRILLING COMPANY: Cascade Drilling, L.P.	DRILLER: Curtis	**Project Name**	Ecology Precision Engineering
DRILLING METHOD(S): Hollow-stem Auger	DRILL BIT(S) SIZE: 8-inch	**Project Number**	1396024*00
ISOLATION CASING: N/A	FROM N/A TO N/A FT.	ELEVATION AND DATUM: bgs	TOTAL DEPTH: 50.5 ft. bgs
BLANK CASING: N/A	FROM N/A TO N/A FT.	DATE STARTED: 4/20/15	DATE COMPLETED: 4/20/15
SLOTTED CASING: N/A	FROM N/A TO N/A FT.	EASTING (FT): N/A	NORTHING (FT): N/A
SIZE AND TYPE OF FILTER PACK: N/A	FROM N/A TO N/A FT.	LOGGED BY: J. Sawdey	
SEAL: N/A	FROM N/A TO N/A FT.	SAMPLING METHODS	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE _____ FT.
GROUT: N/A	FROM N/A TO N/A FT.		

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
								Air Vac clearance to 5-feet.
			5					
SS	1.5	7 4 3	10		0.0 / NS		SP/SM	**Poorly graded SAND with silt** Brown to brownish gray, Approximately 15% silt, fine to medium sand, soft, wet, no odor or sheen
SS	1.5	3 3 3	15		0.0 / NS			
							ML	**SILT with sand** Brown, brownish gray to dark brownish gray, Approximately 10-15% fine sand, moderately firm and dense, medium plasticity, damp, no odor or sheen
SS	1.5	3 4 4	20		0.1 / NS			Silty sand lens at 20 bgs, wet Increased sand (20-25%), weak plasticity
SS	1.5	10 13 14	25		0.1 / NS		SP/SM	**Poorly graded SAND with silt** Brownish gray to dark brownish gray, very fine to fine sand with approximately 20% silt, abundant woody organic material, moderately dense, wet, no odor or sheen
			30					

KJ PNW BORING N&E APRIL 2015 HSA.GPJ KJ PNW.GDT 6/25/15

F-40.1
(6-87) (3-88) (8-90)

Project Name Ecology Precision Engineering **Project Number** 1396024*00 **Boring Name** SB19

SAMPLES TYPE	SAMPLES RECOV. (FEET)	ANALYTICAL SAMPLE INTERVAL	DEPTH (FEET)	SAMPLE NAME		LITHOLOGY	USCS LOG	SAMPLE DESCRIPTION AND DRILLING REMARKS
SS	1.5	4 4 5			0.5 / NS		ML	**SILT with sand** Brown, brownish gray to dark brownish gray, Approximately 10-15% fine sand, moderately firm and dense, medium plasticity, damp, slight briney sulfur-like odor, no sheen
SS	1.5	5 7 7	35	SB19-35	0.4 / NS		SM	**Silty SAND** Gray to greenish gray, poor to moderately graded, abundant shells, soft, damp to wet, continued briney and sulfur like odor, no sheen
SS	1.5	8 7 9	40		0.5 / NS			Increased wood material, increasing silt content
SS	1.5	9 14 40	45	SB19 SB19-45	0.6 / NS		GW/GM	**Well-graded GRAVEL with silt and sand** Gray to blue gray, angular gravels up to 1/4-inch diameter, approximately 25% silt and 10% sand, soft, wet, no odor or sheen
							GW/GM	**Well-graded GRAVEL with silt and sand** Gray to dark gray, glacial till, very hard and firm, dry, no odor or sheen
SS	0.5	100+	50	SB19-50	0.3 / NS			

NOTES

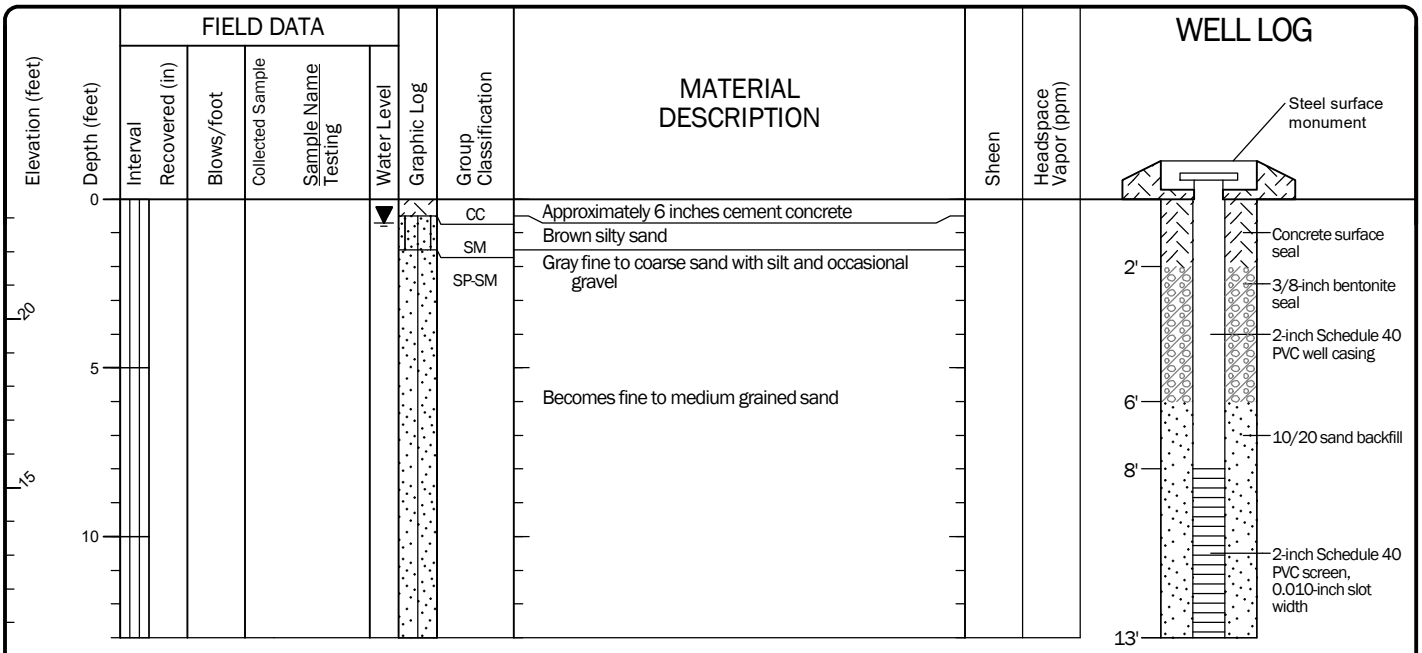
1. PID = Photoionization detector (reading in parts per million)
2. bgs = below ground surface
3. ST = sheen test. NS = no sheen, WS = weak sheen, MS = moderate sheen, SS = strong sheen

KJ PNW BORING N&E APRIL 2015 HSA.GPJ KJ PNW.GDT 6/25/15

2022/2023 Investigation

Drilled Start 3/29/2022 End 3/29/2022	Total Depth (ft) 13	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Sonic	
Hammer Data N/A		Drilling Equipment Terrasonic		DOE Well I.D.: BNY-884 A 2-in well was installed on 3/29/2022 to a depth of 13 ft.	
Surface Elevation (ft) Vertical Datum 23.554 NAVD88		Top of Casing Elevation (ft) 23.55		Groundwater Date Measured: 6/1/2022	Depth to Water (ft): 0.70 Elevation (ft): 22.85
Easting (X) 1273867.012 Northing (Y) 193812.6603		Horizontal Datum WA State Plane North NAD83 (feet)			

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Topographic Survey. Vertical approximated based on Topographic Survey.

Log of Boring with Monitoring Well MW-12

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-16
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001100.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	3/29/2022	3/29/2022	35	PDR	GRL	Holt Services	Sonic

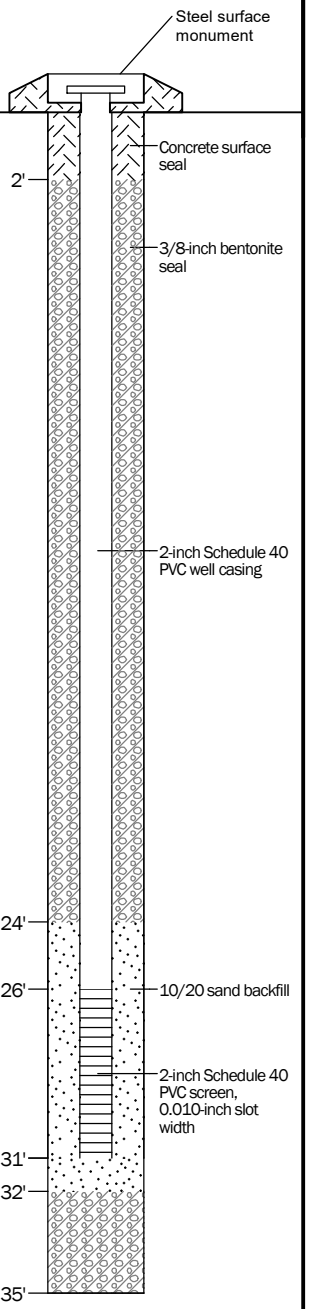
Hammer Data	N/A	Drilling Equipment	Terrasonic
Surface Elevation (ft) Vertical Datum	23.208 NAVD88	Top of Casing Elevation (ft)	23.21
Easting (X) Northing (Y)	1273768.709 193806.4166	Horizontal Datum	WA State Plane North NAD83 (feet)

DOE Well I.D.: BNY-883
A 2-in well was installed on 3/29/2022 to a depth of 31 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/1/2022	0.00	23.21

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0								AC	Approximately 2½ inches asphalt concrete pavement		
		0	60						GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	1.7
									SM	Gray silty fine to coarse sand with gravel (moist)	NS	8.3
						MW-13-3-4			ML	Gray silt with sand (soft, moist)	NS	8.2
	5									Without sand, becomes hard		
		5	60						SM	Gray silty fine to coarse sand with gravel (moist)	NS	8.9
										With wood debris		
	10								SP-SM	Gray fine to coarse sand with silt and occasional gravel (moist)	NS	12
		10	60			MW-13-11-12-DUP2			SM	Gray silty fine to coarse sand with gravel (moist)	NS	12.2
	15										NS	<1
		15	60						SP-SM	Gray fine to coarse sand with silt and gravel (moist)	NS	6.9
	20								SM	Gray silty fine sand with occasional gravel (moist)	NS	11.6
		20	60							Increased gravel content		
	25					MW-13-24-25					NS	20.2
		25	24						SP	Gray fine to coarse sand with trace silt (wet)	NS	6.8
	30					MW-13-28-29						
		30	60						SM	Gray silty fine sand with occasional gravel (moist)	NS	7.1
	35										NS	6.9



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Topographic Survey. Vertical approximated based on Topographic Survey.

Log of Boring with Monitoring Well MW-13

GeoEngineers

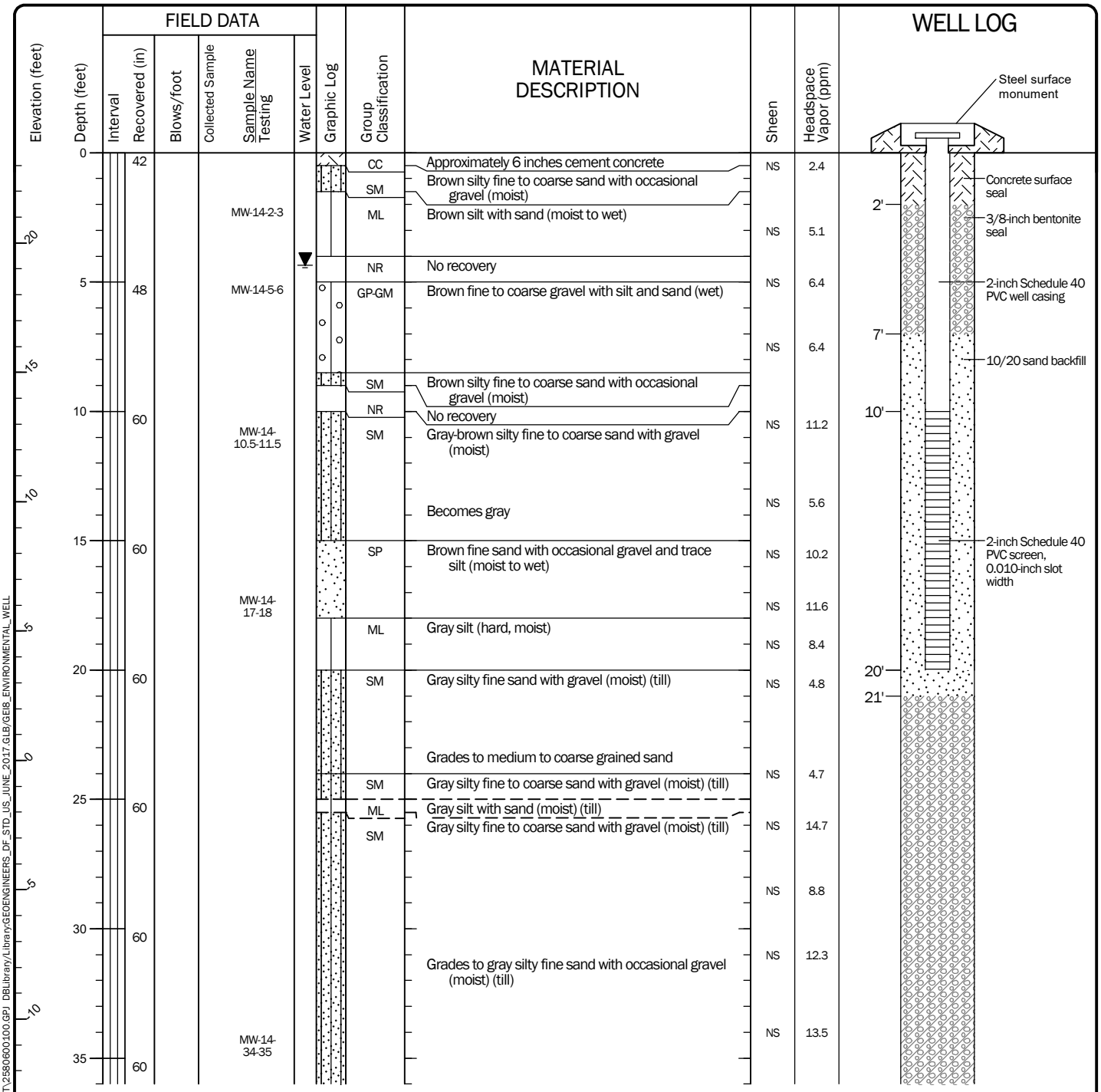
Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-17
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001100.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled Start 3/24/2022 End 3/24/2022	Total Depth (ft) 50	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Sonic	
Hammer Data N/A		Drilling Equipment Terrasonic		A 2-in well was installed on 3/24/2022 to a depth of 20 ft.	
Surface Elevation (ft) Vertical Datum 23.491 NAVD88		Top of Casing Elevation (ft) 23.49		Groundwater Date Measured: 6/1/2022	Depth to Water (ft): 4.34 — Elevation (ft): 19.15
Easting (X) 1274050.796 Northing (Y) 193875.2629		Horizontal Datum WA State Plane North NAD83 (feet)			

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Topographic Survey. Vertical approximated based on Topographic Survey.

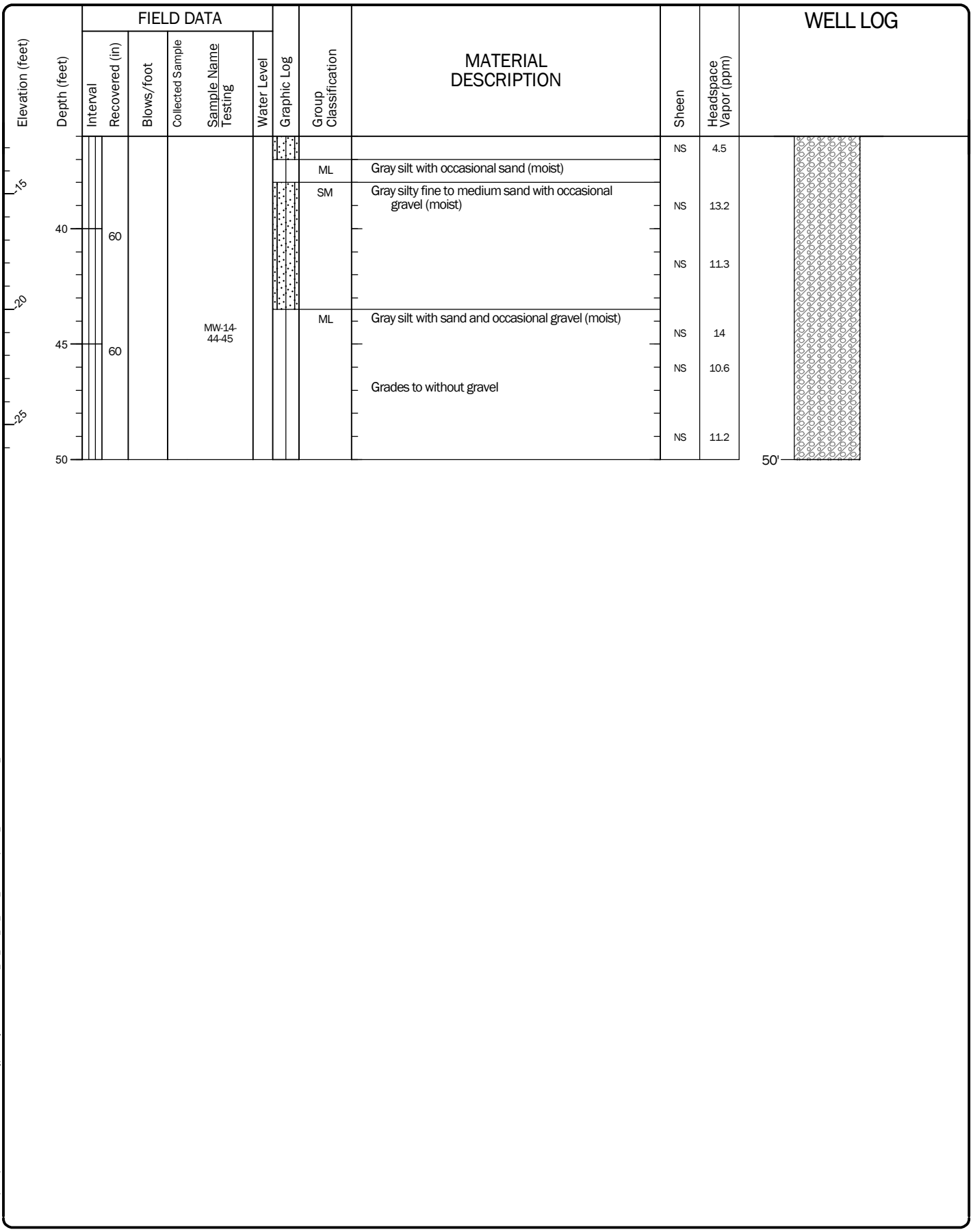
Log of Boring with Monitoring Well MW-14

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-18
Sheet 1 of 2

Date:11/8/22 Path:P:\25\25806001\GINT\25806001100.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL



Log of Boring with Monitoring Well MW-14 (continued)

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-18
Sheet 2 of 2

Date:11/8/22 Path:P:\25\25806001\GINT\25806001100.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	3/23/2022	3/23/2022	40	PDR	GRL	Holt Services	Sonic

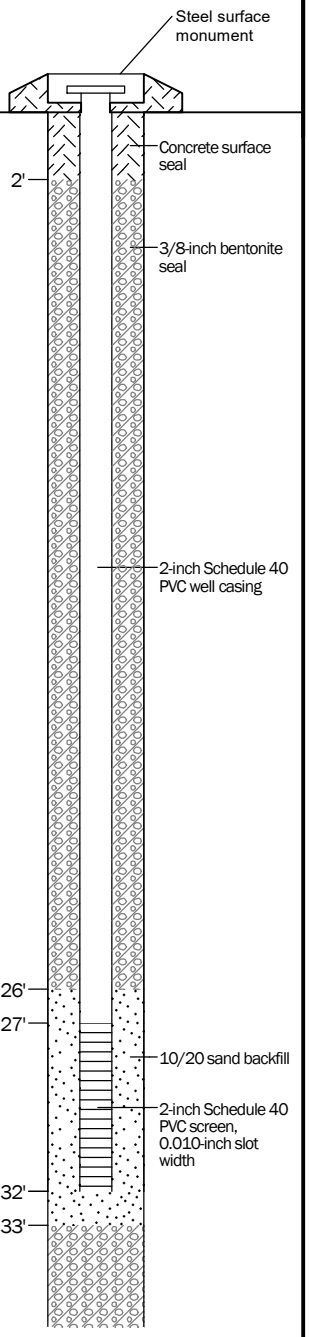
Hammer Data	N/A	Drilling Equipment	Terrasonic
Surface Elevation (ft) Vertical Datum	23.309 NAVD88	Top of Casing Elevation (ft)	23.31
Easting (X) Northing (Y)	1274032.721 193803.2159	Horizontal Datum	WA State Plane North NAD83 (feet)

A 2-in well was installed on 3/23/2022 to a depth of 32 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/1/2022	3.82	19.49

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0								CC	Approximately 5 inches cement concrete		
			54						SP-SM	Dark brown fine to medium sand with silt	NS	<1
									SM	Brown silty fine to medium sand with trace organics (moist to wet)		
20						MW-15-3-4	▼				NS	<1
	5		60							Without organics, becomes wet	NS	<1
						MW-15-6-7			SP-SM	Brown fine to coarse sand with silt gravel (wet)		
15										Increased silt content	NS	<1
	10		60								NS	<1
10										Becomes gray, moist	NS	<1
	15		60							With small cobbles	NS	<1
5											NS	<1
	20		60							Decreased gravel content	NS	<1
0											NS	<1
	25		60							Increased gravel content		
-5						MW-15-18-19			SP	Gray fine to coarse sand with trace silt, gravel and occasional shells (moist to wet)	NS	<1
	30		60							4-inch layer with silt Without shells	NS	<1
-10											NS	<1
	35		60			MW-15-35-36			ML	6-inch layer with silt	NS	<1
										Gray silt with sand (moist)		



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Topographic Survey. Vertical approximated based on Topographic Survey.

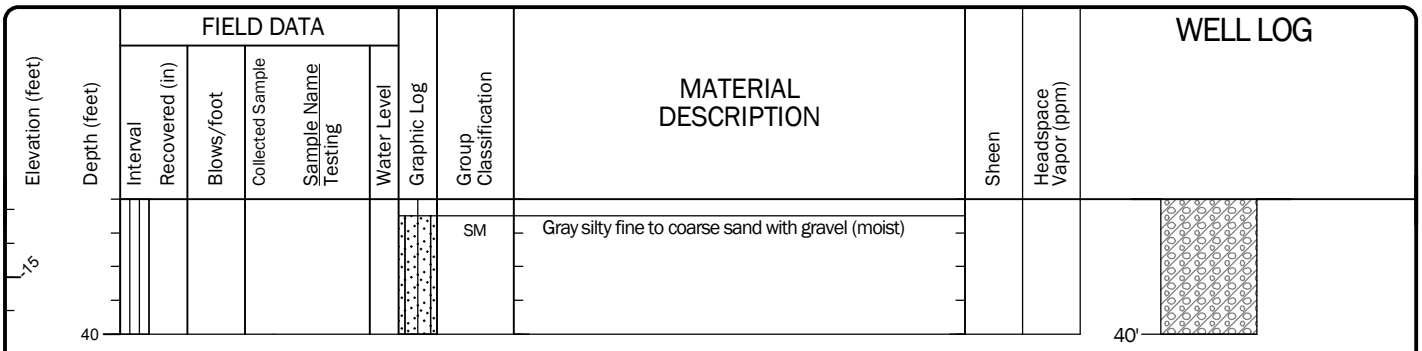
Log of Boring with Monitoring Well MW-15

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-19
Sheet 1 of 2

Date:11/8/22 Path:P:\25\25806001\GINT\25806001100.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL



Log of Boring with Monitoring Well MW-15 (continued)

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-19
Sheet 2 of 2

Date:11/8/22 Path:P:\25\25806001\GINT\25806001100.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_WELL

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	3/22/2022	3/22/2022	50	PDR	GRL	Holt Services	Sonic

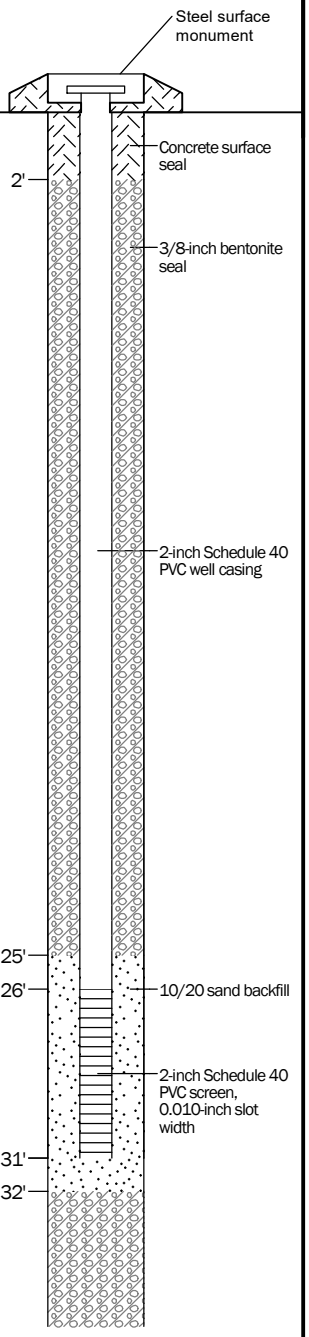
Hammer Data	N/A	Drilling Equipment	Terrasonic
Surface Elevation (ft) Vertical Datum	22.279 NAVD88	Top of Casing Elevation (ft)	22.28
Easting (X) Northing (Y)	1274106.085 193819.2448	Horizontal Datum	WA State Plane North NAD83 (feet)

A 2-in well was installed on 3/22/2022 to a depth of 31 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/1/2022	4.18	18.10

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0								AC	Approximately 2½ inches asphalt concrete pavement		
									SP-SM/ML	Dark gray fine to medium sand with silt to silt with sand (wet)		
			36			MW-16-3-4	▼					<1
	5		48									<1
									ML	Brown silt with sand and trace organics (wet)		
									NR	No recovery		
	10		60						ML	Brown silt with sand and trace organics (small roots) (wet)	NS	<1
						MW-16-12-13					NS	<1
	15		60							Without organics	NS	<1
									GP	Gray fine to coarse gravel with trace silt and sand (wet)		
						MW-16-17.5-18.5			SM	Gray silty fine to coarse sand with gravel, yellow color in fines (moist) (till)	NS	<1
	20		60						SM/ML	Gray silty fine to coarse sand with gravel to silt with sand and gravel (moist to wet)	NS	2
											NS	<1
	25		60						SM	Gray silty fine to coarse sand with gravel (moist)	NS	1.3
									ML	Gray silt with sand and occasional gravel (moist)	NS	4.5
	30		60						SM	Gray silty fine to coarse sand with gravel (Moist)		
	35		60								NS	3.6



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Topographic Survey. Vertical approximated based on Topographic Survey.

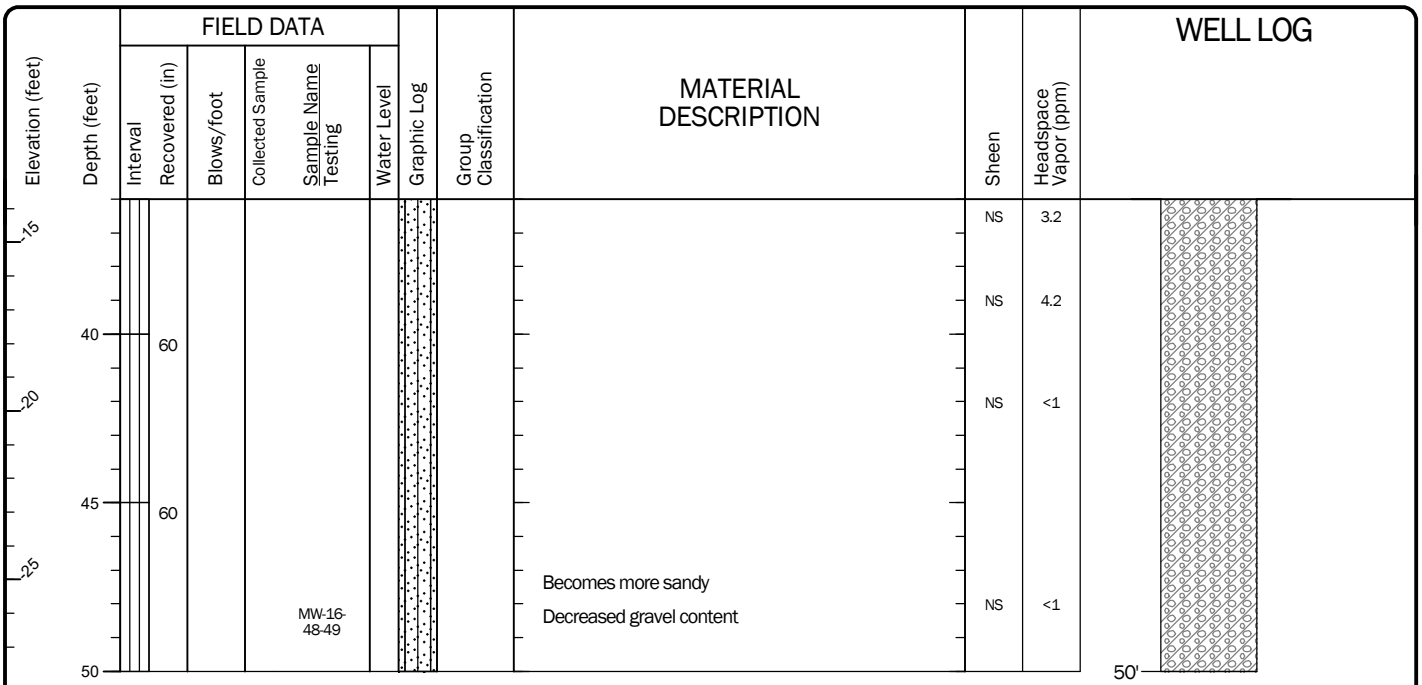
Log of Boring with Monitoring Well MW-16

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-20
Sheet 1 of 2

Date:11/8/22 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL



Log of Boring with Monitoring Well MW-16 (continued)

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-20
Sheet 2 of 2

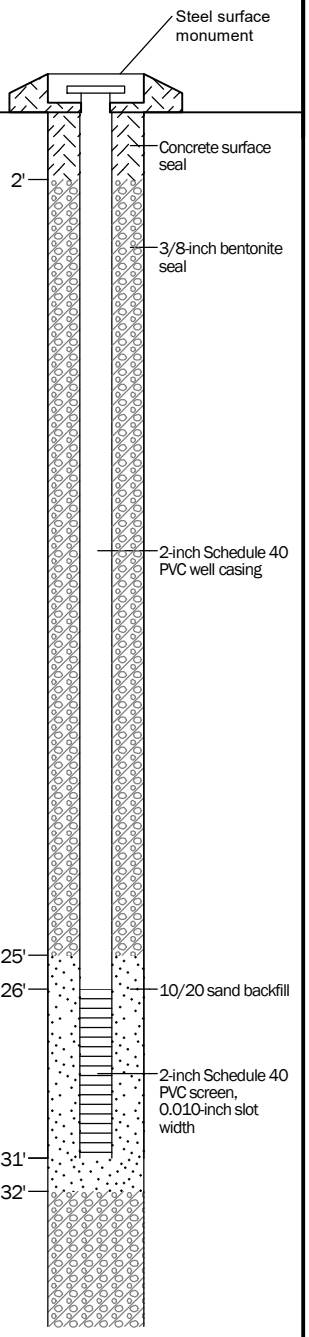
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Drilled Start 3/21/2022 End 3/21/2022	Total Depth (ft) 50	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Sonic	
Hammer Data N/A		Drilling Equipment Terrasonic		A 2-in well was installed on 3/21/2022 to a depth of 31 ft.	
Surface Elevation (ft) Vertical Datum 22.347 NAVD88		Top of Casing Elevation (ft) 22.35		Groundwater Date Measured: 6/1/2022	Depth to Water (ft): 4.16 — Elevation (ft): 18.19
Easting (X) 1274120.613 Northing (Y) 193889.1832		Horizontal Datum WA State Plane North NAD83 (feet)			

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0		54						AC	Approximately 7 inches asphalt concrete pavement		
									ML	Brown silt with sand and occasional gravel (moist to wet)		
20						MW-17-3-4	▼				NS	<1
	5		60							Becomes with occasional organics, without gravel	NS	<1
									PT	Brown fibrous peat with wood debris		
15						MW-17-7-8			ML	Brown silt with sand (wet)	NS	3.8
	10		60							Becomes brown-tan with sand and occasional organics (woody debris)	NS	2.9
10												
	15		60								NS	<1
5						MW-17-17-18				Treat branch encountered	NS	1.2
									SM	Gray silty fine to coarse sand with gravel (moist) (till)		
	20		60								NS	<1
0												
	25		60			MW-17-25-26					NS	<1
									SP	Gray fine to coarse sand with trace silt and gravel (wet)		
-5									SM	Gray silty fine to coarse sand with gravel (moist)	NS	<1
									ML/SM	Gray silt with sand and gravel to silty fine to coarse sand with gravel (moist)	NS	<1
	30		60									
-10											NS	<1
	35		60									

WELL LOG



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Topographic Survey. Vertical approximated based on Topographic Survey.

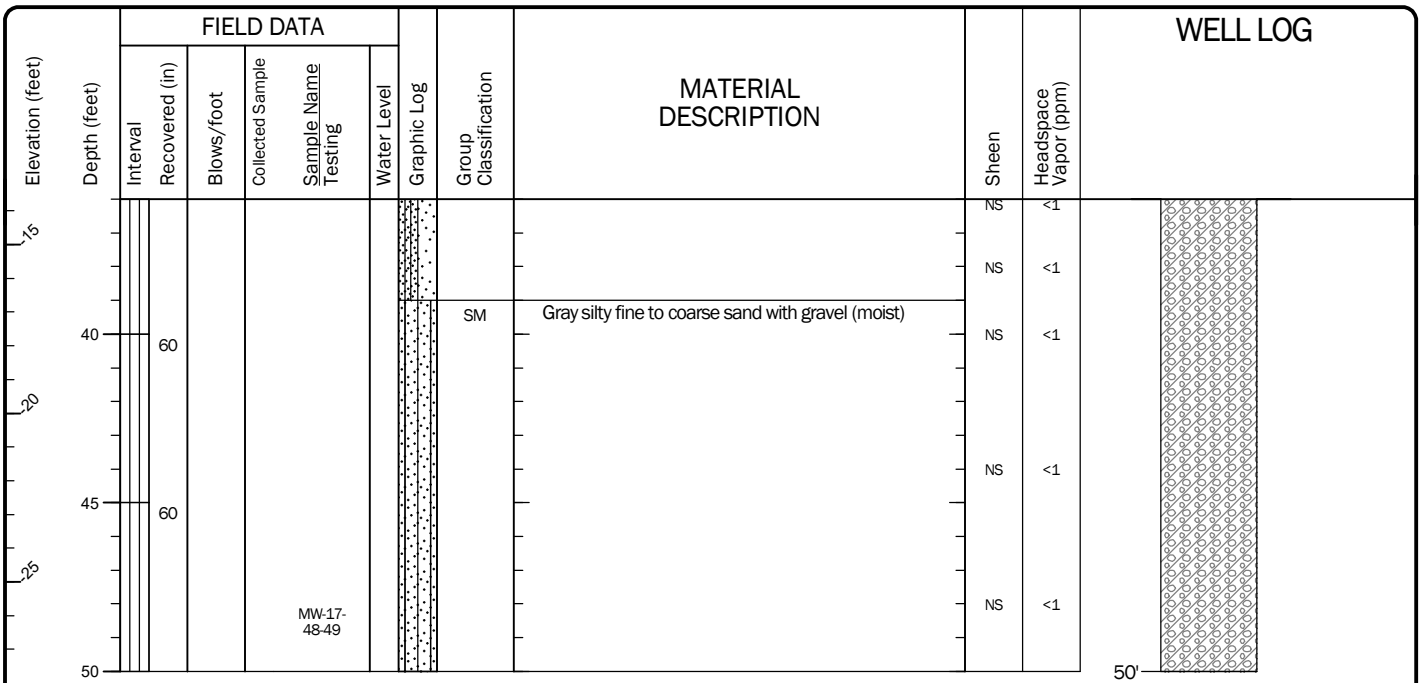
Log of Boring with Monitoring Well MW-17

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-21
Sheet 1 of 2

Date:11/8/22 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL



Log of Boring with Monitoring Well MW-17 (continued)

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-21
Sheet 2 of 2

Date:11/8/22 Path:P:\25\25806001\GINT\25806001100.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	3/28/2022	3/28/2022	20	PDR	GRL	Holt Services	Sonic

Hammer Data	N/A	Drilling Equipment	Terrasonic
Surface Elevation (ft) Vertical Datum	22.507 NAVD88	Top of Casing Elevation (ft)	22.51
Easting (X) Northing (Y)	1274037.413 193650.0924	Horizontal Datum	WA State Plane North NAD83 (feet)

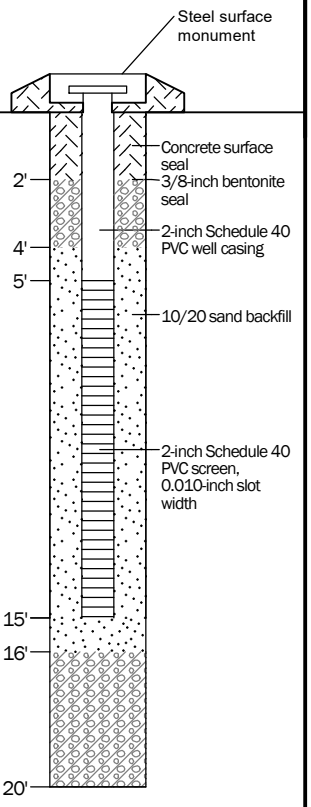
A 2-in well was installed on 3/28/2022 to a depth of ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
6/1/2022	4.45	18.06

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0								AC	Approximately 2½ inches asphalt concrete pavement		
									SP-SM	Brown fine to coarse sand with silt and occasional gravel (wet)	NS	10.6
20			60			MW-18-3-4			SM	Brown silty fine sand with occasional gravel (moist to wet)	NS	16.2
	5									Becomes gray, fine to coarse grained sand, moist to wet		
			60			MW-18-5.5-6.5					SS	<1
15									ML	Gray-brown silt (soft, moist to wet)	NS	<1
	10		60							Becomes wet	NS	<1
										With trace organics (root fibers) Becomes brown		
10						MW-18-12.5-13.5			SP-SM	Gray fine to coarse sand with silt and gravel (moist) (till)	NS	7
	15		48						NR	No recovery		
									SP-SM	Gray fine to coarse sand with silt and gravel (moist) (till)		
5						MW-18-18-19					NS	7.1
	20											

WELL LOG



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Topographic Survey. Vertical approximated based on Topographic Survey.

Log of Boring with Monitoring Well MW-18

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-22
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GB.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	5/26/2023	5/26/2023	15	PDR	GRL	Cascade Drilling	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	CME Track-mounted Rig
Surface Elevation (ft) Vertical Datum	21.949 NAVD88	Top of Casing Elevation (ft)	24.52
Easting (X) Northing (Y)	1274047.162 193591.121	Horizontal Datum	WA State Plane North NAD83 (feet)

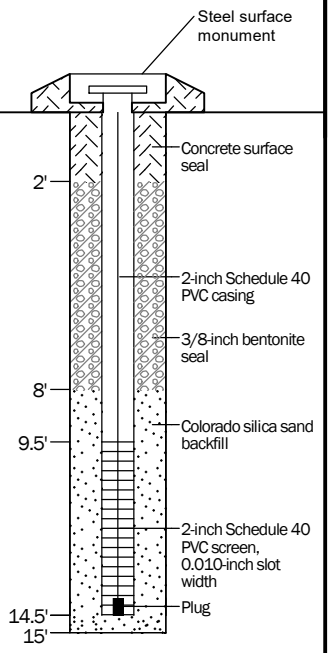
DOE Well I.D.: BPR-321
A 2-in well was installed on 5/26/2023 to a depth of 14.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
5/26/2023	9.00	15.52

Notes:

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
20	0						SM	Brown silty fine to coarse sand with organic matter and occasional gravel (loose, moist)		
		18	14						NS	<1
							ML	Gray silt with sand (stiff, moist)		
	5	18	26	MW-19-6-7.5					NS	<1
15								Decreased sand content, grades to very stiff		
		18	11	MW-19-9-10.5	▼			Increased sand content, becomes wet, grades to medium stiff	NS	<1
10	10									
		18	19					Grades to stiff	NS	<1
	15									

WELL LOG



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on survey by True North Land Surveying, Inc.. Vertical approximated based on survey by True North Land Surveying, Inc..

Log of Monitoring Well MW-19

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-2
Sheet 1 of 1

Date:7/24/23 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	5/25/2023	5/25/2023	24.5	PDR	GRL	Cascade Drilling	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	CME Track-mounted Rig
Surface Elevation (ft) Vertical Datum	20.171 NAVD88	Top of Casing Elevation (ft)	22.28
Easting (X) Northing (Y)	1274171.456 193603.296	Horizontal Datum	WA State Plane North NAD83 (feet)

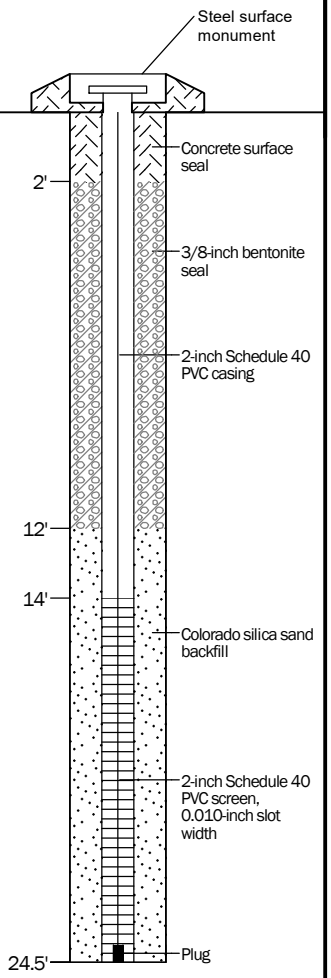
DOE Well I.D.: BPR-320
A 2-in well was installed on 5/25/2023 to a depth of 24.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
5/25/2023	8.00	14.28

Notes:

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
20	0							SM	Brown silty fine sand with organics (loose, moist)		
		18	20		MW-20-2.5-4					SS	1.2
								SP	Dark gray fine sand with trace silt (stiff, moist to wet)		
15	5		50/6"					SM	Gray-brown silty fine sand	SS	2.5
								WD	Wood, possible treated tie		
		18	6		MW-20-7.5-9	▼				NS	1.3
10	10							ML	Dark brown silt with trace sand (medium stiff, wet)		
		18	9						Becomes brown, reduced sand content	SS	<1
5	15										
		18	8						Becomes dark brown, increased sand content, with occasional shell fragments	SS	0.2
0	20										
		18	8		MW-20-23-24.5				Becomes brown	NS	<1

WELL LOG



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on survey by True North Land Surveying, Inc.. Vertical approximated based on survey by True North Land Surveying, Inc..

Log of Monitoring Well MW-20

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-3
Sheet 1 of 1

Date:7/24/23 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

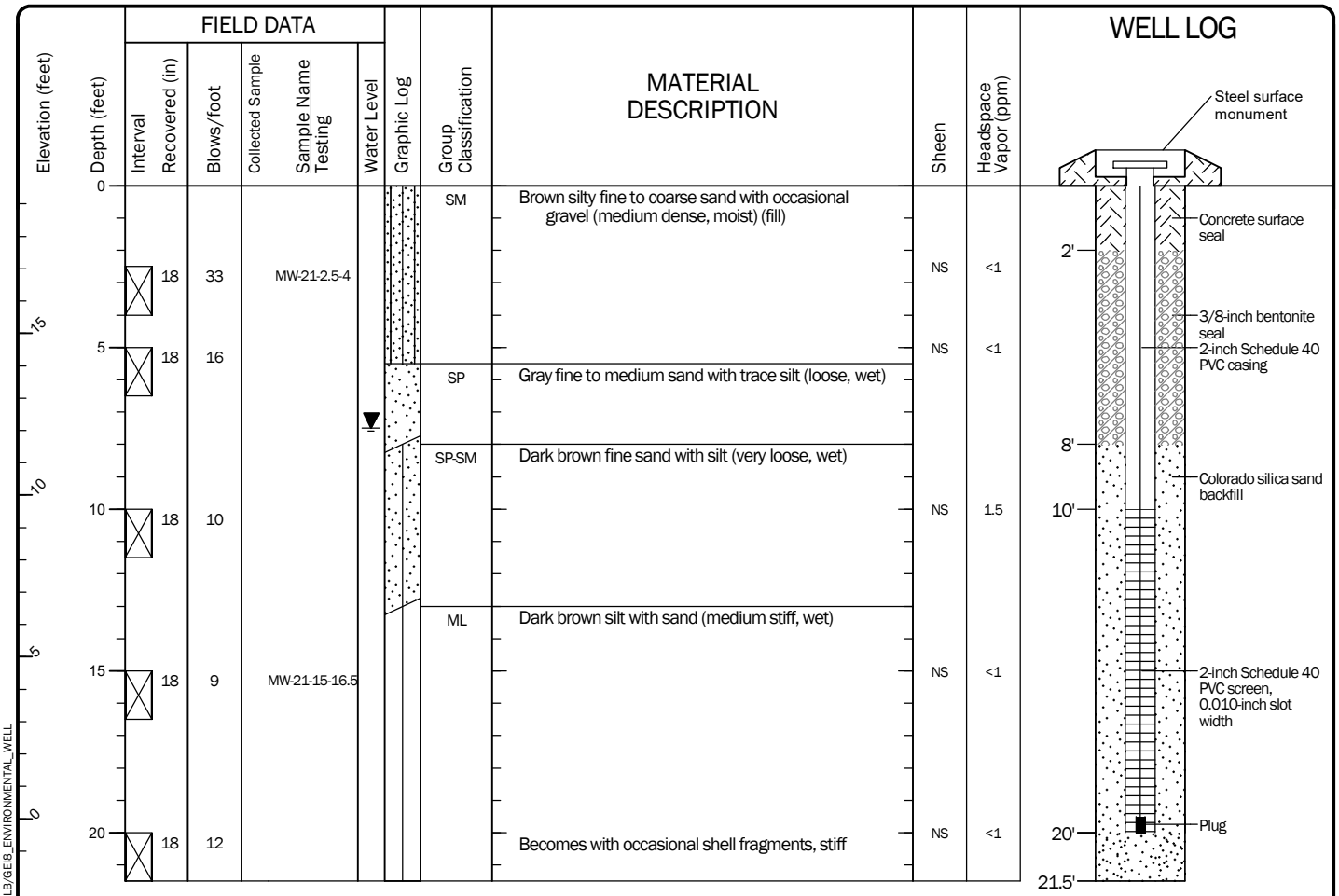
Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	5/31/2023	5/31/2023	21.5	PDR	GRL	Cascade Drilling	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	CME Track-mounted Rig
Surface Elevation (ft) Vertical Datum	19.567 NAVD88	Top of Casing Elevation (ft)	22.67
Easting (X) Northing (Y)	1274244.534 193708	Horizontal Datum	WA State Plane North NAD83 (feet)

DOE Well I.D.: BPR-323
A 2-in well was installed on 5/31/2023 to a depth of 20 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
5/31/2023	7.50	15.17

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on survey by True North Land Surveying, Inc.. Vertical approximated based on survey by True North Land Surveying, Inc..

Log of Monitoring Well MW-21

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-4
Sheet 1 of 1

Date:7/24/23 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	5/30/2023	5/30/2023	60	PDR	GRL	Cascade Drilling	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	CME Track-mounted Rig
Surface Elevation (ft) Vertical Datum	19.824 NAVD88	Top of Casing Elevation (ft)	22.60
Easting (X) Northing (Y)	1274249.396 193725.059	Horizontal Datum	WA State Plane North NAD83 (feet)

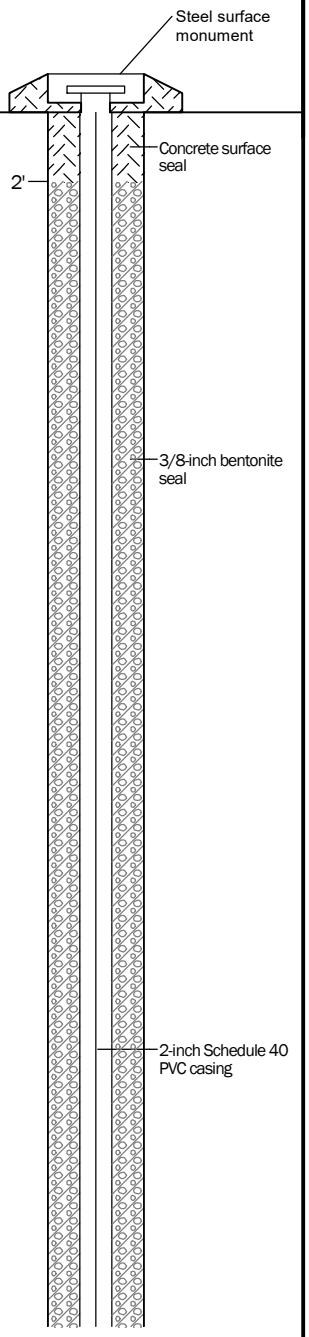
DOE Well I.D.: BPR-322
A 2-in well was installed on 5/30/2023 to a depth of 59 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
5/30/2023	8.00	14.60

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
15	0							SP	Brown fine to coarse sand with gravel and trace silt (medium dense, moist) (fill)		
		18	40		MW-22-2.5-4					NS	<1
5	5	18	20		MW-22-5-6			SP	Gray fine sand with trace silt (loose, moist)	NS	<1
								OL	Brown organic silt with wood debris (stiff, moist)		
						▼		ML	Brown silt with occasional organic matter (wood) and sand (stiff, wet)		
10	10	18	20		MW-22-10-11					NS	52.6
								SP-SM	Dark brown fine sand with silt (loose, wet)		
5	15	18	17		MW-22-15-16.5					NS	32.6
								ML	Gray silt with sand and occasional shell fragments (stiff, wet)		
0	20	18	19		MW-22-20-21.5				Becomes dark brown, decreased shell fragments	NS	<1
-5	25	18	11		MW-22-25-26.5				Increased shell fragments, grades to medium stiff	NS	<1
-10	30	6	50/6"		MW-22-30-31			SM	Dark gray silty sand (very dense, moist)	NS	3.5
								SP/SM	Dark gray fine to coarse rounded sand with silt (very dense, wet)		
-15	35										

WELL LOG



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on survey by True North Land Surveying, Inc.. Vertical approximated based on survey by True North Land Surveying, Inc..

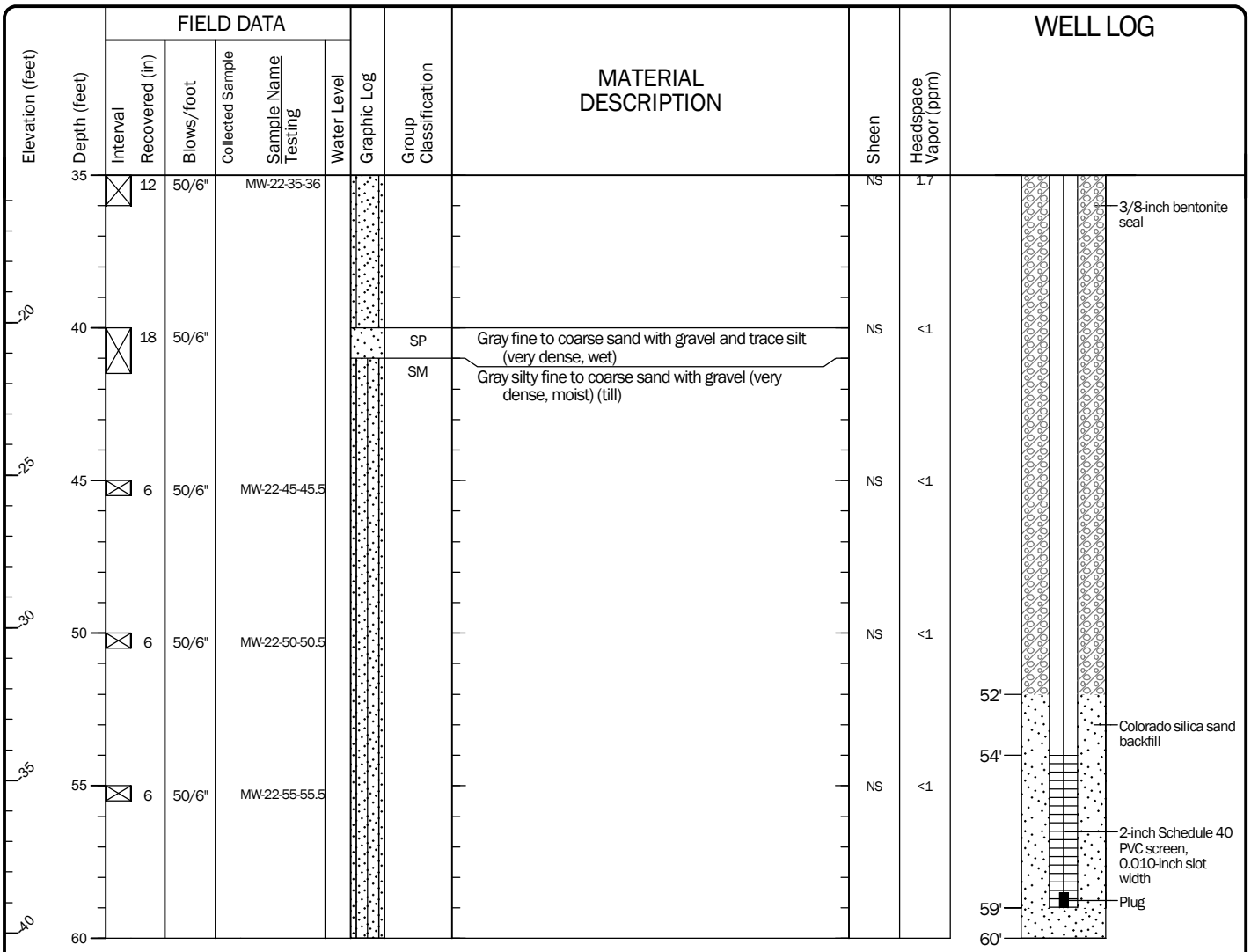
Date:7/24/23 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Log of Monitoring Well MW-22

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-5
Sheet 1 of 2



Log of Monitoring Well MW-22 (continued)

GeoEngineers

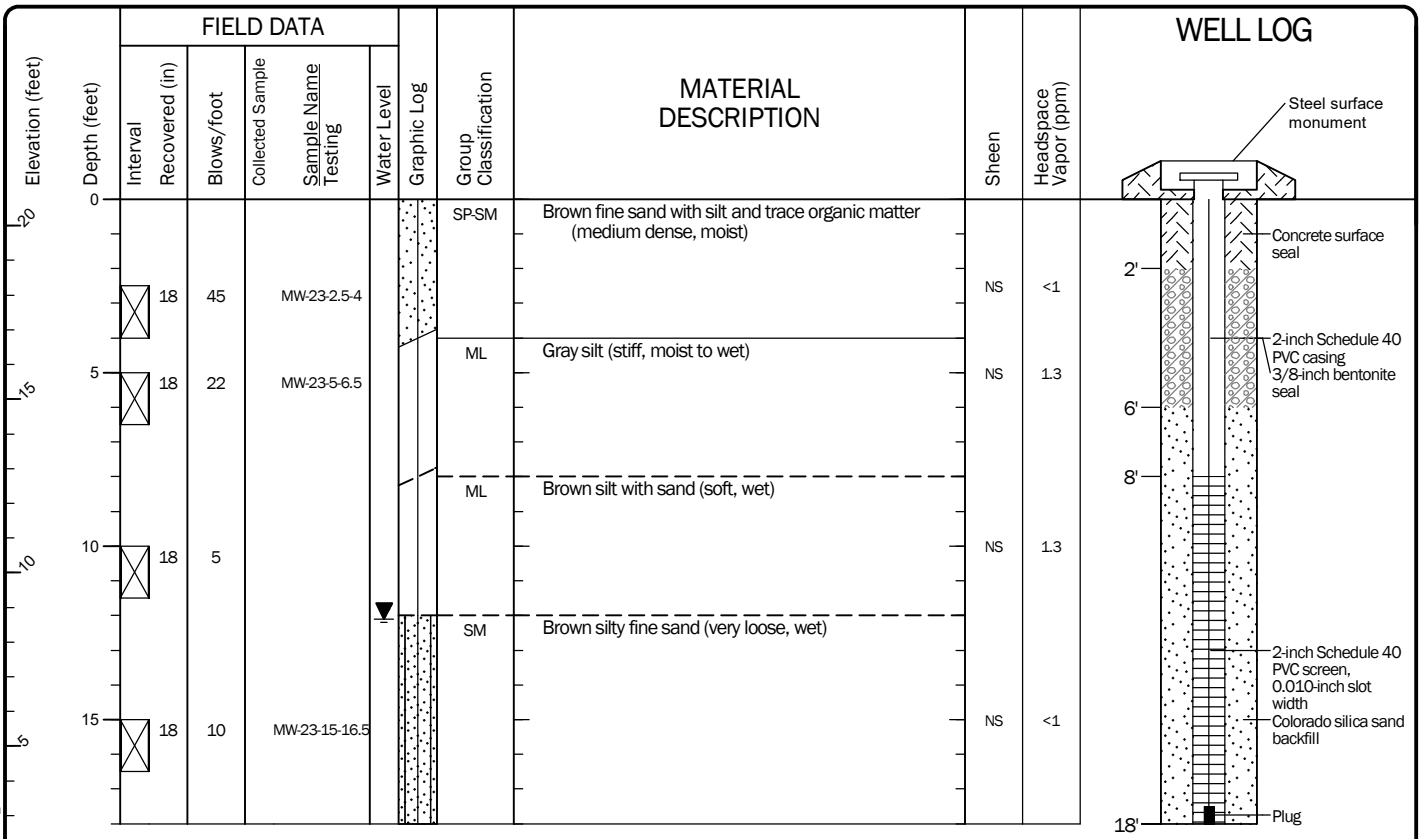
Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-5
Sheet 2 of 2

Date:7/24/23 Path:P:\25\25806001\GINT\25806001101.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled Start 5/24/2023 End 5/24/2023	Total Depth (ft) 18	Logged By PDR Checked By GRL	Driller Cascade Drilling	Drilling Method Hollow-stem Auger	
Hammer Data: Autohammer 140 (lbs) / 30 (in) Drop		Drilling Equipment: CME Track-mounted Rig		DOE Well I.D.: BPR-319 A 2-in well was installed on 5/29/2023 to a depth of 18 ft.	
Surface Elevation (ft) Vertical Datum: 20.765 NAVD88		Top of Casing Elevation (ft): 23.09		Groundwater Date Measured: 5/24/2023	Depth to Water (ft): 12.10 / Elevation (ft): 10.99
Easting (X) 1274278.732 Northing (Y) 193850.798		Horizontal Datum: WA State Plane North NAD83 (feet)			

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on survey by True North Land Surveying, Inc.. Vertical approximated based on survey by True North Land Surveying, Inc..

Log of Monitoring Well MW-23

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-6
Sheet 1 of 1

Date:7/24/23 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start 3/8/2022	End 3/8/2022	Total Depth (ft)	15	Logged By / Checked By	PDR / GRL	Driller	Holt Services	Drilling Method	Direct Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data	N/A	Drilling Equipment	GeoProbe				
Easting (X) Northing (Y)	Undetermined		System Datum	WA State Plane North NAD83 (feet)	Groundwater not observed at time of exploration					

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		60					AC	Approximately 2 inches asphalt concrete pavement	NS	<1	
								GP	Dark brown to black asphalt and gravel (moist to wet)			
						SB-20-2-3		SP-SM	Gray fine to coarse sand with silt and occasional gravel (moist)	NS	<1	
										NS	<1	
	5					SB-20-5-6			2-inch-thick slight yellow color	NS	<1	
										NS	<1	
	10					SB-20-10-11		ML	Gray silt with trace sand (moist)	NS	<1	
								SM	Gray silty fine to coarse sand (moist)			
								SP-SM	Gray fine to coarse sand with silt occasional gravel (moist)			
						SB-20-14-15				NS	<1	
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-20

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-2
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 3/7/2022 End 3/7/2022	Total Depth (ft) 15	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Direct Push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data N/A		Drilling Equipment GeoProbe	
Easting (X) Northing (Y) Undetermined		System Datum WA State Plane North NAD83 (feet)		See "Remarks" section for groundwater observed	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		60					CC	Approximately 6 inches cement concrete	NS	<1	
								SP-SM	Gray fine to coarse sand with silt and occasional gravel (moist)			
						SB-21-3-4			Without occasional gravel	SS	<1	
										NS	<1	
	5		60					SM	Gray-brown silty fine to medium sand (moist to wet)			
										NS	<1	
									Becomes fine to coarse grained sand, with occasional gravel	NS	<1	
						SB-21-8-9						
									Becomes wet	NS	<1	Groundwater observed at approximately 9 feet during drilling
	10		60							NS	<1	
						SB-21-13-14		ML	Gray silt with sand and occasional gravel (moist)	NS	<1	
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-21

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-3
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 3/10/2022 End 3/10/2022	Total Depth (ft) 5	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Direct Push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data N/A		Drilling Equipment GeoProbe	
Easting (X) Northing (Y) Undetermined		System Datum WA State Plane North NAD83 (feet)		See "Remarks" section for groundwater observed	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			SB-22-0.5-1.5		CC	Approximately 6 inches cement concrete	MS	<1	
								SP	Gray fine to coarse sand with trace silt (wet)	MS	<1	
								ML	Gray silt with sand (moist)			
								NR	No recovery			Groundwater observed at approximately 3½ feet during drilling
			12			SB-22-4-5		SP-SM	Gray fine sand with silt (wet)	MS	<1	
	5							ML	Gray silt (hard, moist) Refusal at 5 feet below ground surface			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-22

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-4
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 3/9/2022 End 3/9/2022	Total Depth (ft) 13	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Direct Push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data N/A		Drilling Equipment GeoProbe	
Easting (X) Northing (Y) Undetermined		System Datum WA State Plane North NAD83 (feet)		See "Remarks" section for groundwater observed	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36					CC	Approximately 6 inches cement concrete pavement			
								SM	Brown silty fine to coarse sand (moist)			
						SB-23-1.5-2.5		SP	Gray very fine sand with trace silt (moist to wet)	NS	<1	
								NR	No recovery			
	5		42					ML	Gray silt (moist to wet)			
								PT/OH	Brown peat to organic silt (moist)	NS	<1	
						SB-23-6.5-7.5		OH	Gray organic silt with sand	NS	<1	
								SM	Gray silty fine to coarse sand with occasional gravel (wet)	NS	<1	Groundwater observed at approximately 8½ feet during drilling
								NR	No recovery			
	10		36			SB-23-10-11		SP	Gray fine to medium sand with trace silt (wet)			
								SM	Brown fine to coarse sand with gravel (very dense, moist)			

Refusal at 13 feet below ground surface

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

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Log of Boring SB-23

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Drilled Start 3/8/2022 End 3/8/2022	Total Depth (ft) 7.5	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Direct Push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data N/A		Drilling Equipment GeoProbe	
Easting (X) Northing (Y) Undetermined		System Datum WA State Plane North NAD83 (feet)		Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		42					CC	Approximately 8 inches cement concrete			
								SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist)	NS	5.9	
						SB-24-3-4			With small cobbles	NS	27.3	
			12							NS	20.3	
	5		30						Without cobbles			
										NS	11.8	
						SB-24-6.5-7.5			With cobbles	NS	14.6	

Refusal at 7½ feet below ground surface

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-24

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-6
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 3/8/2022	End 3/8/2022	Total Depth (ft)	8	Logged By	PDR	Driller	Holt Services	Drilling Method	Direct Push
					Checked By	GRL				

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data	N/A	Drilling Equipment	GeoProbe
Easting (X) Northing (Y)	Undetermined	System Datum	WA State Plane North NAD83 (feet)	Groundwater not observed at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		54					CC	Approximately 6 inches cement concrete			
								SP-SM	Brown fine to coarse sand with silt and gravel (moist)	NS	15.4	
								SM	Brown silty fine to medium sand (moist to wet)	NS	62.8	
						SB-25-3.5-4.5		SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist)	NS	69.3	
	5		36									
						SB-25-6-7				NS	7.7	
								SM	Brown silty fine to coarse sand with occasional gravel (moist) (till)			
									Refusal at 8 feet below ground surface on boulder			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-25

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-7
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 3/7/2022 End 3/7/2022	Total Depth (ft) 15	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Direct Push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data N/A		Drilling Equipment GeoProbe	
Easting (X) Northing (Y) Undetermined		System Datum WA State Plane North NAD83 (feet)		Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0							CC	Approximately 6 inches cement concrete			
								SM	Brown silty fine to coarse sand with occasional gravel (moist)	NS	<1	
			60					SP-SM	Gray fine to coarse sand with silt and occasional gravel (moist)	NS	1.7	
						SB-26-3-4			Increased gravel content			
	5		36			SB-26-6-7				NS	<1	
								NR	No recovery			
	10		36					SP-SM	Gray fine to coarse sand with silt and occasional gravel (moist)	NS	1.4	
						SB-26-11-12		SM	Gray silty fine sand with occasional gravel (moist to wet)			
								ML	Gray silt with sand (moist)			
								NR	No recovery			
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-26

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-8
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 3/7/2022	End 3/7/2022	Total Depth (ft) 15	Logged By PDR / Checked By GRL	Driller Holt Services	Drilling Method Direct Push
Surface Elevation (ft) / Vertical Datum	Undetermined		Hammer Data	N/A	Drilling Equipment	GeoProbe
Easting (X) / Northing (Y)	Undetermined		System Datum	WA State Plane North NAD83 (feet)	See "Remarks" section for groundwater observed	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0					CC	Approximately 32 inches cement concrete			Groundwater observed at approximately 5 feet
		24		SB-27-3-4		SM	Geotextile fabric Gray silty fine to coarse sand with occasional gravel and pea gravel	NS	<1	
	5	60		SB-27-6-7		SP-SM	Without gravel, pea gravel, becomes wet Gray fine sand with silt and pea gravel (wet)	NS	3.1	
						ML	Gray silt with sand (moist)			
						SM	Gray silty fine sand with occasional sand (wet)			
						SP	Gray fine to medium sand with trace silt (wet)	NS	<1	
	10	36		SB-27-10-11		SP-SM	Gray fine to medium sand with silt (wet)	NS	<1	
						ML	Gray silt with sand and occasional gravel (moist)			
				SB-27-12.5-13		NR	No recovery	SS	<1	
	15									

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-27

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-9
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 3/7/2022	End 3/7/2022	Total Depth (ft)	15	Logged By	PDR	Driller	Holt Services	Drilling Method	Direct Push
					Checked By	GRL				

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data	N/A	Drilling Equipment	GeoProbe
Easting (X) Northing (Y)	Undetermined	System Datum	WA State Plane North NAD83 (feet)	See "Remarks" section for groundwater observed	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48					AC	Approximately 2½ inches asphalt concrete pavement			
								GP	Gravel base course			
						SB-28-2.5-3		SM	Brown silty fine to coarse sand with occasional gravel (moist) Becomes gray with occasional organics	SS	<1	
								SM	With small wood chips	SS	<1	
	5		48						Brown silty fine sand (moist to wet)	SS	<1	
									With black organics (wood)			
								ML	Gray silt with occasional sand (wet)	SS	<1	Groundwater observed at approximately 7 feet during drilling
						SB-28-8.5-9						
	10		60					ML/CL	Brown silt to clay with occasional sand (wet)			
						SB-28-13.5-14				SS	<1	
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-28

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-10
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 3/10/2022 End 3/10/2022	Total Depth (ft) 3	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Direct Push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data N/A		Drilling Equipment GeoProbe	
Easting (X) Northing (Y) Undetermined		System Datum WA State Plane North NAD83 (feet)		Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		24			SB-29-0-2		CC	Approximately 3 inches cement concrete	NS	<1	
								ML	Gray silt with sand (very hard, moist)			
								NR	No recovery			
								ML	Gray silt with sand (very hard, moist)			
									Refusal at 3 feet below ground surface			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-29

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-11
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001100.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 3/9/2022 End 3/9/2022	Total Depth (ft) 19	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Direct Push	
Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data	N/A	Drilling Equipment	GeoProbe
Easting (X) Northing (Y)	Undetermined	System Datum	WA State Plane North NAD83 (feet)	See "Remarks" section for groundwater observed	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		54					CC	Approximately 6 inches cement concrete			
								GP-GM	Brown fine to coarse gravel with silt and wood debris	NS	<1	
								SM	Gray silty fine sand with gravel (moist)			
						SB-30-3-4			Grades to dark gray	NS	<1	
	5		48						Without gravel, becomes moist to wet			
								OH	Black organic silt (moist to wet)			
						SB-30-7.5-8.5			Becomes wet	NS	<1	Groundwater observed at approximately 8 feet during drilling
			12									
	10		60			SB-30-10-11			Becomes dark brown	NS	<1	
								ML	Tan silt (moist)	NS	<1	
						SB-30-13.5-14.5				NS	<1	
	15		48					SP	Dark gray fine to coarse sand with trace silt and gravel (moist)	NS	<1	
									Becomes light brown	NS	<1	
						SB-30-17-18			Becomes gray	NS	<1	

Refusal at 19 feet below ground surface

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-30

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-12
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 3/9/2022	End 3/9/2022	Total Depth (ft)	15	Logged By	PDR	Driller	Holt Services	Drilling Method	Direct Push
					Checked By	GRL				

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data	N/A	Drilling Equipment	GeoProbe
Easting (X) Northing (Y)	Undetermined	System Datum	WA State Plane North NAD83 (feet)	See "Remarks" section for groundwater observed	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		54					CC	Approximately 3 inches cement concrete	NS	<1	
								SM	Brown-gray silty fine to coarse sand with gravel (moist) (fill)	NS	<1	
						SB-31-2-3		SM/ML	Dark gray silty fine to medium sand to silt with sand (moist to wet)	NS	<1	
	5		48					ML	Gray-black silt with sand (moist)			
									Increased sand content			
								PT	Brown fibrous peat (moist)			
						SB-31-8-9		ML	Tan silt with sand (moist to wet)	NS	<1	
								NR	No recovery			
	10		60					SP-SM	Gray fine sand with silt (wet)			Groundwater observed at approximately 10½ feet during drilling
						SB-31-11.5-12.5				NS	<1	
						SB-31-14-15				NS	<1	
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-31

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-13
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 3/9/2022	End 3/9/2022	Total Depth (ft)	15	Logged By	PDR	Driller	Holt Services	Drilling Method	Direct Push
					Checked By	GRL				

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data	N/A	Drilling Equipment	GeoProbe
Easting (X) Northing (Y)	Undetermined	System Datum	WA State Plane North NAD83 (feet)	See "Remarks" section for groundwater observed	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		54					AC	Approximately 3 inches asphalt concrete pavement			
								GM	Brown silty fine to coarse gravel (moist)			
						SB-32-2-3		ML	Gray silt (moist)	NS	<1	
								SP-SM	Dark brown fine sand with silt (moist)			
						SB-32-4-5				NS	<1	
	5		30					PT	Brown peat (moist)			
								ML	Gray silt with sand (wet)			Groundwater observed at approximately 6 feet during drilling
						SB-32-6.5-7.5				NS	<1	
								NR	No recovery			
	10		60					ML	Brown silt with sand and occasional peat interbedding (wet)	NS	<1	
						SB-32-13-14				NS	<1	
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-32

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-14
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 3/9/2022 End 3/9/2022	Total Depth (ft) 7	Logged By PDR Checked By GRL	Driller Holt Services	Drilling Method Direct Push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data N/A		Drilling Equipment GeoProbe	
Easting (X) Northing (Y) Undetermined		System Datum WA State Plane North NAD83 (feet)		Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0	32					CC	Approximately 8 inches cement concrete			
							SP-SM	Brown fine sand with silt and occasional gravel (moist)	NS	<1	
					SB-33-2-3		CC	Approximately 1½-inch cement concrete layer	NS	<1	
		12					SM	Yellow silty fine to coarse sand with gravel and occasional cobbles (moist)	NS	<1	
		12			SB-33-4-5			Becomes light brown	NS	<1	
	5	24									
							SP-SM	Gray-brown fine to coarse sand with silt and occasional gravel (very dense, moist)	NS	<1	
								Refusal at 7 feet below ground surface			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal undetermined. Vertical undetermined.

Log of Boring SB-33

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-00

Figure A-15
Sheet 1 of 1

Date:11/8/22 Path:P:\25\25806001\GINT\25806001GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 6/2/2023 End 6/2/2023	Total Depth (ft) 15	Logged By PDR Checked By GRL	Driller Cascade Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) Vertical Datum Undetermined NAVD88		Hammer Data Pneumatic		Drilling Equipment Geoprobe Macrocore	
Easting (X) Northing (Y)		System Datum WA State Plane North NAD83 (feet)		See "Remarks" section for groundwater observed	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		60			SB-34-2-3		SM	Brown silty fine to coarse sand with occasional gravel and trace organic matter (moist)			
								SP-SM	Brown fine to coarse sand with silt (moist)	NS	38.2	
									Gray silty fine to coarse sand with occasional gravel (very dense, moist) (till)			
	5		60			SB-34-9-10		SM	Gray silty fine to coarse sand with gravel (moist)	NS	<1	
										NS	1.6	
	10		60			SB-34-13-14				NS	<1	
									Fine sand seam (wet)			Groundwater observed at approximately 13½ feet bgs during drilling
								SM	Gray silty fine to coarse sand (moist)			
	15								Boring terminated at 15 feet bgs			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring SB-34

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-7
Sheet 1 of 1

Date:7/24/23 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 6/2/2023 End 6/2/2023	Total Depth (ft) 10	Logged By PDR Checked By GRL	Driller Cascade Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) Vertical Datum Undetermined NAVD88	Hammer Data Pneumatic	Drilling Equipment Geoprobe Macrocore			
Easting (X) Northing (Y)	System Datum WA State Plane North NAD83 (feet)	Groundwater not observed at time of exploration			
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		60			SB-35-3-4		SP-SM	Brown fine sand with silt and trace organic matter (moist)			
								SM	Gray silty fine to coarse sand with occasional gravel (moist)	NS	<1	
	5		60			SB-35-8-9			Increased gravel content (very dense, moist to wet)	NS	<1	
	10								Boring terminated at 10 feet bgs due to refusal			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring SB-35

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-8
Sheet 1 of 1

Date:7/24/23 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 6/2/2023	End 6/2/2023	Total Depth (ft)	13	Logged By	PDR	Driller	Cascade Drilling	Drilling Method	Direct-Push
					Checked By	GRL				

Surface Elevation (ft) Vertical Datum	Undetermined NAVD88	Hammer Data	Pneumatic	Drilling Equipment	Geoprobe Macrocore
Easting (X) Northing (Y)		System Datum	WA State Plane North NAD83 (feet)	Groundwater not observed at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		60			SB-36-2-3.5		SP-SM	Brown fine to coarse sand with silt, gravel and occasional organic matter (moist)	NS	<1	
								SM	Gray silty fine sand with occasional medium to coarse sand (moist)			
	5		60			SB-36-10-11.5				NS	<1	
								SM	Gray silty fine to coarse sand with gravel (moist)			
										NS	<1	
	10		36			SB-36-10-11.5			Becomes moist to wet	NS	<1	

Boring terminated at 13 feet bgs due to refusal

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring SB-36

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-9
Sheet 1 of 1

Date:7/24/23 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 6/2/2023 End 6/2/2023	Total Depth (ft) 15	Logged By PDR Checked By GRL	Driller Cascade Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) Vertical Datum Undetermined NAVD88		Hammer Data Pneumatic		Drilling Equipment Geoprobe Macrocore	
Easting (X) Northing (Y)		System Datum WA State Plane North NAD83 (feet)		See "Remarks" section for groundwater observed	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		60			SB-37-2-3		SM	Brown silty fine to coarse sand with trace organic matter (topsoil/fill)			
								SP-SM	Gray fine to coarse sand with silt and gravel (moist)	NS	11.3	
								ML	Brown silt with sand (moist)			
	5		60							NS	<1	
	10		60			SB-37-12.5-13.5				NS	<1	
								SP	Brown fine to coarse sand with trace silt (wet)			Groundwater observed at approximately 12½ feet bgs during drilling
								SM	Gray silty fine to coarse sand with occasional gravel (moist)			
	15								Boring terminated at 15 feet bgs			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring SB-37

GeoEngineers

Project: Dick Morgan - Precision Engineering Remedial Investigation
Project Location: Seattle, Washington
Project Number: 25806-001-01

Figure A-10
Sheet 1 of 1

Date:7/24/23 Path:P:\25\25806001\GINT\25806001.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Appendix E
Monitoring Well Survey

True NORTH LAND SURVEYING, INC.
206.332.0800

JOB# 22-22.03
GEO ENGINEERS
Garrett R. Leque

1231 S. Director St. Seattle, WA

Survey Date: June 1, 2022

Monitoring Wells

MW	Northing	Easting	Rim Elev.	PVC Elev.	GND Elev.	Notes	Pt #
	193836.415	1274134.718	22.171			Set magnail and TNLS washer	1
	193651.079	1274077.915	21.635			Set magnail and TNLS washer	2
MW-1	193678.728	1273780.677	27.599	26.832	23.286	CL CASE LID	1023
MW-2	193769.708	1274101.530	22.774	22.567	N/A	CL CASE LID	1007
MW-3	193981.498	1274093.327	23.429	23.227	22.349	CL CASE LID	1001
MW-4	193714.921	1273974.274	24.526	24.278	23.410	CL CASE LID	1021
MW-5	193792.672	1274034.340	23.996	23.583	N/A	CL CASE LID	1015
MW-6	193824.237	1274124.118	22.228	21.658	N/A	CL CASE LID	1004
MW-7	193768.967	1274121.007	21.764	21.529	N/A	CL CASE LID	1006
MW-8	193673.292	1274082.905	21.419	21.056	N/A	CL CASE LID	1010
MW-9	193692.572	1274116.479	20.927	20.647	N/A	CL CASE LID	1009
MW-10	193696.368	1274117.517	20.966	20.503	N/A	CL CASE LID	1008
MW-11	193912.932	1274123.001	22.669	22.471	N/A	CL CASE LID	1002
MW-12	193812.660	1273867.012	24.154	23.554	N/A	CL CASE LID	1022
MW-13	193806.417	1273768.709	23.459	23.208	N/A	CL CASE LID	1026
MW-14	193875.263	1274050.796	23.895	23.491	N/A	CL CASE LID	1013
MW-15	193803.216	1274032.721	23.976	23.309	N/A	CL CASE LID	1014
MW-16	193819.245	1274106.085	22.767	22.279	N/A	CL CASE LID	1005
MW-17	193889.183	1274120.613	22.654	22.347	N/A	CL CASE LID	1003
MW-18	193650.092	1274037.413	23.002	22.507	N/A	CL CASE LID	1018

Notes:

1. Horizontal NAD 83/11. Used the WSDOT Mon "GP17005-175"
2. Vertical datum is NAVD 88. Used the WSDOT Mon "GP17005-176".
3. The elevations of the Rims, Ground and 2" PVC pipes are at the north edge.

   Except for MW-4 which is located on the SE Rim of PVC due to the condition of the pipe.
4. Differential levels were done using a Leica LS10 #2
5. Ground elevations are for stickup wells MW-1, MW-3, and MW-4 only.
6. "CL Case Lid" is for Horizontal reference only.

True NORTH LAND SURVEYING, INC.
206.332.0800

JOB# 22-22.05
GeoEngineers
Garrett Leque, LG

1231 S. Director St., Seattle, WA

Survey Date: June 29, 2023

Monitoring Wells

MW	Tag #	Northing	Easting	Rim Elev.	PVC Elev.	Gnd. Elev.	Notes	Pt #
		213181.339	1279130.175	53.499			Set Mag Nail and TNLS Washer	1
		213238.039	1278994.414	52.608			Set Mag Nail and TNLS Washer	2
MW19	BPR-321	193591.121	1274047.162	24.867	24.521	21.949	2" PVC	2032
MW20	BPR-320	193603.296	1274171.456	22.696	22.282	20.171	2" PVC	2031
MW21	BPR-323	193708.000	1274244.534	22.901	22.672	19.567	2" PVC	2030
MW22	BPR-322	193725.059	1274249.396	22.819	22.604	19.824	2" PVC	2029
MW23	BPR-319	193850.798	1274278.732	23.646	23.09	20.765	2" PVC	2028

Notes:

1. Horizontal NAD 83/11, Vertical NAVD 88. Used existing control from previous project J22-22.03
2. The elevations of the Lids and 2" PVC pipes are at the north edge.
4. Differential levels were done using a Leica LS10 #1
5. Ground elevations are for stickup wells MW19 through MW23.

Appendix F
Historical Data 1989 to 2005

Table A1: Historical Soil Investigation Analyses

Sample Location	Sample Depth (ft bgs)	Date	EP TOX Metals (mg/L)										DATA SOURCE
			Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Selenium	Silver	Zinc	
HA-1	2.8-3.0	5/23/1988				29.7							Sweet-Edwards/EMCON 1988
HA-2	4.3-4.6	5/23/1988				12.0							Sweet-Edwards/EMCON 1988
HA-3	2.3-3.0	5/23/1988				99.5							Sweet-Edwards/EMCON 1988
HA-4	3.5-3.9	5/23/1988				43.6							Sweet-Edwards/EMCON 1988
HA-5	6.5-6.8	5/23/1988				84.4							Sweet-Edwards/EMCON 1988
HA-6	2.8-3.3	5/23/1988				184.0							Sweet-Edwards/EMCON 1988
B-1 (S-1)	2.5	3/7/1989	<0.03	0.018	<0.005	<0.005	<0.005	<0.03	<0.02	<0.03	<0.01	0.01	Sweet-Edwards/EMCON 1989a
B-1 (S-2)	5.0	3/7/1989	<0.03	0.024	<0.005	<0.005	<0.005	<0.03	0.02	<0.03	<0.01	0.01	Sweet-Edwards/EMCON 1989a
B-1 (S-3)	7.5	3/7/1989	<0.03	0.025	<0.005	<0.005	0.006	<0.03	0.02	<0.03	<0.01	0.02	Sweet-Edwards/EMCON 1989a
B-1 (S-4)	10.0	3/7/1989	<0.03	0.011	<0.005	<0.005	<0.005	<0.03	<0.02	<0.03	<0.01	0.01	Sweet-Edwards/EMCON 1989a
B-1 (S-5)	12.5	3/7/1989	<0.03	0.016	<0.005	<0.005	<0.005	<0.03	<0.02	<0.03	<0.01	<0.01	Sweet-Edwards/EMCON 1989a
B-1 (S-6)	15.0	3/7/1989	<0.03	<0.01	<0.005	<0.005	<0.005	<0.03	<0.02	<0.03	<0.01	0.01	Sweet-Edwards/EMCON 1989a
B-1 (S-7)	17.5	3/7/1989	<0.03	0.016	<0.005	<0.005	<0.005	<0.03	<0.02	<0.03	<0.01	<0.01	Sweet-Edwards/EMCON 1989a
B-1 (S-8)	20.0	3/7/1989	<0.03	0.016	<0.005	<0.005	<0.005	<0.03	0.04	<0.03	<0.01	0.015	Sweet-Edwards/EMCON 1989a
HA-7		9/30/1989				1.01							Sweet-Edwards/EMCON 1989d
HA-8		9/30/1989				1.01							Sweet-Edwards/EMCON 1989d
HA-9		9/30/1989				1.40							Sweet-Edwards/EMCON 1989d
HA-10		9/30/1989				<0.01							Sweet-Edwards/EMCON 1989d
HA-11		9/30/1989				0.02							Sweet-Edwards/EMCON 1989d
HA-12		9/30/1989				<0.01							Sweet-Edwards/EMCON 1989d
HA-13		9/30/1989				0.16							Sweet-Edwards/EMCON 1989d
B-1 (S-2)	9.5-10.5	11/29/1989				<0.01							Sweet-Edwards/EMCON 1990a
B-2 (S-2)	9.8-11.0	11/29/1989				0.03							Sweet-Edwards/EMCON 1990a
B-3 (S-1)	4.5-6.0	11/29/1989				0.44							Sweet-Edwards/EMCON 1990a
B-5 (S-4)	5.5-7.0	11/30/1989				68.9							Sweet-Edwards/EMCON 1990a
B-5 (S-5)	7.0-8.5	11/30/1989				61.9							Sweet-Edwards/EMCON 1990a
B-5 (S-6)	8.5-9.2	11/30/1989				4.12							Sweet-Edwards/EMCON 1990a

Notes:

"<" indicates analyte was not detected above the specified laboratory reporting limit.

Indicates analysis not performed/reported.

mg/L = milligrams per liter

ft bgs = feet below ground surface

Table A2: Historical Groundwater Investigation Analyses - Monitoring Wells and Reconnaissance Samples

Sample ID	Date	Hydrocarbons (µg/L)		Metals (µg/L)																			VOCs (µg/L)	
		Diesel-range	Oil-range	Antimony	Arsenic	Beryllium	Cadmium	Total Chromium	Dissolved Chromium	Hexavalent chromium	Copper	Dissolved Copper	Lead	Dissolved Lead	Mercury	Dissolved Mercury	Nickel	Dissolved Nickel	Selenium	Silver	Thallium	Zinc	Dissolved Zinc	Acetone	Benzene
Monitoring Wells																								
MW1	6/22/1988							40																
	3/8/1990							332	<5		240	<10	57	<2	0.5	<0.5	360	<20				620	<10	21	<1
	6/16/2005							<20		269														<5	<1
	12/27/2005	<248	<495	<3	32.3	<1	<1	<1		<6.25	1.01		<1		<0.2		<1.00		<1	<1	<1	<10			
	4/18/2006	<260	<520		33			<0.14		<20	<2		<0.016						<1.1						
	7/15/2010	<76	<380		28.1					<1.3	<0.2								<0.1						
MW2	6/22/1988							278																	
	5/5/1989							6																	
	3/8/1990	<50	<50					<5	<5		<10	<10	4	<2	<0.5	<0.5	<20	<20				30	<10	<10/ <10	<1/ <1
	6/17/2005	438	512					<20		<10														17.1	<1
	12/28/2005	1,190	1,040	<3	5.63	<1	<1	8.79		<6.25	1.17		<1		<0.2		2.51		6.28	<1	<1	<10			
	4/19/2006	410	<580		3.8			21		<20	2.5		<0.016												
	7/15/2010	280	<390		2.3			6.7		<6.5	<0.2								0.71						
MW3	6/22/1988							923																	
	5/5/1989							28																	
	3/8/1990							57	<5		40	<10	9	<2	<0.5	<0.5	50	<20				90	<10	<10	<1
	6/7/2005							<20		<10														<5	<1
	12/29/2005	312	<505	<3	15.3	<1	<1	2.15		<6.25	<1.00		<1		<0.2		1.7		<1	<1	<1	<10			
	4/17/2006	<280	<570		13			7.8		<20	<2		<0.016						<1.1						
	7/13/2010	<82	<410		14.5			2.1		<100	<0.2								<0.1						
MW4	3/8/1990							239	<5		150	<10	35	<2	<0.5	<0.5	260	<20				370	<10	<10	<1
	6/9/2005							<20/ <20		<10/ <10														<5/ <5	<1/ <1
	12/27/2005	<248	<495	<3	15.1	<1	<1	<1		<6.25	<1.00		<1		<0.2		1.33		<1	<1	<1	<10			
	4/18/2006	<270	<540		15			2		23	<2		<0.016						<1.1						
	7/15/2010	<78	<390		11.2					<1.3	<0.2								<0.1						
MW5	12/28/2005	831	<495	<3	4.59	<1	<1	497,000		450,000	3.67		<1		<0.2		32.2		<1000	<1	<1	14.0			
	4/19/2006	<260	<510		4.9			382,000		350,000	<2		<0.016						<1.1						
	7/16/2010	130	<390		<0.31			207,600		81,600	<1								<0.52						
MW6	12/29/2005	2,640	1,320	<3	11.9	<1	<1	18.7		<6.25	4.02		<1		<0.2		16.3		12.3	<1	<1	<10			
	4/19/2006	760	1200		24			47		<20	5.1		<0.016						19						
	7/16/2010	730	930		35.7			27.5		<1.3	0.54								2.9						
MW7	12/28/2005	<248	<495	<3	6.62	<1	<1	10.6		7.38	2.12		<1		<0.2		11.8		2.77	<1	<1	10.8			
	4/18/2006	<260/ <260	<510/ <510		7.1/ 7.3			13/ 13		<20 / <20	2.4/ 3.3		<0.016/ <0.016						5.0/ 4.6						
	7/13/2010	<80/ <77	<400/ <380		5.6/ 5.4			1.3/ 1.3		<1.3/ <1.3	2.9/ 2.9								<0.1/ <0.1						
MW8	12/28/2005	1,710/ 1,790	1,000/ 1,210	<3/ <3	6.41/ 7.85	<1 / <1	<1 / <1	7.55/ 8.49		<6.25/ <6.25	<1/ 1.03		<1/ <1		<0.2		2.91/ 3.14		4.11/ 4.27	<1 / <1	<1/ <1	<10 / <10			
	4/18/2006	450	<580		4.8			21		<20	<2		<0.016						3.6						
	7/15/2010	280	<390		6.3			8.4		<6.5	<0.2								<0.1						
Reconnaissance Groundwater Samples																									
GP2	6/9/2005							37,100		4,720			<15000											295	<5
GP4	6/16/2005	0.325	<0.478					267,000		236,000														40.5	<1
GP5	6/16/2005							<20		89.7														7.2	<1
GP6	6/16/2005							343,000		300,000														<100	<20
GP7	6/16/2005							<20		101														<5	<1
GP8	6/16/2005	0.814	<0.479					355,000		294,000														75.8	<1
GP-13	12/14/2005																								
GP-15	12/14/2005																								

Table A2: Historical Groundwater Investigation Analyses - Monitoring Wells and Reconnaissance Samples

Sample ID	Date	VOCs (µg/L)																										
		Bromobenzene	Bromodichloro-methane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride	1,1,2-Trichloro-1,2,2,-trifluoroethane	Chlorobenzene	Chlorobromo-methane	Chloroethane	2-Chloroethylvinyl-ether	Chloroform	Chloromethane	1,2-Dibromo-3-chloropropane	2-Chlorotoluene	4-Chlorotoluene	Dibromochloro-methane	1,2-Dibromoethane	Dibromomethane	1,2-Dichlorobenzene	1,3-Dichloro-benzene	1,4-Dichloro-benzene	Dichlorodifluoro-methane
Monitoring Wells																												
MW1	6/22/1988																											
	3/8/1990		<1	<1	<1	<10				<1	<1	<10	<1		<1	<10	<1	<1				<1			<1	<1	<1	
	6/16/2005	<1	<1	<1	<1	<5	<1	<1	<1		<1		<1	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	12/27/2005					<2																						
	4/18/2006																											
	7/15/2010																											
MW2	6/22/1988																											
	5/5/1989																											
	3/8/1990		<1/ <1	<1/ <1	<1/ <1	<10/ <10				<1/ <1	<1/ <1	<10/ <10	<1/ <1		<1/ <1	<10/ <10	<1/ <1	<1/ <1				<1/ <1			<1/ <1	<1/ <1	<1/ <1	
	6/17/2005	<1	<1	<1	<1	5.43	<1	<1	<1		<1		<1	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<1	
	12/28/2005					<2																						
	4/19/2006																											
	7/15/2010																											
MW3	6/22/1988																											
	5/5/1989																											
	3/8/1990		<1	<1	<1	<10				<1	<1	<10	<1		<1	<10	<1	<1				<1			<1	<1	<1	
	6/7/2005	<1	<1	<1	<1	<5	<1	<1	<1		<1		<1	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	12/29/2005					<2																						
	4/17/2006																											
	7/13/2010																											
MW4	3/8/1990		<1	<1	<1	<10				<1	<1	<10	<1		<1	<10	<1	<1				<1			<1	<1	<1	
	6/9/2005	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<5/ <5	<1/ <1	<1/ <1	<1/ <1		<1/ <1		<1/ <1	<1/ <1	<1/ <1		<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1
	12/27/2005					<2																						
	4/18/2006																											
	7/15/2010																											
MW5	12/28/2005					34																						
	4/19/2006																											
	7/16/2010																											
MW6	12/29/2005					10.7																						
	4/19/2006																											
	7/16/2010																											
MW7	12/28/2005					<2																						
	4/18/2006																											
	7/13/2010																											
MW8	12/28/2005					17/ 15.5																						
	4/18/2006																											
	7/15/2010																											
Reconnaissance Groundwater																												
GP2	6/9/2005	<5	<5	<5	<5	729	<5	<5	<5		<5	<5					<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GP4	6/16/2005	<1	<1	<1	<1	<5	<1	<1	<1		<1	<1					<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP5	6/16/2005	<1	<1	<1	<1	<5	<1	<1	<1		<1	<1					<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP6	6/16/2005	<20	<20	<20	<20	<100	<20	<20	<20		<20	<20					<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
GP7	6/16/2005	<1	<1	<1	<1	<5	<1	<1	<1		<1	<1					<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP8	6/16/2005	<1	<1	<1	<1	10.3	<1	<1	<1		<1	<1					<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-13	12/14/2005					<2																						
GP-15	12/14/2005					2.07																						

Table A2: Historical Groundwater Investigation Analyses - Monitoring Wells and Reconnaissance Samples

Sample ID	Date	VOCs (µg/L)																											
		1,1-Dichloroethene	1,2-Dichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane	1,1-Dichloropropene	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	Ethylbenzene	Hexachloro-butadiene	2-Hexanone	Isopropylbenzene	4-Isopropyl-toluene	4-Methyl-2-pentanone	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	1,1,1,2-Tetrachloro-ethane	1,1,2,2-Tetrachloro-ethane	Tetrachloroethene	Toluene	1,2,3-Trichloro-benzene
Monitoring Wells																													
MW1	6/22/1988																												
	3/8/1990	<1	<1	<1	<1	<1	<1				<1	<1	<1		<10			<10		12			<1	<1		<1	<1	
	6/16/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	12/27/2005				<0.200	<0.200																							
	4/18/2006				<0.062	<0.091																							
	7/15/2010																												
MW2	6/22/1988																												
	5/5/1989																												
	3/8/1990	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1				<1/ <1	<1/ <1	<1/ <1		<10/ <10			<10/ <10		<10/ <10			<1/ <1	<1/ <1		<1/ <1	<1/ <1	
	6/17/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	12/28/2005				<0.200	<0.200																							
	4/19/2006				<0.062	<0.091																							
	7/15/2010																												
MW3	6/22/1988																												
	5/5/1989																												
	3/8/1990	<1	<1	<1	<1	<1	<1				<1	<1	<1		<10			<10		<10			<1	<1		<1	<1	
	6/7/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	12/29/2005				<0.200	<0.200																							
	4/17/2006				<0.062	<0.091																							
	7/13/2010																												
MW4	3/8/1990	<1	<1	<1	<1	<1	<1				<1	<1	<1		<10			<10		<10			<1	<1		<1	<1	
	6/9/2005	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1		<1/ <1	<1/ <1	<5/ <5	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1
	12/27/2005				<0.200	<0.200																							
	4/18/2006				<0.062	>0.091																							
	7/15/2010																												
MW5	12/28/2005				2.42	0.260																							
	4/19/2006				1.1	<0.091																							
	7/16/2010																												
MW6	12/29/2005				<1.00	<1.00																							
	4/19/2006				<0.062	<0.091																							
	7/16/2010																												
MW7	12/28/2005				<0.200	<0.200																							
	4/18/2006				<0.062/ <0.062	<0.091/ <0.091																							
	7/13/2010																												
MW8	12/28/2005				1.03/ 0.920	<0.200/ <0.200																							
	4/18/2006				1.5	<0.091																							
	7/15/2010																												
Reconnaissance Groundwater																													
GP2	6/9/2005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<25	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GP4	6/16/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP5	6/16/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP6	6/16/2005	<20	<20	<20	144	<20	<20	<20	<20	<20	<20	<20	<20	<20		<20	<20	<100	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
GP7	6/16/2005	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP8	6/16/2005	<1	<1	<1	2.26	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<5	<1	<1	87	<1	<1	<1	<1	<1	<1	<1	<1
GP-13	12/14/2005				6.03	1.01																							
GP-15	12/14/2005				0.2	<0.2																							

Table A2: Historical Groundwater Investigation Analyses - Monitoring Wells and Reconnaissance Samples

Sample ID	Date	VOCs (µg/L)													PAHs (µg/L)											
		1,2,4-Trichloro-benzene	1,1,1-Trichloro-ethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoro-methane	1,2,3-Trichloro-propane	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Vinyl Acetate	Vinyl chloride	m,p-Xylene	o-Xylene	Total Xylenes	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene	Benzo(a)pyrene	Benzo(b)-fluoranthene	Benzo(k)-fluoranthene	Benzo(b+k)-fluoranthene	Benzo(ghi)-perylene	2-Chloro-naphthalene	Chrysene	Dibenzo(a,h)-anthracene
Monitoring Wells																										
MW1	6/22/1988																									
	3/8/1990		<1	<1	<1	<1				<10	<1			<1	<1	<1	<1	<1	<1			<2	<1		<1	<2
	6/16/2005	<1	<1	<1	<1	<1	<1	<1	<1		<1	<2	<1													
	12/27/2005				<0.200						<0.200				<0.114	<0.114	<0.114	0.107	<0.0114	0.104	0.108		<0.114		0.132	<0.0114
	4/18/2006				<0.055						<0.14				0.0038 J	0.020 J	0.030 J	0.029 J	<0.057			<0.030	<0.017		0.014 J	<0.011
	7/15/2010				<0.50						<0.20							<0.015	<0.015	<0.015	<0.015				<0.015	<0.015
MW2	6/22/1988																									
	5/5/1989																									
	3/8/1990		<1/ <1	<1/ <1	<1/ <1	<1/ <1				<10/ <10	<1/ <1			<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1			<2/ <2	<1/ <1		<1/ <1	<2/ <2
	6/17/2005	<1	<1	<1	<1	<1	<1	<1	<1		<1	<2	<1		<0.192	<0.192	<0.192	<0.192	<0.192			<0.962	<0.192	<0.192	<0.192	<0.192
	12/28/2005				<0.200						<0.200				<0.0990	<0.0990	<0.0990	<0.0990	<0.00990	<0.00990	<0.00990		<0.0990		<0.0990	<0.0990
	4/19/2006				<0.055						<0.14				0.015 J	<0.0044	0.035 J	0.031 J	<0.066			<0.034	<0.020		<0.0098	<0.013
	7/15/2010				<0.50						<0.20							<0.015	<0.015	<0.015	<0.015				<0.015	<0.015
MW3	6/22/1988																									
	5/5/1989																									
	3/8/1990		<1	<1	<1	<1				<10	<1			<1	<1	<1	<1	<1	<1			<2	<1		<1	<2
	6/7/2005	<1	<1	<1	<1	<1	<1	<1	<1		<1	<2	<1													
	12/29/2005				<0.200						<0.200				<0.100	<0.100	<0.100	<0.100	<0.0100	<0.0100	<0.0100		<0.0100		<0.0100	<0.0100
	4/17/2006				<0.055						<0.14				<0.0032	<0.0042	<0.0084	<0.0095	<0.063			<0.033	<0.019		<0.0095	<0.013
	7/13/2010				<0.50						<0.20							<0.015	<0.015	<0.015	<0.015				<0.015	<0.015
MW4	3/8/1990		<1	<1	<1	<1				<10	<1			<1	<1	<1	<1	<1	<1			<2	<1		<1	<2
	6/9/2005	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1	<1/ <1		<1/ <1	<2/ <2	<1/ <1													
	12/27/2005				<0.200						<0.200				<0.100	<0.100	<0.100	<0.100	<0.0100	<0.0100	<0.0100		<0.0100		<0.0100	<0.0100
	4/18/2006				<0.055						<0.14				0.019 J	0.019 J	<0.0082	<0.0092	<0.061			<0.032	<0.018		<0.0092	<0.012
	7/15/2010				<0.50						<0.20							<0.015	<0.015	<0.015	<0.015				<0.015	<0.015
MW5	12/28/2005				22.1						<0.200				<0.0990	<0.0990	<0.0990	<0.0990	<0.00990	<0.00990	<0.00990		<0.00990		<0.00990	<0.00990
	4/19/2006				7.9						<0.14				0.0061 J	0.020 J	0.033 J	<0.0086	<0.057			<0.030	<0.017		<0.0086	<0.011
	7/16/2010				<0.50						<0.20							<0.015	<0.015	<0.015	<0.015				<0.015	<0.015
MW6	12/29/2005				<1.00						<1.00				<0.0990	<0.0990	<0.0990	<0.0990	<0.00990	<0.00990	<0.00990		<0.00990		<0.00990	<0.00990
	4/19/2006				<0.055						<0.14				<0.0031	<0.0041	0.039 J	<0.0093	<0.062			<0.032	<0.019		<0.0093	<0.012
	7/16/2010				<0.50						<0.20							<0.015	<0.015	<0.015	<0.015				<0.015	<0.015
MW7	12/28/2005				<0.200						<0.200				<0.0990	<0.0990	<0.0990	<0.0990	<0.00990	<0.00990	<0.00990		<0.00990		<0.00990	<0.00990
	4/18/2006				<0.055/ <0.055						<0.14/ <0.14				0.011 J/ 0.004 J	0.028 J/ <0.0041	0.037 J/ 0.029 J	0.035 J/ <0.0091	<0.061/ <0.061			<0.031/ <0.031	<0.018/ <0.0181		0.013 J/ <0.009	0.038 J/ <0.012
	7/13/2010				<0.50/ <0.50						<0.20/ <0.20							<0.015/ <0.015	<0.015/ <0.015	<0.015/ <0.015	<0.015/ <0.015				<0.015/ <0.015	<0.015/ <0.015
MW8	12/28/2005				<0.200/ <0.200						0.560/ 0.400				<0.100/ <0.0990	<0.100/ <0.0990	<0.100/ <0.0990	<0.100/ <0.0990	<0.0100/ <0.00990	<0.0100/ <0.00990	<0.0100/ <0.00990		<0.0100/ <0.00990		<0.0100/ <0.00990	<0.0100/ <0.00990
	4/18/2006				<0.055						0.80 J				<0.0038	<0.0050	<0.010	<0.011	<0.00990			<0.039	<0.023		<0.011	<0.015
	7/15/2010				<0.50						<0.20							<0.015	<0.015	<0.015	<0.015				<0.015	<0.015
Reconnaissance Groundwater																										
GP2	6/9/2005	<5	<5	<5	<5	<5	<5	<5	<5		<5	<1	<5													
GP4	6/16/2005	<1	<1	<1	<1	<1	<1	<1	<1		<1	<2	<1			<0.191	<0.191	<0.191	<0.191			<0.954	<0.191	<0.191	<0.191	<0.191
GP5	6/16/2005	<1	<1	<1	<1	<1	<1	<1	<1		<1	<2	<1													
GP6	6/16/2005	<20	<20	<20	1130	<20	<20	<20	<20		<20	<40	<20													
GP7	6/16/2005	<1	<1	<1	<1	<1	<1	<1	<1		<1	<2	<1													
GP8	6/16/2005	<1	<1	<1	16.8	<1	<1	<1	<1		<1	<2	<1			0.328	<0.194	<0.194	<0.194			<0.97	<0.194	<0.194	<0.194	<0.194
GP-13	12/14/2005				0.22						16.5															
GP-15	12/14/2005				<0.2																					

Table A2: Historical Groundwater Investigation Analyses - Monitoring Wells and Reconnaissance Samples

Sample ID	Date	PAHs (µg/L)							
		Fluoranthene	Fluorene	Indeno(1, 2, 3-cd)-pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	Naphthalene	Phenanthrene	Pyrene
Monitoring Wells									
MW1	6/22/1988								
	3/8/1990	<1	<1	<2			<1	<1	<1
	6/16/2005								
	12/27/2005	0.384	<0.114	<0.0114	<0.114	<0.114	<0.114	0.159	0.310
	4/18/2006	0.053 J	<0.0076	0.034 J	<0.030	<0.0086	0.011 J	0.024 J	<0.043
	7/15/2010			<0.015					
MW2	6/22/1988								
	5/5/1989								
	3/8/1990	<1/ <1	<1/ <1	<2/ <2			<1/ <1	<1/ <1	<1/ <1
	6/17/2005	<0.192	<0.192	<0.192		<0.481	0.854	<0.192	<0.192
	12/28/2005	<0.0990	<0.0990	<0.00990	<0.0990	<0.0990	0.271	<0.0990	<0.0990
	4/19/2006	0.032 J	<0.0087	<0.016	<0.035	<0.0096	0.93	<0.0052	<0.014
	7/15/2010			<0.015					
MW3	6/22/1988								
	5/5/1989								
	3/8/1990	<1	<1	<2			<1	<1	<1
	6/7/2005								
	12/29/2005	<0.100	<0.100	<0.0100	<0.100	<0.100	<0.100	<0.100	<0.100
	4/17/2006	<0.0095	<0.0084	<0.016	<0.034	<0.0095	<0.0063	<0.0032	<0.014
	7/13/2010			<0.015					
MW4	3/8/1990	<1	<1	<2			<1	<1	<1
	6/9/2005								
	12/27/2005	<0.100	<0.100	<0.0100	<0.100	<0.100	<0.100	<0.100	<0.100
	4/18/2006	0.029 J	<0.0082	<0.015	<0.033	<0.0092	0.011 J	<0.0064	<0.030
	7/15/2010			<0.015					
MW5	12/28/2005	<0.0990	<0.0990	<0.00990	<0.0990	<0.0990	0.457	<0.0990	<0.0990
	4/19/2006	0.032 J	<0.0076	<0.014	<0.033	0.017 J	0.13 J	<0.014	<0.032
	7/16/2010			<0.015					
MW6	12/29/2005	<0.0990	<0.0990	<0.00990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990
	4/19/2006	0.033 J	<0.0083	<0.016	<0.033	0.012 J	0.013 J	<0.011	<0.034
	7/16/2010			<0.015					
MW7	12/28/2005	<0.0990	<0.0990	<0.00990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990
	4/18/2006	0.036 J/ <0.0091	0.039 J/ <0.0081	0.039 J/ <0.015	<0.032/ <0.032	0.014 J/ <0.0091	0.023 J/ 0.019 J	0.022/ <0.0081	<0.037/ <0.013
	7/13/2010			<0.015/ <0.015					
MW8	12/28/2005	<0.100/ <0.0990	<0.100/ <0.0990	<0.0100/ <0.00990	<0.100	<0.100	<0.100/ <0.0990	<0.100/ <0.0990	<0.100/ <0.0990
	4/18/2006	<0.011	<0.010	<0.019	<0.040	<0.011	<0.0075	<0.0038	<0.016
	7/15/2010			<0.015					
Reconnaissance Groundwater									
GP2	6/9/2005								
GP4	6/16/2005	<0.191	<0.191	<0.191		<0.477	<0.477	<0.191	<0.191
GP5	6/16/2005								
GP6	6/16/2005								
GP7	6/16/2005								
GP8	6/16/2005	<0.194	0.298	<0.194		8.56	26.5	5.54	<0.194
GP-13	12/14/2005								
GP-15	12/14/2005								

Notes:
"<" indicates analyte was not detected above the specified laboratory reporting limit.
Indicates analysis not performed/reported.
J qualifier indicates an estimated concentration.
PAHs = polycyclic aromatic hydrocarbons
VOCs = volatile organic compounds
µg/L = micrograms per liter

Table A3: Historical Drainage Ditch Soil Analyses

Sample Location	Sample Depth (ft bgs)	Date	EP TOX Metals (mg/L)											DATA SOURCE
			Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	
PEI-S1	0-0.5	3/22/1989	<0.01	0.750	0.031	0.046	0.054	1.35	<0.0005	0.250	<0.03	<0.01	5.93	Sweet-Edwards/EMCON 1989b
PEI-S2	0-0.5	3/22/1989	0.067	0.087	0.006	0.010	0.041	<0.03	<0.0005	0.058	<0.03	<0.01	0.206	Sweet-Edwards/EMCON 1989b
PEI-S3	0-0.5	3/22/1989	0.078	0.081	0.008	0.055	0.217	0.466	<0.0005	0.272	<0.03	<0.01	4.81	Sweet-Edwards/EMCON 1989b
PEI-S4	0-0.5	3/22/1989	<0.1	0.350	0.020	0.025	0.247	1.22	<0.0005	0.091	<0.03	<0.01	1.65	Sweet-Edwards/EMCON 1989b
PEI-S5	0-0.5	3/22/1989	<0.1/<0.1	0.311/0.172	0.014/0.004	<0.005/<0.005	0.063/0.064	1.09/1.51	<0.0005/<0.0005	0.062/0.034	<0.03/<0.03	<0.01/<0.01	0.876/0.420	Sweet-Edwards/EMCON 1989b
PEI-S6	0-0.5	3/22/1989	<0.1	0.077	0.004	0.508	0.441	0.321	<0.0005	0.044	<0.03	<0.01	0.917	Sweet-Edwards/EMCON 1989b
PEI-B1	0-0.5	3/22/1989	<0.1	0.025	0.002	<0.005	0.064	0.061	<0.0005	0.031	<0.03	<0.01	0.564	Sweet-Edwards/EMCON 1989b
PEI-B2	0-0.5	3/22/1989	<0.1	0.02	<0.002	0.007	0.049	0.102	<0.0005	0.026	<0.03	<0.01	0.282	Sweet-Edwards/EMCON 1989b
PEI-B3	0-0.5	3/22/1989	0.031	0.372	0.013	0.017	0.123	0.218	<0.0005	0.068	<0.03	<0.01	1.10	Sweet-Edwards/EMCON 1989b
PEI-B4	0-0.5	3/22/1989	<0.1	0.142	0.008	0.010	0.056	0.298	<0.0005	0.039	<0.03	<0.01	16.0	Sweet-Edwards/EMCON 1989b
S-7	0-0.5	11/30/1989				0.02								Sweet-Edwards/EMCON 1990a
S-8	0-0.5	11/30/1989				0.26								Sweet-Edwards/EMCON 1990a
S-9	0.5-1.0	11/30/1989				0.05								Sweet-Edwards/EMCON 1990a
S-10	0.5-1.0	11/30/1989				0.09								Sweet-Edwards/EMCON 1990a
S-11	0-0.5	11/30/1989				0.33								Sweet-Edwards/EMCON 1990a

Notes:

"<" indicates substance was not detected above the specified laboratory reporting limit.

Indicates analysis not performed/reported.

mg/L = milligram per liter

ft bgs = feet below ground surface

Table A4: Historical Soil Analytical Results from Tank 1 and 2 Removal

Sample Location	Sample Depth (ft bgs)	Date	Sample Type	EP Toxicity Chromium (mg/L)	Hexavalent Chromium (mg/kg)	
Tanks 1 and 2						
NW-1	Composite	4/25/1990	Characterization		52	Precision Engineering 1993
WW-1	Composite	4/25/1990	Characterization	1.8	96	Precision Engineering 1993
EW-1	Composite	4/25/1990	Characterization		960	Precision Engineering 1993
BW-1	7-8	4/25/1990	Characterization		68	Precision Engineering 1993
PE-430B	11	4/30/1990	Characterization	30	190	Precision Engineering 1993
PE-430E	Composite	4/30/1990	Confirmation		<0.05	Precision Engineering 1993
PE-430S	Composite	4/30/1990	Confirmation	9.6	73	Precision Engineering 1993
PE-430W	Composite	4/30/1990	Confirmation		7.3	Precision Engineering 1993
PE-430N	Composite	4/30/1990	Confirmation		34	Precision Engineering 1993
BW-2	12	5/3/1990	Confirmation		41	Precision Engineering 1993

Notes:

"<" indicates analyte was not detected above the specified laboratory reporting limit.

Indicates analysis not performed/reported.

mg/kg = milligrams per kilogram

ft bgs = feet below ground surface

mg/L = milligrams per liter

Table A5: Historical Soil Analytical Results from Tanks 3, 4, 5, and 6 Removal

Sample Location	Sample Depth (ft bgs)	Date	Sample Type	EP Toxicity Chromium (mg/L)	Hexavalent Chromium (mg/kg)	
WP-1	Concrete floor	3/9/1993	**	34.7		Precision Engineering 1993
WP-2	Concrete floor	3/9/1993	**	4.20		Precision Engineering 1993
WP-3	Concrete floor	3/9/1993	**	3.51		Precision Engineering 1993
WP-4	Concrete floor	3/9/1993	**	17.5		Precision Engineering 1993
WP-5	0-0.5	3/9/1993	Characterization	37.3		Precision Engineering 1993
WP-6	0.5	3/9/1993	Characterization	89.0		Precision Engineering 1993
WP-7	Composite	3/11/1993	**	128	5,300	Precision Engineering 1993
WP-8	Composite	3/11/1993	**	159	7,470	Precision Engineering 1993
WP-9	Composite	3/12/1993	**	174	6,080	Precision Engineering 1993
WP-10	Composite	3/12/1993	Characterization	201	5,810	Precision Engineering 1993
WP-11	Composite	3/12/1993	Confirmation	91	5,760	Precision Engineering 1993
WP-12	Composite	3/12/1993	Confirmation	118	4,180	Precision Engineering 1993
WP-13	Composite	3/12/1993	Confirmation	259	6,650	Precision Engineering 1993
WP-14	Concrete floor	3/12/1993	Characterization	590	37,600	Precision Engineering 1993

Notes:

Indicates analysis not performed/reported.

** indicates a sample that may have been used as backfill within the excavation.

ft bgs = feet below ground surface
mg/L = milligrams per liter
mg/kg = milligrams per kilogram

Appendix G

Vapor Report, VI Assessment, Interim Remedial Actions, VI Priority Work Plan

Appendix G-1
Selected Pages from 2020 Vapor Report

VAPOR REPORT

VAPOR INTRUSION ASSESSMENT
INTERIM REMEDIAL ACTIONS
VAPOR INTRUSION PRIORITY WORK PLAN
PRECISION ENGINEERING, INC., SITE

Prepared for
DICK MORGAN
December 30, 2020
Project No. 1803.01.02

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ALONGI

3.2 Fate and Transport

The primary mechanism likely to influence the fate and transport of volatile chemicals at the Site is volatilization of chemically impacted soil and/or shallow groundwater. Volatile contaminants may partition to the vapor phase, resulting in impacts to sub-slab soil gas. Soil gas may migrate via VI to air within the building and to ambient air. Vapor migration likely occurs along preferential pathways, including perforations (e.g., utility penetrations), cracks, and seams in the concrete building slab; and along utility corridors.

It is expected that once vapors have entered the building, attenuation will occur during the normal workday because of ventilation provided by multiple open bay doors (see Figure 2-1). The building's heating, ventilation, and air conditioning (HVAC) system was assessed as part of the response actions described in Section 5. HVAC system configuration and operation and their potential influence on indoor air quality are discussed in Section 5.2.4.

3.3 Potential Exposure Scenarios

Depending on the extent of impacts at the Site, the following are potentially current or future exposure pathways related to vapor:

- Inhalation of VOCs in indoor air impacted by VI from VOC-impacted soil and/or groundwater beneath the building
- Inhalation of VOCs in ambient air (i.e., outdoor air) impacted by vapors emanating from VOC-impacted soil and/or groundwater

These potential exposure pathways will be evaluated further in the RI.

3.4 Potential Receptors

The following current and future receptors who may potentially be exposed to chemicals in vapor at the Site:

- On-site occupational workers
- General public
- Construction and trench workers

4 INITIAL VAPOR ASSESSMENT

An initial vapor assessment was conducted at the Site from February 1, 2020, to February 13, 2020. The assessment included collection of indoor air, ambient air, sub-slab soil gas, and passive indoor air samples (see Table 4-1). Sampling was conducted in general accordance with the VI work plan;

changes in the VI assessment scope of work were made in coordination with Ecology (MFA, 2019). Initial vapor assessment and follow-up vapor assessment, response actions, and IRA activities are summarized in Table 4-1. Table 4-2 summarizes the vapor samples collected during those activities; Table 4-3 presents vapor analytes and associated screening criteria; analytical results are presented in Tables 4-4 to 4-7.

The indoor air, sub-slab soil gas, and ambient air samples were analyzed for TCE and its breakdown products. Passive indoor air samples were analyzed for TCE. Samples were screened to MTCA Method B indoor air CULs and VI screening levels for sub-slab soil gas, as well as the TCE short-term indoor air action level for workplace exposure provided in Ecology's Implementation Memo No. 22 (Ecology, 2019).

4.1 Field and Analytical Methods

4.1.1 Sub-Slab Soil Gas

On February 1, 2020, four sub-slab soil gas samples were collected, each from one of four locations (A8 to A11) inside the building (see Figure 4-1), using the Cox-Colvin & Associates, Inc. Vapor Pin™ system installed with a roto-hammer. To avoid air breakthrough, depressurized 1-liter Summa canisters were used in sample collection. As a quality assurance measure, to check for potential leaks in the sampling system, the sampling apparatus and vapor pin were contained in a helium shroud during sampling, and the samples were analyzed for helium. Field photographs of the sampling apparatus are provided in Appendix B. Additional sampling protocols are presented in the VI work plan (MFA, 2019). A sub-slab soil gas sample could not be collected from one of the planned sample locations in the northwest corner of Warehouse 1 because groundwater was in direct contact with the building slab.

Sub-slab soil gas samples were analyzed for helium by ASTM International Method D-1946, and for TCE and TCE breakdown products by U.S. Environmental Protection Agency (EPA) Method Toxic Organics (TO)-15. Additional sample information is presented in Table 4-2.

4.1.2 Indoor Air

Eight 24-hour indoor air samplers (i.e., 6-liter Summa canisters with 24-hour flow controllers) were deployed, each in one of eight locations (IA8 to IA15) inside the building, on February 1, 2020, and were collected on February 2, 2020 (see Figure 4-1). Field photographs of the sampling apparatus are provided in Appendix B. The Summa canisters were placed 3 to 5 feet above the floor, in the anticipated breathing zone. Twenty-four-hour indoor air samples were analyzed for TCE and TCE breakdown products by EPA Method TO-15. Additional sample information is presented in Table 4-2.

4.1.3 Ambient Air

Five 24-hour ambient air samplers (i.e., 6-liter Summa canisters with 24-hour flow controllers) were deployed, each in one of five locations (AA1 to AA5) around the perimeter of the Property, upwind

of the building, on February 1, 2020, and were collected on February 2, 2020 (see Figure 4-1). Twenty-four-hour ambient air samples were analyzed for TCE and TCE breakdown products by EPA Method TO-15. Additional sample information is presented in Table 4-2.

As discussed in the VI work plan (MFA, 2019), ambient air samples were collected to evaluate possible off-Property TCE vapor sources. To identify a potential source of TCE detected in the ambient air samples, wind speed and direction data were collected during the sampling event (see Section 4.1.5).

4.1.4 Passive Indoor Air

Three 12-day passive indoor air samplers (Radiello 130 passive samplers [RAD130s]) were deployed, each in one of three locations (RAD1 to RAD3), on February 1, 2020, and were collected on February 13, 2020 (see Figure 4-1). Field photographs of the sampling apparatus are provided in Appendix B. For comparison to the short-term TCE action level, passive samples were collected in areas where female occupational workers of childbearing age were known to work or were likely to spend time during the workday; these samples were collected in the office (RAD1), just inside the shipping and receiving bay door in Warehouse 3 (RAD2), and in Warehouse 1 near the front desk (RAD3). A trip blank sample was also collected and analyzed. Passive samples were analyzed for TCE by modified EPA Method TO-17.

RAD130s were placed 3 to 5 feet above the floor, in the anticipated breathing zone and consistent with 24-hour indoor air sample collection heights. Samplers were deployed in accordance with manufacturer instructions and sampling protocols as provided in the VI work plan (MFA, 2019).

4.1.5 Atmospheric Conditions

A Davis Instruments Vantage Pro2 weather station was placed on the roof of the building on January 31, 2020, to collect atmospheric readings during vapor sampling events (see Appendix C). Temperature, wind direction, wind speed, and barometric pressure readings were collected every 15 minutes. At times, the weather station had connectivity issues or was blown over by strong winds; during these periods, data from the nearest King County weather station supplemented weather station data.

4.2 Analytical Results

Laboratory analytical reports are provided in Appendix D. Analytical data and the laboratory's internal quality assurance and quality control data were reviewed to assess whether they met data quality objectives, consistent with EPA procedures for evaluating laboratory analytical data (EPA, 2014a,b). A memorandum summarizing data validation procedures, data usability, and deviations from specific field and/or laboratory methods is provided in Appendix E. All analytical results were deemed usable, with the assigned qualifiers, for their intended use.

4.2.1 Sub-Slab Soil Gas

Sub-slab soil gas analytical results are summarized in Table 4-4 and shown on Figure 4-2.

TCE was detected above the MTCA Method B screening level of 12 micrograms per cubic meter (ug/m^3) in all sub-slab soil gas samples. The highest TCE concentration, 1,100 ug/m^3, was detected at sample location A9, near the former TCE tank (see Figures 4-2). Other detections of TCE in sub-slab soil gas samples ranged from 29 to 160 ug/m^3.

Cis-1,2-dichlorethene was also detected in samples A9 and A10 at 21 and 40 ug/m^3, respectively. No other TCE breakdown products were detected in the sub-slab soil gas samples.

4.2.2 Indoor Air

Indoor air analytical results from the initial vapor assessment are summarized in Table 4-5 and shown on Figure 4-2.

In all indoor air samples, TCE was detected above the MTCA Method B indoor air CUL of 0.33 ug/m^3 and the TCE short-term action limit of 7.5 ug/m^3. TCE concentrations ranged from 110 to 340 ug/m^3. All indoor air samples from sample location IA11 showed concentrations of 1,2-dichloroethane above the MTCA Method B indoor air CUL of 0.096 ug/m^3. No other TCE breakdown products were detected in the indoor air samples.

4.2.3 Ambient Air

Ambient air analytical results are summarized in Table 4-6 and shown on Figure 4-2.

TCE was not detected in any ambient air samples. 1,2-Dichloroethane was detected in all samples at 0.065 ug/m^3, below the MTCA Method B indoor air CUL of 0.096 ug/m^3.

4.2.4 Passive Indoor Air

Passive indoor air analytical results from the initial vapor assessment are summarized in Table 4-7. Sample locations are shown on Figure 4-1.

All passive samples contained concentrations of TCE above the TCE short-term action limit of 7.5 ug/m^3. TCE detections ranged from 110 to 170 ug/m^3, which is within the range of concentrations observed in the 24-hour initial indoor air samples (see Section 4.2.2).

4.2.5 Atmospheric Conditions

Atmospheric data for all vapor sampling events are provided in Appendix C.

Atmospheric conditions were measured using the on-Property weather station during the 24-hour indoor and ambient air sampling event, as described in Section 4.1.5. Wind was predominantly from the south but varied from the northeast to the south (see the wind rose provided in Appendix C). Observed fluctuations in atmospheric conditions were up to 0.1 inches of mercury in barometric pressure, 12.1 degrees Fahrenheit in temperature, and 10 miles per hour in wind speed (see charts in Appendix C).

During indoor air sampling on May 2 and 3, barometric pressure steadily increased across the 24-hour sampling period. Generally, increases in barometric pressure may result in reduced vapor intrusion. The range of barometric pressure recorded during the sampling (29.38 to 29.81 inches of mercury) was comparable to pressure range recorded over the three-week sampling event from May 15 to June 5 (29.23 to 29.78 inches of mercury). Additionally, the passive samplers deployed over a three-week period captured fluctuations in pressure, and TCE results from passive samples were below action levels.

The on-Property weather station was not functioning properly during the 12-day passive indoor air sampling event. While it did record barometric pressure measurements, it did not record wind speed, wind direction, or temperature data. Supplemental temperature data were obtained from the King County Renton Road weather station. Observed fluctuations in atmospheric conditions were up to 0.8 inches of mercury in barometric pressure and 21.1 degrees Fahrenheit in temperature (see Appendix E).

4.3 Discussion

TCE results for sub-slab soil gas, indoor air, and ambient air samples collected during the initial vapor assessment are shown in Figure 4-2.

TCE and TCE breakdown products were not detected in ambient air samples. These data suggest that no significant sources of TCE vapors were present during the sampling period in upwind locations from the northeast to the south. While these results do not rule out potential off-Property sources, they indicate that an off-Property source was not present during the sampling period and therefore was not contributing to concentrations of TCE and TCE breakdown products detected in indoor air.

No TCE sources associated with current operations were identified during the preliminary site visit (MFA, 2019) or during any of the field activities described in Sections 4 through 6 of this report.

The ambient air results and lack of known, significant VOC sources associated with current operations on the Property, as discussed in the VI work plan (MFA, 2019), and the elevated TCE concentrations detected in sub-slab soil gas samples, suggest that soil and groundwater contamination beneath the building is the primary source of TCE vapor in indoor air.

Wind from the northwest was not measured to be blowing into the Property during the sampling period. Given the steep, approximately 30-foot-high slopes along the north and west boundaries of the Property, it is not likely that the Property typically receives wind from those directions. Therefore, the absence of wind blowing from that direction during the sampling event is not considered a data gap. If an outdoor air TCE source were present in that upwind direction, it would be considered unlikely to impact the Property as the Property is sheltered from receiving wind from that direction.

The highest TCE concentration detected in sub-slab soil gas was in sample location A9, near the former TCE tank (see Figures 4-2). This suggests that the TCE vapor source (i.e., sub-slab TCE-impacted soil and groundwater) is in that area. The extent of TCE in sub-slab soil gas, groundwater, and soil has not been fully delineated. Additional work will be proposed in the RI work plan to better characterize the release for remediation.

The highest indoor air TCE concentrations were observed not in the samples collected closest to sub-slab soil gas location A9, which was located in Warehouse 1, but in sample locations IA9 and IA10, which were located in Warehouse 2 (see Figure 4-2). Indoor air concentrations likely are influenced by indoor air movement and ventilation.

As discussed above, sources of TCE associated with current operations or off-Property activities were not identified during the initial vapor assessment. As noted in Section 3.1, KJC stated in their 2015 RI report that TCE in indoor air was more than twice the concentration of TCE sub-slab soil gas, indicative of a potential source of TCE other than VI. However, KJC formed this conclusion with very limited vapor data: one sub-slab soil gas sample and one indoor air sample. Both samples were collected in the north-central portion of Warehouse 1, approximately 100 feet northeast of the former TCE tank.

During MFA's initial vapor assessment, eight indoor air and four sub-slab soil gas samples were collected from locations throughout Warehouse 1 and 2. TCE was detected in MFA sub-slab soil gas sample A9, located near the former TCE tank, at a concentration of 1,100 ug/m^3. This TCE detection is higher than the concentration of TCE detected in the KJC sub-slab soil gas sample at 95 ug/m^3, and higher than the TCE concentrations detected in all indoor air samples collected during the initial vapor assessment.

Concentrations of TCE in indoor air exceeded sub-slab soil gas concentrations in several areas during MFA's initial vapor assessment, suggesting that sub-slab soil gas may be migrating below the slab before entering the building and/or VI may be occurring at locations with higher sub-slab soil gas concentrations and migrating in indoor air via the HVAC system and other indoor air currents. Vapor migration may have contributed to the elevated concentration of TCE in the KJC indoor air sample. It is also possible that there may have been cross-contamination between sub-slab soil gas and indoor air in KJC's sample. When indoor air and sub-slab soil vapor sample locations are co-located, sampling precautions should be taken to avoid cross-contamination. Ecology recommends installing sub-slab vapor points after indoor air sample collection or, if installed before, to allow sufficient time for indoor vapor concentrations to return to pre-installation levels (Ecology, 2018). KJC installed the co-located sub-slab vapor pin approximately two and a half hours before collection of the indoor air sample and collected their sub-slab soil gas sample approximately 30 minutes before (KJC, 2015). It is unclear if that was sufficient time for concentrations to return to pre-installation levels.

Additionally, TCE vapors volatilizing from chemically-impacted groundwater seeping into the evaporator pit may have contributed to elevated concentrations of TCE in the KJC indoor air sample. However, it is unknown if groundwater seepage was occurring in the pit during the KJC RI vapor assessment.

TCE concentrations detected in the 24-hour indoor air samples exceeded the TCE short-term action limit. As stated in Ecology's Implementation Memo No. 22, exceedances of the TCE short-term indoor air action level require prompt action to quickly reduce concentrations of TCE and protect building occupants. Based on that finding, prompt response actions were developed in coordination with Ecology to reduce TCE concentrations below the short-term indoor air action level, as discussed in Section 5. The 24-hour sampling period was conducted under "worst case" conditions, designed to promote maximum VI (i.e., doors and windows closed, outside working hours). Therefore, one of the

first response action steps was to resample TCE in indoor air during an eight-hour workday to better represent potential worker exposure. The second indoor air sampling event was conducted before the collection of the passive indoor air samples, as discussed below.

Based on the results of that event, air purification was identified as a prompt response action to reduce indoor air TCE concentrations for the protection of human health, as required by Ecology's Implementation Memo No. 22. The passive samplers, which were intended to be deployed for three weeks for comparison to the short-term action limit, which is based on an average three-week exposure duration, were collected before air purification started (12 days from their deployment). The passive air results indicate that TCE concentrations averaged over that 12-day period, which represent conditions during and outside a normal workday, were above the short-term action limit. These results suggest that average indoor air quality was adversely impacted by TCE.

VI is influenced by atmospheric conditions, most notably barometric pressure. Periods of rapidly falling barometric pressure can promote VI and, conversely, VI may be mitigated by rapidly rising barometric pressure. Whereas atmospheric conditions did fluctuate during the sampling events, the range of barometric pressures observed is consistent with typical daily fluctuations. Barometric pressure changes are often as much as 0.7 inches over a day (Electric Power Research Institute, Inc., 2005); 0.1- and 0.8-inch mercury changes in barometric pressure were observed during the 24-hour and three-week sampling periods, respectively. The atmospheric data indicate that while weather conditions did vary during the three-week sampling period, as indicated by periods of rising and falling barometric pressure, no highly variable weather patterns were observed that may have significantly impacted VI assessment results. As such, the three-week samples are considered sufficient to have captured conditions over typical weather variations and were not adversely impacted by extreme weather conditions.

5 RESPONSE ACTIONS

The exceedances of the short-term TCE action limit required urgent response per Ecology's Implementation Memo No. 22 (Ecology, 2019). After receiving analytical results from the initial assessment, MFA worked with the building owner, Ecology, and the Washington State Department of Health (DOH) to implement prompt response actions to reduce indoor air concentrations of TCE to below action levels while IRAs were developed and to better understand worker exposure through additional sampling. The response actions consisted of communication with the building owners and employees working in the building, additional vapor sampling, an HVAC system assessment, and installation of mobile air-purification units.

5.1 Building Owner and Occupant Outreach

After the VI assessment, MFA met with Lee Frazier, the building and Property owner and the owner and president of Pacific Industrial Supply, Inc., to discuss the results of the VI assessment, the installation of air-purifying units, and plans for IRAs. MFA staff also facilitated a meeting with Pacific Industrial Supply staff on February 10, 2020. During that meeting the results of the initial VI

assessment and next steps were explained and staff were provided with a TCE fact sheet from Ecology.

5.2 Additional Assessments

In response to TCE exceedances identified during the vapor assessment, MFA conducted additional screening for preferential pathways and TCE sources and assessed worker exposure and the former evaporator pit.

5.2.1 Site Visit and Screening

On February 11, 2020, MFA conducted a follow-up site visit to evaluate potential TCE sources and potential VI pathways and to identify sample locations for an assessment of TCE in indoor air during an eight-hour workday. The site visit included an interview of the building owner; field observations; and qualitative, real-time measurements of VOCs in indoor air, using a photoionization detector (PID).

Prior to the collection of the second round of indoor air samples, a Honeywell ppbRAE 3000 PID equipped with a 10.6-electron volt lamp was used to qualitatively screen the building for potential areas of increased VI. The PID readings are considered qualitative because the PID is not capable of measuring TCE concentrations alone but measures all VOCs present in air. The PID model and lamp combination was chosen for its ability to read low-level VOC concentrations. If only TCE were present, the PID would be capable of reading concentrations as low as 2 ug/m^3, below the short-term action limit of 7.5 ug/m^3.

Cracks, joints, pipes, and pins in the slab were screened with the PID and compared to ambient air readings in each room of the building. Peak readings were recorded for each general area of the three warehouses, and any sizeable spikes in readings were noted. Activities believed to be potential sources of observed VOC spikes at the time the of the PID screening include the use of gas-powered forklifts, spray painting, and chain degreasing. Locations with the highest observed PID spikes that did not appear to be attributable to work operations were selected as locations for additional indoor air sampling, as discussed in Section 5.2.3.

5.2.2 Evaporator Pit

The former evaporator pit was a 140-cubic-foot concrete pit that was left exposed after Precision ceased operations on the Site. Standing water observed in the pit was attributed to groundwater seepage, which was later confirmed by the presence of a crack in the concrete bottom of the pit observed during its decommissioning (see Section 6.1). A water sample was collected from the pit on February 11, 2020, using a disposable bailer, and was analyzed for total petroleum hydrocarbons (diesel- and residual-oil-range organics), arsenic, chromium, and TCE.

All chemicals for which analyses were conducted were detected in the grab sample from the evaporator pit. Detections included 1.4 micrograms per liter (ug/L) TCE; 3,900 ug/L diesel-range petroleum hydrocarbons; 2,500 ug/L residual-oil-range hydrocarbons; 994,000 ug/L total chromium; and 6.08

ug/L total arsenic. The analytical laboratory indicated that diesel-range hydrocarbons and oil-range hydrocarbons results had chromatographic patterns that most closely resemble a cutting oil, transformer oil, or a fuel metabolite (Erdahl, 2020). These fuel types will be further assessed in the RI. Table 5-1 shows analytical results and screening levels. The analytical lab report is included in Appendix D, and data are assessed in the data validation memorandum included as Appendix E. The results were consistent with chemical concentrations observed in previous shallow groundwater samples collected from monitoring wells on the Property, suggesting that the source of the water was groundwater seepage. Chromium concentrations in the sample qualified the water as hazardous waste for disposal purposes.

No VI screening level is available for TCE in indoor standing water. The TCE concentration was equal to, but did not exceed the VI Method B groundwater screening level. However, standing water in the evaporator pit was directly exposed to indoor air. The groundwater screening level assumes 1,000 times attenuation vapor between groundwater and indoor air. Therefore, the screening level applied, while not directly applicable to standing water in the evaporator pit, indicates the potential for TCE to volatilize to indoor air at unacceptable concentrations. Based on these results, water in the pit was identified as groundwater seepage and a source of TCE in indoor air. An interim action was conducted to remove water from the pit and to prevent future groundwater seepage (see Section 6.2). A location immediately adjacent to the pit was selected as a sample location for the additional round of eight-hour indoor air sampling to further evaluate the pit as a source of TCE in indoor air.

5.2.3 Worker Exposure Assessment

On February 11, 2020, as part of the worker exposure assessment, five indoor air samples were collected using 6-liter Summa canisters with eight-hour flow controllers. Sample canisters were deployed at the start of the workday and were collected after eight hours. During the collection period, the facility operated normally, including providing ventilation by open bay doors. No air purification took place during the sample collection.

Samples were collected in areas where women potentially of childbearing age were observed to be working (IA17 in the second-story sewing shop and IA16 in the office); near the evaporator pit (IA18); in the location where the highest sub-slab soil gas TCE concentration had been detected during the initial vapor assessment (IA19, near A9); and in the central portion of the building, in Warehouse 2 (IA20). Sample locations are shown in Figure 4-1. A sample collection summary is provided in Table 4-2. Analytical results are provided in Table 4-5. The laboratory analytical report and data validation results are provided in Appendices D and E, respectively. Time series plots for atmospheric conditions recorded during the sampling period are provided in Appendix C.

TCE concentrations exceeded MTCA Method B CULs in all five samples, and the short-term TCE action level of 7.5 ug/m^3 in all but one sample (IA16, located in the office). TCE detections ranged from 2.8 to 110 ug/m^3. The TCE exceedances of the short-term action limit demonstrated a need for prompt response actions to reduce indoor air concentrations. Based on these results and in consultation with Ecology, DOH, and the building owner, actions taken to reduce TCE concentrations included an evaluation of the HVAC system and air purification, as discussed in the following sections.

5.2.4 HVAC System

MFA contracted with the Welsh Commissioning Group, Inc., to assess the HVAC system to identify potential improvements that would increase building pressurization and/or ventilation to mitigate VI. A report summarizing the findings of that assessment is included as Appendix F. HVAC assessment findings relevant to the potential for mitigation of TCE in indoor air are described below.

During regular operations, the warehouse rollup doors are typically left open to increase air flow throughout the building and to provide access for forklift and truck traffic. This prevents steady pressurization of some areas of the warehouse would reduce the effectiveness if a new HVAC system were installed. The main administrative office is one of only a few areas in the building with a contained HVAC system. The assessment found that while certain components of the building's HVAC system were outdated, upgrading the system would not be the most efficient way to reduce vapor concentrations inside the building. Based on these findings, no HVAC system adjustments or modifications were recommended as response actions.

5.3 Air Purification

5.3.1 Air Purifier Installation, Operation, and Maintenance

On February 13, 2020, three HEPA-AIRE® PAS2400 air-purifying units with activated charcoal filters were installed at the Site to reduce indoor air TCE concentrations. The units were placed in areas where women potentially of childbearing age typically work for extended periods, including on the first floor of the main office and the second floor of the sewing room, as well as at the south end of the first warehouse to purify air in the space patronized by customers (see Figure 4-1). Each unit contained a prefilter to remove large dust or particulates, VL2002 high-capacity active carbon filter to remove TCE and other VOCs, and a high-efficiency particulate air (HEPA) filter for fine particulates. The internal carbon filter was delivered wrapped in plastic packaging. The packaging was removed and the filters installed on February 17, 2020. Detailed specifications and operating assumptions for the units are provided in Appendix G.

The units in the warehouse and the sewing room were operated on the "low" setting. Facility staff requested that the unit in the main office be operated on the "high" setting because it reportedly ran more quietly on that setting.

A conservative carbon filter change-out schedule of once per week was selected for each air-purifying unit, based on the calculated TCE removal capacity of the carbon filters (see Appendix G). During the weekly carbon filter replacement visits, other maintenance was conducted on the units, including collecting PID readings to qualitatively assess, in real time, the air purifiers' effectiveness in removing VOCs; to perform a visual check to evaluate the potential need to replace the prefilters and HEPA filters; and to ensure that the units were functioning properly.

Before replacement of the carbon filter, PID readings were collected from the inlet and outlet of each unit. For each reading, the PID was allowed to stabilize and the peak reading was recorded. This procedure was repeated after the carbon filter was replaced. PID readings were used as a qualitative

field check that air purifiers were functioning properly and reducing concentrations of VOCs in indoor air. VOC concentrations in indoor air were confirmed by post-air purification indoor air sampling. PID readings, unit maintenance activities, and observations are summarized in Table 5-2.

PID readings, although only a qualitative indicator of air purifier TCE removal, exhibited lower results at the filter outlets than at the inlets, both before and after replacement of the carbon filters (see Table 5-2); however, the difference in concentrations was generally greater in the postfilter replacement readings than in the prefilter replacement readings. These observations suggest that the carbon filters were still removing VOCs from air after approximately one week of continuous operation of the air purifiers, but that the replacement filters were more effective at removing VOCs.

Spent filters were placed in sealed 55-gallon drums awaiting waste characterization for disposal. On May 4, 2020, two composite filter samples were collected for analysis. Each sample consisted of filter fabric and the activated carbon material collected from several filters in different drums. Samples were analyzed for TCE, arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver, using the toxicity characteristic leaching procedure. Both samples were non-detect for all analytes (see lab report in Appendix H). Filters were disposed of in the on-Property dumpster, the contents of which are subsequently disposed of in a municipal subtitle D landfill.

On April 9, 2020, based on visual observations that the filters were becoming noticeably dirty, the HEPA filters were replaced in all three units and the prefilter was replaced in the unit located in the office (see Table 5-2). Photographs of the units are available in Appendix B.

The air purifiers were run continuously from February 13, 2020, until May 14, 2020, except for during a sampling event conducted from May 2, 2020 through May 3, 2020.

5.3.2 Performance Sampling

To ensure that the air-purifying units were reducing indoor air TCE concentrations to below the short-term action limit, indoor air sampling was conducted while the units were in operation. An eight-hour indoor air sampling event and a three-week passive indoor air sampling event were conducted. Sampling activities are summarized in Tables 4-1 and 4-2. Analytical results are summarized in Tables 4-5 and 4-7. Analytical laboratory reports and data validation results are provided in Appendices D and E, respectively. Time series plots for atmospheric conditions recorded during the sampling period are provided in Appendix C.

Three indoor air samples to be analyzed for TCE were collected on February 20, 2020, using 6-liter Summa canisters with eight-hour flow controllers. Each sample was taken from the vicinity of an air purifier unit to determine the effectiveness of the response action (sample locations IA16, IA17, and IA19; see Figure 5-1). In all three samples, TCE was detected above MTCA Method B indoor air CULs, but below the short-term action limit (see Table 4-5 and Figure 5-1).

Three RAD130s were deployed on February 20, 2020, and were collected for analysis after three weeks (sample locations RAD1, RAD4, and RAD5; see Figure 5-1). The RAD130s were collocated with the Summa canister samples described above. All three passive samples were analyzed for TCE;

concentrations were above MTCA Method B indoor air CULs but below the short-term action limit (see Table 4-5 and Figure 5-1).

The performance sampling results showed TCE reductions with air purification in all locations sampled (see Figure 5-1). Pre-IRA TCE concentrations in indoor air ranged from 110 to 340 ug/m^3, while post-IRA concentrations ranged from non-detect to 2.6 ug/m^3. These results suggest that air purification effectively reduced TCE to below concentrations that pose a short-term health threat, but also suggested that concentrations remained unacceptable for long-term, chronic exposure.

6 INTERIM REMEDIAL ACTIONS

Air purification was identified as a temporary, short-term TCE mitigation measure. IRAs that would provide long-lasting and more reliable TCE mitigation in indoor air were identified. The following two IRAs were selected in consultation with the building owner and Ecology:

- Sealing perforations in the concrete building slab that may be acting as preferential pathways for VI
- Decommissioning the evaporator pit that had been identified as a potential source of TCE vapors in indoor air because of groundwater seepage

Photodocumentation of the IRAs is provided in Appendix B.

6.1 Sealing Concrete Building Slab

Between April 14, 2020, and April 29, 2020 Advance Environmental, Inc. (Advance) made several trips to the Site to seal perforations in the building slab, including cracks, seams, and utility penetrations. Advance worked progressively through the three warehouses to seal all accessible perforations.

The first step in the sealing process was to use a shop vacuum to remove dirt and debris. If that was not successful, a wire brush was used to loosen material before vacuuming it out. After cleaning, sealant was applied to fill up to the existing slab surface. Two kinds of sealant with similar properties were used interchangeably: Sikaflex® 1C SL and Quikrete® concrete sealant.

Some cracks in the slab were wide and penetrated the full thickness of the slab. When product was placed in these cracks, it would sink down into the crack and fail to form a seal. In these cases, dry mix concrete was placed in the crack before applying sealant and/or the sealant was applied multiple times. The sealant was left to cure for 24 hours without foot or vehicle traffic. Photos of the sealant application process are provided in Appendix B.

6.2 Evaporator Pit Decommissioning

Decommissioning of the evaporator pit was conducted to remove TCE-containing water from the pit and stop future seepage of groundwater into the pit. Water present in the pit due to groundwater seepage was identified as a source of TCE in indoor air (see Section 5.2.2). Decommissioning of the evaporator pit involved removal and disposal of standing water and debris, sealing cracks in the walls, backfilling, and capping the pit with concrete. The decommissioning was conducted on April 13, 2020. MFA contracted Advance to lead decommissioning activities. MFA contracted Stericycle to pump water out of the pit for disposal using a vacuum truck. A total of 743 gallons of water was removed for off-site disposal (Appendix H). Based on the previous water sampling results, i.e., high chromium concentrations (see Section 5.2.2), the water was characterized as regulated hazardous waste for disposal purposes. It was assumed that any debris encountered and removed from the pit would be saturated with water with hazardous levels of chromium; therefore, debris was also treated as hazardous waste for disposal.

Solid waste removed from the pit included nine wooden pallets, a small motor, and other small debris such as plastic bottles and a tape measure. The materials were placed on a layer of visqueen sheeting for staging and then broken down and packaged into 1-cubic-yard CleanPak® waste totes for disposal. The totes were stored on site until pickup and transport to a hazardous waste landfill by Cascade Environmental (see Appendix H).

After the contents of the pit had been removed, the pit was sprayed down with potable water to rinse any remaining residue from the pit walls. Rinse water was removed by the vac truck and the pit was monitored for groundwater seepage infiltrating through cracks. Water was observed to infiltrate into the pit from the bottom of the northwest corner. This fluid was once again removed with the vac truck and the pit was rinsed a final time before Advance began to fill the pit.

Approximately 800 pounds of dry-mix concrete was added in the base of the pit and used to seal up cracks. After initial placement, the pit was observed for additional infiltration. Areas where water was still entering the pit were sealed with additional concrete until the seeping stopped. After concrete placement, 5.5 loose cubic yards of gravel was placed in the pit and compacted in 6-inch lifts, using hand tamping to a final volume of 4 cubic yards. The gravel surface was then leveled and 5 inches of mixed concrete was poured to match the existing grade of the building slab. Photodocumentation of the decommissioning is provided in Appendix B.

6.3 Confirmation Vapor Sampling

The following two indoor air monitoring events were conducted after completion of the IRAs to assess their effectiveness at reducing TCE concentrations:

- An initial 24-hour event to assess TCE under "worst-case conditions," without air purification and with no workers present
- Based on favorable results from the initial test, a three-week passive air monitoring period to assess whether favorable conditions were sustained without air purification

Sampling activities are summarized in Tables 4-1 and 4-2. Analytical results are summarized in Tables 4-5 and 4-7. Analytical laboratory reports and data validation results are provided in Appendices D and E, respectively.

Air purification, which had been operating continuously since February 13, 2020, and throughout implementation of the IRAs, was paused to allow the initial round of post-interim-action indoor air monitoring. The monitoring event was conducted over a weekend when workers were not present to avoid the potential for exposure to TCE in the absence of air purification.

Four indoor air samples were collected using 6-liter Summa canisters with 24-hour flow controllers. Sample canisters were deployed on May 2, 2020, after the air purifying units had been shut off and the building closed up for approximately 22 hours. Canisters were collected after 24 hours. Conditions were controlled during the sampling period to create worst-case conditions for TCE buildup in indoor air. Business and commercial operations were shut down and doors and windows were sealed to maximize the potential for VI. Air purification was immediately resumed following sample collection and before workers returned.

Samples were collected from the three air purifier locations (IA16, IA17, and IA19) and adjacent to the former evaporator pit (IA18) (see Figure 5-2). TCE was not detected in any of the samples (see Table 4-5 and Figure 6-1). Based on these results, a determination was made in consultation with Ecology to cease air purification and proceed with passive air sampling to assess whether reduced TCE concentrations would be sustained over a three-week sampling period.

On May 15, 2020, the air purifiers were turned off and removed and three RAD130s were deployed in the air purifier locations (RAD1, RAD4, and RAD5, colocated with the 24-hour sample locations; see Figure 5-2). The RAD130s were collected for analysis after three weeks, on June 5, 2020, and the samples analyzed for TCE. TCE concentrations in all passive samples were below the short-term action limit (see Table 4-7 and Figure 5-2).

Temperature and barometric data were collected from the nearby Renton Road and Salmon Creek weather stations, respectively, during the sampling periods. Time series plots are provided in Appendix C.

The confirmation monitoring results indicate that the IRAs successfully reduced indoor air TCE concentrations. A comparison of pre- and post-interim-action TCE concentrations in indoor air is shown in Figure 5-2. In the locations that were sampled both before and after the IRAs, TCE concentrations without air purification were reduced from a high of 110 ug/m^3 to non-detect in some samples. TCE concentrations in the passive air samples collected with no air purification were similar to those observed with air purification and up to two orders of magnitude below concentrations observed without air purification before the IRAs. However, the post-interim-action passive air sample results indicate that TCE concentrations in indoor air remain above MTCA Method B CULs.

7 VAPOR INTRUSION PRIORITY WORK PLAN

During the initial VI assessment, TCE was detected in indoor air samples above the short-term action levels included in Ecology's Implementation Memo No. 22 (Ecology, 2019), triggering prompt response actions for the protection of human health. The completed IRAs effectively reduced TCE concentrations in indoor air below short-term threat levels; however, the sub-slab source material remains and TCE concentrations in indoor air remain above MTCA Method B CULs. Therefore, additional IRAs will be required. Potential additional IRAs will be considered following completion of data gap sampling to be proposed in the RI work plan. In the meantime, although the completed IRAs have been proven effective, the potential exists for seals in the concrete slab to break down or for new cracks to form that could promote VI from the sub-slab contamination that remains, resulting in unfavorable air quality. Therefore, ongoing performance air monitoring and monitoring of the condition of the concrete slab are recommended until a more permanent remedy has been implemented. Ecology will require a VIP work plan in the agreed order for the Site.

7.1 Scope of Work

The proposed scope of work for VIP monitoring is as follows:

- Quarterly passive air monitoring will be conducted until a more permanent remedy is implemented.
- During each quarterly sampling event, passive air samples will be collected using RAD130s deployed for three weeks from the following three locations: RAD1, RAD4, and RAD5 (see Figure 4-1).
- Site reconnaissance will be conducted at the start of each quarterly air monitoring event to observe and record the condition of the concrete slab and slab seals, and to identify the potential formation of new cracks or perforations in the slab, or other conditions, that could promote VI.

Sampling activities will be conducted in general accordance with the procedures and methods used for the other passive air sampling events described in this report. Samples will be analyzed for TCE by modified EPA Method TO-17. A trip blank will be collected and analyzed for each event.

If TCE concentrations in any of the samples exceed the short-term action limit of 7.5 ug/m^3, Ecology and the building owner will be notified immediately, facility staff will be informed, and air purification activities will be resumed. Air purification, if required, will be conducted in accordance with the procedures developed for the response actions (see Section 5.3) and will continue until a more permanent remedy is implemented.

Data will be shared with Ecology, which will be notified of sampling activities and any TCE action limit exceedances in accordance with finalized agreed order requirements.

7.2 Project Management Plan

The following describes the roles of key personnel on the project.

7.2.1 Key Project Personnel

Jim Maul will be the project director for MFA. Mr. Maul will provide strategic technical project support and will assist with project communications.

Heather Good will be the project manager for MFA. Ms. Good will coordinate with project task leaders and will be the primary point of contact for the PLPs and Ecology. She will be responsible for allocating the resources necessary to ensure that the objectives of the VIP work plan are met. Ms. Good will also provide technical assistance to assigned staff, assist with resolution of technical or logistical challenges that may be encountered during sampling, and write and review reports.

Amanda Bixby will lead field activities and other project tasks and will write and review reports. She will be responsible for ensuring that sampling activities are conducted in accordance with the procedures outlined in this plan.

Seth Baker will assist in developing as-needed communications for Pacific Industrial Supply, Inc., employees.

Bill Beadie will provide as-needed technical support related to human health toxicity concerns, RA, risk communication, and air treatment and testing technologies.

Evelyn Lundeen will assist with field activities and report preparation.

7.3 Schedule

Sampling will begin within 30 days of Ecology's approval of the final VIP work plan and will continue until a more permanent remedy is implemented, unless a TCE short-term action limit exceedance is detected. In that case, sampling will be terminated, and air purification will resume and will continue until a more permanent remedy is implemented. The first two sampling events will be conducted consecutively, and the following events will be conducted on a quarterly basis.

8 CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results from the confirmation sampling event, the IRAs successfully reduced TCE concentrations below Ecology's short-term action level. Air purification is no longer necessary on the Site, but additional air monitoring may be necessary to ensure the IRAs' continued effectiveness as the RI is completed and more permanent remedies are implemented.

Additional assessment of the sub-slab source material, further evaluation of the nature and extent of contamination, and additional sub-surface data are needed for remedy selection. MFA is preparing an RI work plan, which will provide a basis for additional data collection. Data from the RI will be used to select and implement a permanent remedy to address the sub-slab source material.

LIMITATIONS

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with the Client. This report is solely for the use and information of the Client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the Client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

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TABLES



Table 4-1
Event Summary
Precision Engineering, Inc.
Seattle, Washington

Sample Media	Start Date	End Date	Sample Locations	Event Purpose	Sampling Notes
Initial VI Assessment					
SS	02/01/2020	02/01/2020	A8, A9, A10, A11	An initial VI assessment was conducted to evaluate the potential for short-term TCE exposure and potential sources contributing to TCE in indoor air. Work was conducted in general accordance with MFA's December 20, 2019, VI assessment work plan, with subsequent revisions based on Ecology feedback.	--
IA	02/01/2020	02/02/2020	IA8, IA9, IA10, IA11, IA12, IA13, IA14, IA15		24-hour collection period. Sampling was conducted outside normal working hours and without air purification to evaluate "worst-case" conditions.
AA			AA1, AA2, AA3, AA4, AA5		
RAD	02/01/2020	02/13/2020	RAD1, RAD2, RAD3		RAD samplers were collected 12 days after deployment because of the upcoming, scheduled installation of the air purifier units. Sampling was conducted without air purification.
Evaporator Pit Assessment					
W	02/11/2020	02/11/2020	Evap Pit	Standing water in the exposed evaporator pit was sampled to evaluate it as a potential source of TCE in indoor air.	One grab sample was collected from the evaporator pit.
Worker Exposure Assessment					
IA	02/11/2020	02/11/2020	IA16, IA17, IA18, IA19, IA20	Additional indoor air sampling was triggered by TCE concentrations above Ecology's short-term action levels detected in indoor air during the initial VI assessment .	Eight-hour collection period. Sampling was conducted during normal working hours, under normal working conditions, and without air purification.
Air Purification					
--	02/13/2020	05/15/2020	--	Air-purifying units were installed in the building to reduce indoor-air concentrations of TCE, which had been detected above Ecology's short-term action levels during the initial and eight-hour vapor assessments. Air purification ended after the interim action was completed.	Three air-purifying units were installed and were operated continuously, aside from a pause for an indoor air sampling event on May 2 and 3, 2020, in the following locations: the main office, the sewing room, and warehouse 1. The units were assessed and maintained on a weekly schedule.

Table 4-1
Event Summary
Precision Engineering, Inc.
Seattle, Washington

Sample Media	Start Date	End Date	Sample Locations	Event Purpose	Sampling Notes
Air Purification Performance Sampling					
IA	02/20/2020	02/20/2020	IA16, IA17, IA19	Indoor air sampling for TCE was conducted after installation of the air purifiers to evaluate their effectiveness in reducing concentrations of TCE in indoor air.	Eight-hour collection period. Sampling was conducted during normal working hours, under normal working conditions, and with air purification.
RAD	02/20/2020	03/12/2020	RAD1, RAD4, RAD5		Three-week collection period. Sampling was conducted with air purification.
Interim Actions					
--	04/13/2020	04/13/2020	--	Evaporator pit decommissioning.	--
--	04/14/2020	04/29/2020	--	Sealing concrete building slab.	--
Post-Interim Action Confirmation Sampling					
IA	05/02/2020	05/03/2020	IA16, IA17, IA18, IA19	To evaluate whether the interim actions effectively reduced TCE concentrations in indoor air to below Ecology's short-term action limit.	24-hour collection period. Sampling was conducted outside normal working hours and without air purification to evaluate "worst-case" conditions.
RAD	05/15/2020	06/05/2020	RAD1, RAD4, RAD5		Three-week collection period. Sampling was conducted without air purification.

NOTES:

Only sampling and air purification events are summarized. Other events are described in the report text.

Shading (color key below) indicates that the event was conducted under the following conditions:

Prior to air purification

During air purification

After implementation of the interim remedial actions, with no air purification

-- = none.

AA = ambient air.

Ecology = Washington State Department of Ecology.

IA = indoor air.

RAD = passive indoor air sample collected with Radiello 130.

SS = sub-slab soil gas.

TCE = trichloroethene.

VI = vapor intrusion.

W = water.

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Table 4-2
Vapor Sampling and Analysis Summary
Precision Engineering, Inc.
Seattle, Washington

Media Sampled	Location ID	Sample ID	Sample Type	Collection Period	Sample Collection Start			Sample Collection End			Analytical Suite[a]		
					Date	Time	Initial Vacuum ("Hg)	Date	Time	Final Vacuum ("Hg)	He	TCE	TCE Breakdown Products[b]
SS	A8	A8	1-L Summa Canister	5 min	02/01/2020	13:36	-30	02/01/2020	13:42	-5	X	X	X
	A9	A9				12:08	-30		12:14	-5	X	X	X
	A10	A10				11:28	-30		11:35	-5	X	X	X
	A11	A11				13:06	-30		13:12	-5	X	X	X
IA	IA8	IA8-020120	6-L Summa Canister	24 hr	02/01/2020	15:46	-30	02/02/2020	15:46	-6	--	X	X
	IA9	IA9				15:51	-30		15:51	-8	--	X	X
	IA10	IA10				15:48	-29		15:48	-8	--	X	X
	IA11	IA11				15:54	-29		15:47	0	--	X	X
	IA12	IA12				15:56	-29		15:56	-6	--	X	X
	IA13	IA13				15:57	-30		15:57	-7	--	X	X
	IA14	IA14				15:59	-30		15:59	-7	--	X	X
	IA15	IA15				16:05	-30		16:05	-9	--	X	X
	IA16	IA16		8 hr	02/11/2020	8:51	-30	02/11/2020	16:51	-7	--	X	--
		IA16-022020		8 hr	02/20/2020	7:55	-30	02/20/2020	15:55	-6	--	X	--
		IA16-050220		24 hr	05/02/2020	15:07	-29.5	05/03/2020	15:07	-8	--	X	--
	IA17	IA17		8 hr	02/11/2020	8:58	-30	02/11/2020	16:58	-9	--	X	--
		IA17-022020		8 hr	02/20/2020	8:03	-30	02/20/2020	16:03	-9	--	X	--
		IA17-050220		24 hr	05/02/2020	15:11	-29	05/03/2020	15:11	-6	--	X	--
	IA18	IA18		8 hr	02/11/2020	9:07	-30	02/11/2020	17:07	-6	--	X	--
		IA18-050220		24 hr	05/02/2020	15:15	-30	05/03/2020	15:15	-7	--	X	--
	IA19	IA19		8 hr	02/11/2020	9:15	-30	02/11/2020	17:10	-6	--	X	--
		IA19-022020		8 hr	02/20/2020	8:11	-30	02/20/2020	16:11	-6	--	X	--
		IA19-050220		24 hr	05/02/2020	15:19	-30	05/03/2020	15:19	-9	--	X	--
	IA20	IA20		8 hr	02/11/2020	9:30	-30	02/11/2020	17:30	-12	--	X	--
AA	AA1	AA1	6-L Summa Canister	24 hr	02/01/2020	16:30	-30	02/02/2020	16:30	-6	--	X	X
	AA2	AA2				16:41	-30		16:41	-5	--	X	X
	AA3	AA3				16:40	-30		16:40	-12	--	X	X
	AA4	AA4				16:37	-30		16:37	-7	--	X	X
	AA5	AA5				16:32	-30		16:32	-6	--	X	X
Passive IA	RAD1	RAD1	RAD	12 day	02/01/2020	16:55	--	02/13/2020	13:50	--	--	X	--
		RAD1-022020		21 day	02/20/2020	8:30	--	03/12/2020	12:24	--	--	X	--
		RAD1-051520		21 day	05/15/2020	15:13	--	06/05/2020	15:11	--	--	X	--
	RAD2	RAD2		12 day	02/01/2020	16:52	--	02/13/2020	14:12	--	--	X	--
	RAD3	RAD3		12 day	02/01/2020	16:58	--	02/13/2020	14:16	--	--	X	--
	RAD4	RAD4		21 day	02/20/2020	8:35	--	03/12/2020	12:30	--	--	X	--
		RAD4-051520		21 day	05/15/2020	15:20	--	06/05/2020	15:15	--	--	X	--
	RAD5	RAD5		21 day	02/20/2020	8:45	--	03/12/2020	12:21	--	--	X	--
		RAD5-051520		21 day	05/15/2020	15:24	--	06/05/2020	15:18	--	--	X	--

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Table 4-2
Vapor Sampling and Analysis Summary
Precision Engineering, Inc.
Seattle, Washington

NOTES:

Sample shading (color key below) indicates that the sample was collected under the following conditions:

Prior to air purification

During air purification

After implementation of the interim remedial actions, with no air purification

-- = not analyzed.

"Hg = inches of mercury.

AA = ambient air.

DCE = dichloroethene.

EPA = U.S. Environmental Protection Agency.

He = helium.

hr = hour.

IA = indoor air.

ID = identification.

L = liter.

min = minute.

RAD = passive indoor air sample collected with Radiello 130.

SS = sub-slab soil gas.

TCE = trichloroethene.

[a]All analyses performed by EPA Method TO-15.

[b]TCE anaerobic breakdown products include cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride.

Table 4-3
Vapor Analytes and Screening Levels
Precision Engineering, Inc.
Seattle, Washington

Analyte	Indoor Air Cleanup Level, MTCA Method B	TCE Indoor Air Short-Term Action Level, Workplace Scenario	Sub-Slab Soil Gas Screening Level, MTCA Method B
Modified EPA Method TO-15 SIM (ug/m^3)			
TCE	0.33	7.5	11
1,1-Dichloroethene	91	NA	3,000
1,2-Dichloroethane	0.096	NA	3.2
cis-1,2-Dichloroethene	NV	NA	NV
trans-1,2-Dichloroethene	NV	NA	NV
1,1-Dichloroethane	1.6	NA	52
Chloroethane	4,600	NA	150,000
Vinyl chloride	0.28	NA	9.5
Modified EPA Method TO-17 (ug/m^3)			
TCE	0.33	7.5	11
ASTM Method D-1946			
Helium	NV	NA	NV

NOTES:
Cleanup and screening levels obtained from Ecology, CLARC data tables, dated August 2020.
Short-term TCE action level obtained from Ecology, Toxics Cleanup Program Implementation Memo No. 22.
ASTM = ASTM International.
CLARC = Cleanup Levels and Risk Calculation.
Ecology = Washington State Department of Ecology.
EPA = U.S. Environmental Protection Agency.
MTCA = Model Toxics Control Act.
NA = not applicable.
NV = no value.
SIM = selected ion monitoring.
TCE = trichloroethene.
TO = toxic organics.
ug/m^3= micrograms per cubic meter.

Table 4-4
Sub-Slab Soil Gas Analytical Results
Precision Engineering, Inc.
Seattle, Washington

Location:	Sub-Slab Soil Gas Screening Level, MTCA Method B	A8	A9	A10	A11
Sample Name:		A8	A9	A10	A11
Collection Date:		02/01/2020	02/01/2020	02/01/2020	02/01/2020
VOCs (ug/m^3)					
1,1-Dichloroethane	52	3.3 U	6.5 U	18 U	14
1,1-Dichloroethene	3,000	3.3 U	6.3 U	17 U	3.3 U
1,2-Dichloroethane	3.2	0.33 U	0.65 U	1.8 U	0.33 U
Chloroethane	150,000	22 U	42 U	120 U	22 U
cis-1,2-Dichloroethene	NV	3.3 U	21	40	3.3 U
trans-1,2-Dichloroethene	NV	3.3 U	6.3 U	17 U	3.3 U
Trichloroethene	11	160	1100	29	82
Vinyl chloride	9.5	2.1 U	4.1 U	11 U	2.1 U

NOTES:

Result shading indicates an exceedance of the sub-slab soil gas screening level, MTCA Method B; non-detects ("U") were not compared with screening criteria.

Sample shading indicates that the sample was collected prior to air purification.

MTCA = Model Toxics Control Act.

NV = no value.

U = Result not detected at or above method reporting limit.

ug/m^3 = micrograms per cubic meter.

VOC = volatile organic compound.

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Table 4-5
Indoor Air Analytical Results
Precision Engineering, Inc.
Seattle, Washington

Location:	Indoor Air Cleanup Level, MTCA Method B	TCE Indoor Air Short-Term Action Level, Workplace Scenario[a]	IA8	IA9	IA10	IA11	IA12	IA13	IA14	IA15	IA16		
Sample Name:			IA8-020120[b]	IA9[b]	IA10[b]	IA11[b]	IA12[b]	IA13[b]	IA14[b]	IA15[b]	IA16[c]	IA16-022020	IA16050220
Collection Start Date:			02/01/2020	02/01/2020	02/01/2020	02/01/2020	02/01/2020	02/01/2020	02/01/2020	02/01/2020	02/11/2020	02/20/2020	05/02/2020
Collection End Date:			02/02/2020	02/02/2020	02/02/2020	02/02/2020	02/02/2020	02/02/2020	02/02/2020	02/02/2020	02/11/2020	02/20/2020	05/03/2020
VOCs (ug/m^3)													
1,1-Dichloroethane	1.6	NV	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	--
1,1-Dichloroethene	91	NV	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	--
1,2-Dichloroethane	0.096	NV	0.093	0.085	0.089	0.097	0.093	0.089	0.085	0.093	--	--	--
Chloroethane	4,600	NV	0.093 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	--	--	--
cis-1,2-Dichloroethene	NV	NV	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	--
trans-1,2-Dichloroethene	NV	NV	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	--
TCE	0.33	7.5	270	330	340	170	200	210	110	170	2.8	1.9	0.27 U
Vinyl chloride	0.28	NV	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	--	--	--

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Table 4-5
Indoor Air Analytical Results
Precision Engineering, Inc.
Seattle, Washington

Location:	Indoor Air Cleanup Level, MTCA Method B	TCE Indoor Air Short-Term Action Level, Workplace Scenario[a]	IA17			IA18		IA19			IA20
Sample Name:			IA17[c]	IA17-022020	IA17050220	IA18[c]	IA18050220	IA19[c]	IA19-022020	IA19050220	IA20[c]
Collection Start Date:			02/11/2020	02/20/2020	05/02/2020	02/11/2020	05/02/2020	02/11/2020	02/20/2020	05/02/2020	02/11/2020
Collection End Date:			02/11/2020	02/20/2020	05/03/2020	02/11/2020	05/03/2020	02/11/2020	02/20/2020	05/03/2020	02/11/2020
VOCs (ug/m^3)											
1,1-Dichloroethane	1.6	NV	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	91	NV	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	0.096	NV	--	--	--	--	--	--	--	--	--
Chloroethane	4,600	NV	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	NV	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	NV	NV	--	--	--	--	--	--	--	--	--
TCE	0.33	7.5	93	4.5	0.27 U	45	0.27 U	110	2.3	0.27 U	73
Vinyl chloride	0.28	NV	--	--	--	--	--	--	--	--	--

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Table 4-5
Indoor Air Analytical Results
Precision Engineering, Inc.
Seattle, Washington

NOTES:

Result shading (color key below) indicates an exceedance of screening criteria; non-detects ("U") were not compared with screening criteria.

Indoor Air Cleanup Level, MTCA Method B

TCE Indoor Air Short-Term Action Level, Workplace Scenario

Sample shading (color key below) indicates that the sample was collected under the following conditions:

Prior to air purification

During air purification

After implementation of the interim remedial actions, with no air purification

-- = not analyzed.

MTCA = Model Toxics Control Act.

NV = no value.

TCE = trichloroethene.

U = Result is non-detect to method reporting limit.

ug/m^3 = micrograms per cubic meter.

VOC = volatile organic compound.

[(a)]TCE Indoor Air Action Level from Washington State Department of Ecology Implementation Memo No. 22.

[(b)]Twenty-four-hour indoor air sample collected with a 6-liter Summa canister outside normal working conditions.

[(c)]Eight-hour indoor air sample collected with a 6-liter Summa canister during normal working conditions.

Table 4-6
Ambient Air Analytical Results
Precision Engineering, Inc.
Seattle, Washington

Location:	Indoor Air Cleanup Level, MTCA Method B	TCE Indoor Air Short-Term Action Level, Workplace Scenario[(a)]	AA1	AA2	AA3	AA4	AA5
Sample Name:			AA1	AA2	AA3	AA4	AA5
Collection Start Date:			02/01/2020	02/01/2020	02/01/2020	02/01/2020	02/01/2020
Collection End Date:			02/02/2020	02/02/2020	02/02/2020	02/02/2020	02/02/2020
VOCs (ug/m^3)							
1,1-Dichloroethane	1.6	NV	0.40 U	0.40 U	0.65 U	0.40 U	0.40 U
1,1-Dichloroethene	91	NV	0.40 U	0.40 U	0.63 U	0.40 U	0.40 U
1,2-Dichloroethane	0.096	NV	0.07	0.07	0.07	0.07	0.07
Chloroethane	4,600	NV	2.60 U	2.60 U	4.20 U	2.60 U	2.60 U
cis-1,2-Dichloroethene	NV	NV	0.40 U	0.40 U	0.63 U	0.40 U	0.40 U
trans-1,2-Dichloroethene	NV	NV	0.40 U	0.40 U	0.63 U	0.40 U	0.40 U
TCE	0.33	7.50	0.16 U	0.16 U	0.27 U	0.16 U	0.16 U
Vinyl chloride	0.28	NV	0.26 U	0.26 U	0.41 U	0.26 U	0.26 U

NOTES:

Ambient air samples collected in 6-liter Summa canisters over a 24-hour period from February 1, 2020 to February 2, 2020 outside normal working conditions.

Sample shading indicates that the sample was collected prior to air purification.

MTCA = Model Toxics Control Act.

NV = no value.

TCE = trichloroethene.

U = Result is non-detect to method reporting limit.

ug/m^3 = micrograms per cubic meter.

VOC = volatile organic compound.

[(a)]TCE Indoor Air Short-Term Action Level from Washington State Department of Ecology Implementation Memo No. 22.

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Table 4-7
Passive Indoor Air Analytical Results
Precision Engineering, Inc.
Seattle, Washington

Location:	Indoor Air Cleanup Level, MTCA Method B	TCE Indoor Air Short-Term Action Level, Workplace Scenario[(a)]	RAD1			RAD2	RAD3	RAD4		RAD5	
Sample Name:			RAD1	RAD1-022020	RAD1-051520	RAD2	RAD3	RAD4	RAD4-051520	RAD5	RAD5-051520
Collection Start Date:			02/01/2020	02/20/2020	05/15/2020	02/01/2020	02/01/2020	02/20/2020	05/15/2020	02/20/2020	05/15/2020
Collection End Date:			02/13/2020	03/12/2020	06/05/2020	02/13/2020	02/13/2020	03/12/2020	06/05/2020	03/12/2020	06/05/2020
VOC (ug/m^3)											
TCE	0.33	7.5	110	1.3	1.4	110	170	2.6	2.6	2.3	1.7

NOTES:

Radiello 130 (R130) passive air samplers were used for all sampling events.

Result shading (color key below) indicates an exceedance of screening criteria.

Indoor Air Cleanup Level, MTCA Method B

TCE Indoor Air Short-Term Action Level, Workplace Scenario

Sample shading (color key below) indicates that the sample was collected under the following conditions:

Prior to air purification

During air purification

After implementation of the interim remedial actions, with no air purification

MTCA = Model Toxics Control Act.

RAD = passive indoor air sample collected with Radiello 130.

TCE = trichloroethene.

ug/m^3 = micrograms per cubic meter.

VOC = volatile organic compound.

[(a)]TCE Indoor Air Short-Term Action Level from Washington State Department of Ecology Implementation Memo No. 22.

Table 5-1
Evaporator Pit Water Analytical Results
Precision Engineering, Inc.
Seattle, Washington

Location:	MTCA Method A, Groundwater	MTCA Method B, Groundwater	Vapor Intrusion, Groundwater Screening Level, MTCA Method B	Evaporation Pit
Sample Name:				EVAPPIT
Collection Date:				02/11/2020
TPH (ug/L)				
Diesel-Range Organics	500	NV	NV	3,900
Residual-Oil-Range Organics	500	NV	NV	2,500
Diesel + Oil[(a)]	500	NV	NV	6,400
Total Metals (ug/L)				
Arsenic	5	0.058	NV	6.1 J
Chromium	50[(b)]	48[(c)]	NV	994,000
VOCs (ug/L)				
Trichloroethene	5	0.54	1.40	1.4

NOTES:

Result shading (color key below) indicates an exceedance of screening criteria.

MTCA Method A, Groundwater

MTCA Method B, Groundwater

Sample shading indicates that the sample was collected prior to air purification.

J = estimated.

MTCA Method A = Model Toxics Control Act Method A.

MTCA Method B = Model Toxics Control Act Method B, lower of carcinogen or noncarcinogen value.

NV = no value.

TPH = total petroleum hydrocarbons.

ug/L = micrograms per liter.

VOC = volatile organic compound.

[(a)]Diesel + Oil is the sum of the diesel-range organics and residual-oil-range organics.

[(b)]Value is for total chromium.

[(c)]Value is for hexavalent chromium, the more toxic species of chromium.

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Table 5-2
Air Purifier PID Readings
Precision Engineering, Inc.
Seattle, Washington

Air Purifier Location	Collection Date	Collection Time	PID Reading		Reading Collected Immediately Before Filter Replacement	Reading Collected Immediately After Filter Placement	Comments
			Air Purifier Inlet (ppb)	Air Purifier Outlet (ppb)			
Warehouse 1	02/17/2020	8:11	446	446	X	--	Air purifier was running, but internal carbon filter was still wrapped in plastic packaging. Packaging was removed and filter was reinstalled. Air purifier was set to low flow.
		14:30	357	146	--	X	
	02/20/2020	8:16	329	200	--	--	Reading collected near time of deployment of eight-hour Summa canister indoor air sample. Prefilter for air-purifying unit was a dark gray color. The change filter indicator light was not on.
		15:41	413	262	--	--	Reading collected near time of collection of eight-hour Summa canister indoor air sample.
	02/24/2020	14:25	200	167	X	--	Filter was changed after readings were collected; no post-replacement reading was recorded.
	03/02/2020	13:57	217	220	X	--	
		14:25	241	96	--	X	
	03/12/2020	12:50	211	170	X	--	
		13:04	197	66	--	X	
	03/19/2020	12:00	283	225	X	--	
		12:18	259	73	--	X	
	03/26/2020	12:36	270	165	X	--	
		13:01	363	140	--	X	
	04/02/2020	11:50	285	232	X	--	
		12:04	309	97	--	X	
	04/09/2020	11:37	254	177	X	--	HEPA and carbon filters were replaced and readings subsequently recorded.
		13:03	220	70	--	X	
	04/16/2020	12:01	722	613	X	--	
		12:16	463	159	--	X	
	04/23/2020	11:33	161	181	X	--	PID was restarted in a clean ambient air environment and the air purifier was retested to ensure that measured results were accurate.
		11:54	204	36	--	X	
	04/29/2020	10:50	86	74	X	--	
		11:07	133	28	--	X	

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Table 5-2
Air Purifier PID Readings
Precision Engineering, Inc.
Seattle, Washington

Air Purifier Location	Collection Date	Collection Time	PID Reading		Reading Collected Immediately Before Filter Replacement	Reading Collected Immediately After Filter Placement	Comments
			Air Purifier Inlet (ppb)	Air Purifier Outlet (ppb)			
Sewing Room	02/17/2020	8:03	378	380	X	--	Air purifier was running, but internal carbon filter was still wrapped in plastic packaging during PID reading. Packaging was removed and filter was reinstalled. Air purifier was set to low flow.
		14:30	446	210	--	X	
	02/20/2020	8:32	832	301	--	--	Reading collected near time of deployment of eight-hour Summa canister indoor air sampler.
		16:00	404	256	--	--	Reading collected near time of collection of eight-hour Summa canister indoor air sample.
	02/24/2020	14:35	9	0	X	--	Filter was changed after readings were collected; no post-replacement reading was recorded.
	03/02/2020	14:02	318	170	X	--	Prefilter had darkened to a gray color.
		14:10	313	87	--	X	
	03/12/2020	12:58	360	342	X	--	Air purifier had been moved to opposite side of room because of leaking roof near unit.
		13:08	315	50	--	X	
	03/19/2020	11:55	272	238	X	--	
		12:15	316	95	--	X	
	03/26/2020	12:50	268	252	X	--	
		13:11	230	67	--	X	
	04/02/2020	11:43	110	55	X	--	
		12:00	138	33	--	X	
	04/09/2020	11:31	332	226	X	--	HEPA and carbon filters were replaced and readings subsequently recorded.
		12:59	162	82	--	X	
	04/16/2020	11:55	272	225	X	--	
		12:12	276	108	--	X	
	04/23/2020	11:27	103	54	X	--	
		11:51	146	7	--	X	
	04/29/2020	10:43	80	40	X	--	
		11:03	206	44	--	X	

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Table 5-2
Air Purifier PID Readings
Precision Engineering, Inc.
Seattle, Washington

Air Purifier Location	Collection Date	Collection Time	PID Reading		Reading Collected Immediately Before Filter Replacement	Reading Collected Immediately After Filter Placement	Comments
			Air Purifier Inlet (ppb)	Air Purifier Outlet (ppb)			
Office	02/17/2020	7:40	15	10	X	--	Air purifier was running, but carbon filter was still wrapped in plastic packaging for PID reading. Packaging was removed and filter was reinstalled. At employees' request, air purifier is set to high and laid on its back to reduce operation noise. Confirmed that air purifier position did not compromise its operation.
		14:30	265	135	--	X	
	02/20/2020	8:22	822	297	--	--	Reading collected near time of deployment of eight-hour Summa canister indoor air sampler.
		15:53	204	152	--	--	Reading collected near time of collection of eight-hour Summa canister indoor air sample
	02/24/2020	14:20	0	0	X	--	Filter was changed after readings were collected; no post-replacement reading was recorded.
	03/02/2020	14:15	29	39	X	--	
		14:20	30	10	--	X	
	03/12/2020	12:41	63	50	X	--	
		13:03	12	0	--	X	
	03/19/2020	11:49	8	0	X	--	
		12:12	47	1	--	X	
	03/26/2020	12:25	0	0	X	--	Prefilter had darkened to a gray color.
		12:58	30	3	--	X	
	04/02/2020	11:38	0	0	X	--	
		11:57	12	0	--	X	
	04/09/2020	11:25	0	0	X	--	HEPA, prefilter, and carbon filters were replaced and readings subsequently recorded.
		12:56	0	0	--	X	
	04/16/2020	11:51	0	0	X	--	
		12:09	0	0	--	X	
	04/23/2020	11:23	0	0	X	--	
		11:48	0	0	--	X	
	04/29/2020	10:37	0	0	X	--	
		11:01	0	0	--	X	

NOTES:
A Honeywell ppbRAE 3000 PID equipped with a 10.6 electron volt lamp was used to collect ambient air readings during air-purifier operation.
Air-purifying units were HEPA-AIRE® PAS2400 portable air scrubbers equipped with a prefilter, a HEPA filter, and a VL2002 high-capacity carbon filter.
All PID readings are the observed peak value after the instrument had time to stabilize to the new location.
Shading (color key below) indicates that the event was conducted under the following conditions:

Prior to air purification
During air purification
After implementation of the interim remedial actions, with no air purification

-- = no reading collected.
X = reading collected.
HEPA = high-efficiency particulate air.
PID = photoionization detector.
ppb = parts per billion.

FIGURES



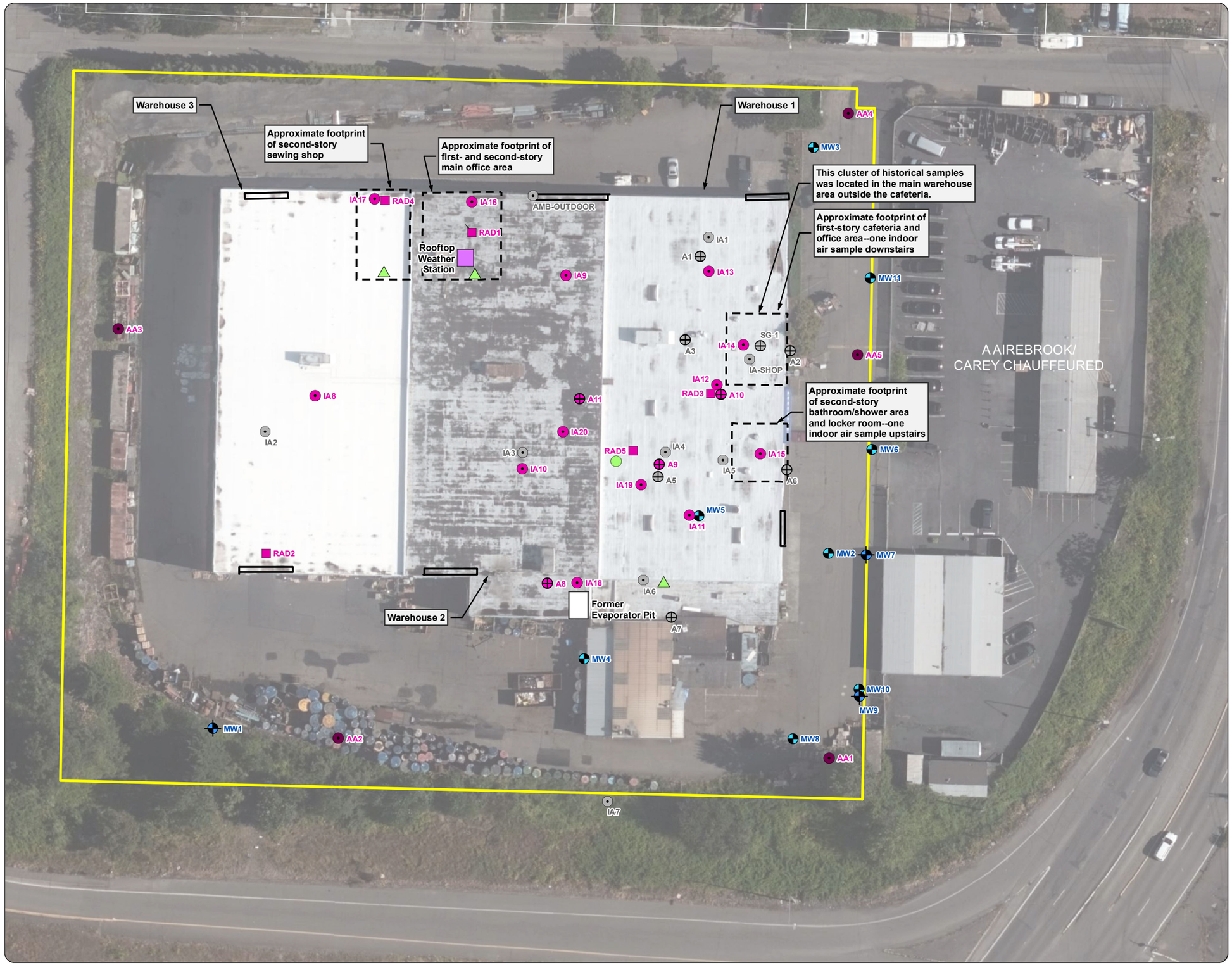


Figure 4-1
Vapor Sample Locations

Precision Engineering, Inc.
Seattle, Washington

Legend

Vapor Sample Locations

- Ambient Air
- Indoor Air
- Passive Sampler
- Sub-slab Soil Gas

Historical Vapor Sample Locations

- Indoor/Ambient Air
- Sub-slab Soil Gas

Property Features

- Air Purifier
- Former Trichloroethene Tank
- Shallow Monitoring Well
- Deep Monitoring Well
- Overhead Door (Approximate)
- Property Parcel
- King County Parcel

NOTES:
Air purifier units were installed on 2/13/2020.
The air purifier located in the sewing shop was originally located near IA17, but was moved on March 12, 2020.
Well locations for MW1 to MW8 were surveyed by Duncanson, Inc. All other feature locations are approximate.

0 25 50
Feet

Source:
Aerial photograph obtained from Mapbox.
Parcel data obtained from King County GIS.

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Figure 4-2
Pre-Air-Purification and -Interim-Action TCE Results
Precision Engineering, Inc.
Seattle, Washington

Location	IA 16
Sample Name	IA 16[d]
Collection Date	2/11/2020
TCE (ug/m3)	2.8

Location	IA 13
Sample Name	IA 13[a]
Collection Date	2/2/2020
TCE (ug/m3)	210

Location	AA 4
Sample Name	AA 4[c]
Collection Date	2/2/2020
TCE (ug/m3)	0.16 U

Location	IA 17
Sample Name	IA 17[d]
Collection Date	2/11/2020
TCE (ug/m3)	93

Location	RAD 1
Sample Name	RAD 1[e]
Collection Date	2/13/2020
TCE (ug/m3)	110

Location	AA 3
Sample Name	AA 3[c]
Collection Date	2/2/2020
TCE (ug/m3)	0.27 U

Location	IA 14
Sample Name	IA 14[a]
Collection Date	2/2/2020
TCE (ug/m3)	110

Location	AA 5
Sample Name	AA 5[c]
Collection Date	2/2/2020
TCE (ug/m3)	0.16 U

Location	A 11
Sample Name	A 11[b]
Collection Date	2/1/2020
TCE (ug/m3)	82

Location	IA 9
Sample Name	IA 9[a]
Collection Date	2/2/2020
TCE (ug/m3)	330

Location	IA 12
Sample Name	IA 12[a]
Collection Date	2/2/2020
TCE (ug/m3)	200

Location	IA 8
Sample Name	IA 8-020120[a]
Collection Date	2/2/2020
TCE (ug/m3)	270

Location	A 10
Sample Name	A 10[b]
Collection Date	2/2/2020
TCE (ug/m3)	29

Location	IA 20
Sample Name	IA 20[d]
Collection Date	2/11/2020
TCE (ug/m3)	73

Location	RAD 3
Sample Name	RAD 3[e]
Collection Date	2/13/2020
TCE (ug/m3)	170

Location	IA 10
Sample Name	IA 10[a]
Collection Date	2/2/2020
TCE (ug/m3)	340

Location	RAD 2
Sample Name	RAD 2[e]
Collection Date	2/13/2020
TCE (ug/m3)	110

Location	IA 15
Sample Name	IA 15[a]
Collection Date	2/2/2020
TCE (ug/m3)	170

Location	A 9
Sample Name	A 9[b]
Collection Date	2/1/2020
TCE (ug/m3)	1100

Location	A 8
Sample Name	A 8[b]
Collection Date	2/1/2020
TCE (ug/m3)	160

Location	IA 18
Sample Name	IA 18[d]
Collection Date	2/11/2020
TCE (ug/m3)	45

Location	IA 11
Sample Name	IA 11[a]
Collection Date	2/1/2020
TCE (ug/m3)	170

Location	IA 19
Sample Name	IA 19[d]
Collection Date	2/11/2020
TCE (ug/m3)	110

Location	AA 2
Sample Name	AA 2[c]
Collection Date	2/1/2020
TCE (ug/m3)	0.16 U

Location	AA 1
Sample Name	AA 1[c]
Collection Date	2/1/2020
TCE (ug/m3)	0.16 U

Approximate footprint of second-story sewing shop

Approximate footprint of first- and second-story main office area

This cluster of historical samples was located in the main warehouse area outside the cafeteria.

Approximate footprint of first-story cafeteria and office area--one indoor air sample downstairs

Approximate footprint of second-story bathroom/shower area and locker room--one indoor air sample upstairs

Rooftop Weather Station

Former Evaporator Pit

Warehouse 1

Warehouse 2

Warehouse 3

A AIREBROOK/
CAREY CHAUFFEURED

IA-SHOP

SG-1

AMB-OUTDOOR

Legend

Vapor Sample Locations
- Ambient Air
- Indoor Air
- Passive Sampler
- Sub-slab Soil Gas

Historical Vapor Sample Locations
- Indoor/Ambient Air
- Sub-slab Soil Gas

Property Features
- Shallow Monitoring Well
- Deep Monitoring Well
- Overhead Door (Approximate)
- Former TCE Tank
- Property Parcel
- King County Parcel

Sample Shading
- Sample collected prior to air purification

TCE Result Shading
- Exceedance of MTCA Method B indoor air CUL (0.33 ug/m3)
- Exceedance of short-term indoor air action level, workplace (7.5 ug/m3)
- Exceedance of MTCA Method B sub-slab soil gas screening level (11 ug/m3)

NOTES:
CUL = cleanup level.
MTCA = Model Toxics Control Act.
TCE = trichloroethene.
U = Result is non-detect to method reporting limit.
ug/m3 = micrograms per cubic meter.
(a) 24-hour indoor air sample collected with a 6-liter Summa canister under "worst case" conditions (i.e., doors and windows closed, outside working hours).
(b) Sub-slab soil gas sample collected with a 1-liter Summa canister.
(c) 24-hour ambient air sample collected with a 6-liter Summa canister.
(d) 8-hour indoor air sample collected with a 6 liter Summa canister.
(e) Radiello 130 passive indoor air sample collected from February 1 to February 13, 2020.

0 25 50
Feet

Source:
Aerial photograph obtained from Mapbox.
Parcel data obtained from King County GIS.

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Figure 5-1
Pre- and Post-Air-Purification Indoor Air TCE Results

Precision Engineering, Inc.
Seattle, Washington

Location	IA 17	
Sample Name	IA 17[a]	IA 17-022020[b]
Collection Date	2/11/2020	2/20/2020
TCE (ug/m3)	93	4.5

Location	RAD 4
Sample Name	RAD4[d]
Collection Date	3/12/2020
TCE (ug/m3)	2.6

Location	IA 16	
Sample Name	IA 16[a]	IA 16-022020[b]
Collection Date	2/11/2020	2/20/2020
TCE (ug/m3)	2.8	1.9

Location	RAD 1	
Sample Name	RAD1[c]	RAD1-022020[b]
Collection Date	2/13/2020	3/12/2020
TCE (ug/m3)	110	1.3

Location	RAD 3
Sample Name	RAD3[c]
Collection Date	2/13/2020
TCE (ug/m3)	170

Location	IA 20
Sample Name	IA20[a]
Collection Date	2/11/2020
TCE (ug/m3)	73

Location	RAD 2
Sample Name	RAD2[c]
Collection Date	2/13/2020
TCE (ug/m3)	110

Location	IA 18
Sample Name	IA 18[a]
Collection Date	2/11/2020
TCE (ug/m3)	45

Location	RAD 5
Sample Name	RAD5[d]
Collection Date	3/12/2020
TCE (ug/m3)	2.3

Location	IA 19	
Sample Name	IA 19[a]	IA 19-022020[b]
Collection Date	2/11/2020	2/20/2020
TCE (ug/m3)	110	2.3

IA17 RAD4 IA16 RAD1 AA4 IA9 IA13 Sewing Room Office Warehouse 3 Warehouse 2 Warehouse 1 AA3 IA14 Cafeteria and Office AA5 AIRE-BROOK/ CAREY CHAUFFEURED IA12 RAD3 A10 IA8 A11 IA20 Locker Room RAD5 IA15 A9 IA10 IA19 IA11 RAD2 IA18 A8 Former Evaporator Pit AA2

Legend

Pre- and Post-Air-Purification Indoor Air Sample Locations

- Indoor Air
- Passive Sampler

Other Sample Locations

- Ambient Air
- Indoor Air
- Sub-slab Soil Gas

Property Features

- Air Purifier
- Former TCE Tank
- Overhead Door (Approximate)
- Property Parcel

Sample Shading

- Sample collected prior to air purification
- Sample collected during air purification

TCE Result Shading

- Exceedance of MTCA Method B indoor air CUL (0.33 ug/m3)
- Exceedance of short-term indoor air action level, workplace (7.5 ug/m3)

NOTES:
All sample locations are approximate.
Indoor air samples were collected under normal working conditions.
CUL = cleanup level.
MTCA = Model Toxics Control Act.
TCE = trichloroethene.
ug/m3 = micrograms per cubic meter.
(a) 8-hour indoor air sample collected with a 6 liter Summa canister.
(b)8-hour indoor air sample collected with a 6 liter Summa canister.
(c) Radiello 130 passive indoor air sample collected from February 1 to February 13, 2020.
(d) Radiello 130 passive indoor air sample collected from February 20 to March 12, 2020.

0 20 40
Feet

Source:
Aerial photograph obtained from Mapbox.
Parcel data obtained from King County GIS.

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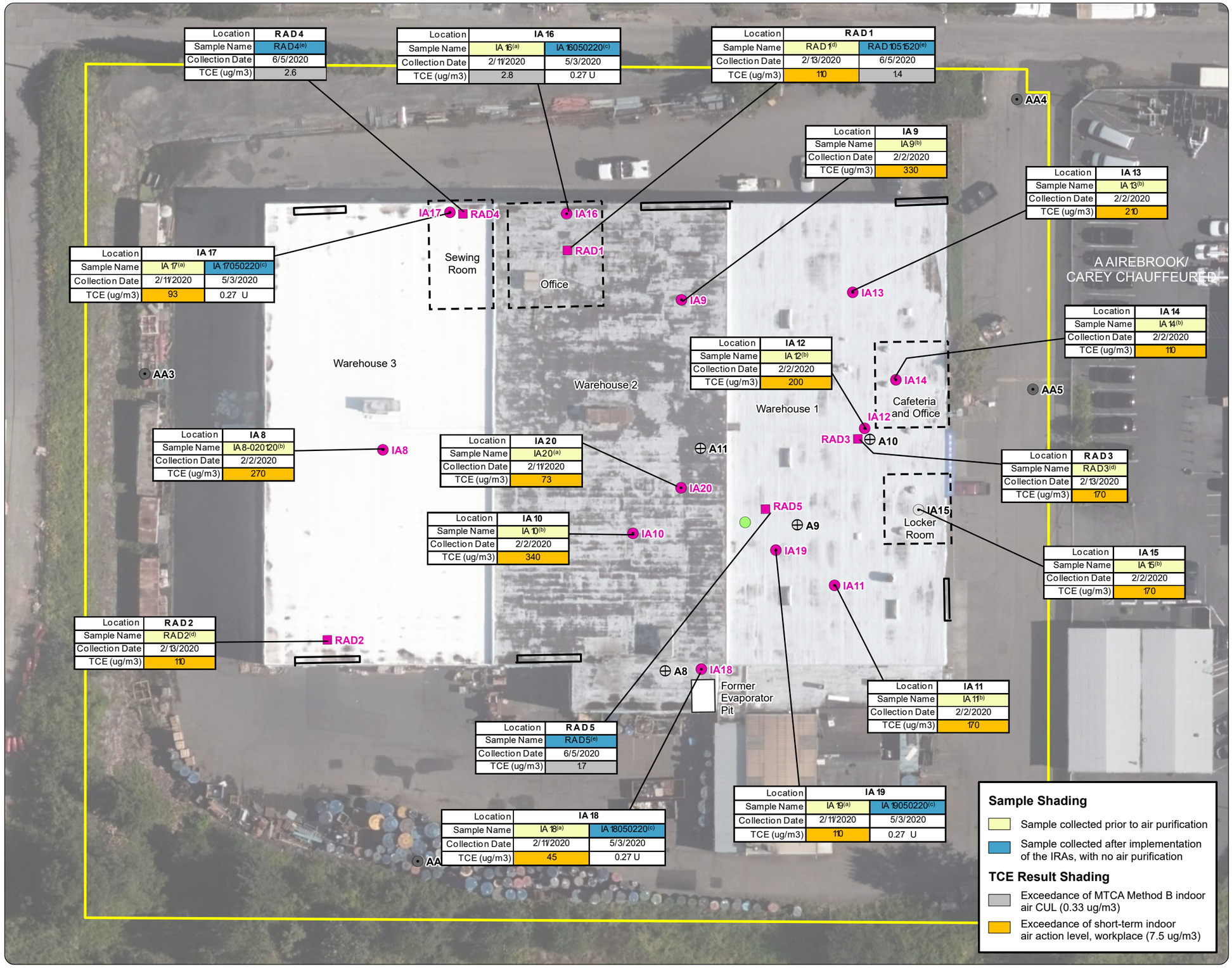


Figure 6-1
Pre- and Post-Interim-Action Indoor Air TCE Results

Precision Engineering, Inc.
Seattle, Washington

Legend

Pre- and Post-Interim-Action Indoor Air Sample Locations

- Indoor Air
- Passive Sampler

Other Sample Locations

- Ambient Air
- Indoor Air
- Sub-slab Soil Gas

Property Features

- Former TCE Tank
- Overhead Door (Approximate)
- Property Parcel

NOTES:
All sample locations are approximate.
Non-detects ("U") were not compared to screening critieria.
CUL = cleanup level.
IRAs = interim remedial actions.
MTCA = Model Toxics Control Act.
TCE = trichloroethene.
U = Result is non-detect to method reporting limit.
ug/m3 = micrograms per cubic meter.
(a) 8-hour indoor air sample collected with a 6-liter Summa canister during normal working conditions.
(b) 24-hour indoor air sample collected with a 6-liter Summa canister outside of normal working conditions.
(c) 24-hour indoor air, post-interim action performance sample collected with a 6-liter Summa canister outside of normal working conditions.
(d) Radiello 130 passive indoor air sampler collected from February 1 to February 13, 2020.
(e) Radiello 130 passive indoor air sampler collected from May 15 to June 5, 2020.

0 20 40
Feet

Source:
Aerial photograph obtained from Mapbox.
Parcel data obtained from King County GIS.

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This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Appendix G-2
Vapor Intrusion Priority Monitoring

GeoEngineers

1101 Fawcett Avenue, Suite 200, Tacoma, Washington 98402, Telephone: 253.383.4940, Fax: 253.383.4923 www.geoengineers.com

Memorandum

To:	Priscilla Tomlinson, Washington State Department of Ecology
From:	Garrett Leque, LG; Terry McPhetridge, LG, LHG
Date:	Revised May 25, 2023
File:	25806-001-00
Subject:	March 2023 Vapor Intrusion Priority Monitoring: Precision Engineering, Inc. Agreed Order No. DE 18079

GeoEngineers (GeoEngineers, Inc.) prepared this revised memorandum to summarize results from the sixth quarterly vapor intrusion priority (VIP) air monitoring event conducted at the Precision Engineering, Inc., site. Activities were conducted in accordance with the Washington State Department of Ecology (Ecology)-approved VIP work plan, included as Section 7 of the document titled "Vapor Report: Vapor Intrusion Assessment, Interim Remedial Actions, Vapor Intrusion Priority Work Plan, Precision Engineering, Inc., Site."

This memorandum has been revised to correct a typo regarding the sampler deployment dates.

AIR MONITORING

Radiello 130 passive vapor samplers were deployed in five locations over a three-week period from February 2 to February 23, 2023. The five locations include the office (RAD1), Warehouse 3 (RAD2), Warehouse 1 store front (RAD3), sewing room (RAD4), and near the former TCE tank (RAD5) per the VIP work plan (see attached Figure 1). The samples were analyzed for trichloroethene (TCE) by United States Environmental Protection Agency (EPA) Method TO-17. The laboratory analytical report is provided as Attachment A.

Analytical data and the laboratory's internal quality assurance and quality control data were reviewed to assess whether they met project-specific data quality objectives. A data validation memorandum summarizing data evaluation procedures, data usability, and deviations from specific field and/or laboratory methods is included as Attachment B. The data are considered acceptable for their intended use. TCE was detected in four samples at concentrations ranging from 0.089 to 0.059 micrograms per cubic meter (µg/m^3) which are less than the Model Toxics Control Act Method B indoor air cleanup level of 0.33 µg/m^3 and less than Ecology's workplace scenario short-term action limit of 7.5 µg/m^3. One sample was non-detect (RAD2). TCE concentrations at the five sampling locations were the lowest observed since corrective actions were implemented at the site in April 2020. See Table 1 for a summary of the sampling results to date.

DISCUSSION AND RECOMMENDATIONS

Indoor air TCE concentrations have declined since the April 2020 interim actions. Table 1 summarizes the six sampling events that have occurred since implementation of the interim actions. TCE concentrations in samples collected during the first three events were initially greater than the Model Toxics Control Act (MTCA) Method B cleanup level. TCE has been detected at concentrations less than the screening level

during the past three sampling events. Therefore, the minor slab issues observed in the fifth quarterly report do not appear to be a concern for indoor air TCE concentrations.

GeoEngineers requests to change from quarterly to semi-annual sampling (twice per year). One sampling event would be performed during the heating season (November through March) with the second event completed during the cooling season (April through October). The next sampling event would be performed in September 2023.

LIMITATIONS

We have prepared this report for the exclusive use of Dick Morgan for the Precision Engineering Site located at 1231 South Director Street, Seattle, Washington. Dick Morgan may distribute copies of this report to authorized agents and regulatory agencies as may be required for the Project.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty, express or implied, applies to this report.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Attachments:

Table 1. Indoor Air TCE Results

Figure 1. Passive Sampler Locations

Attachment A. Analytical Lab Report

Attachment B. Data Validation Memorandum

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Table 1

Indoor Air TCE Results

Precision Engineering, Inc.

Seattle, Washington

Location	Sample Identification	Sample Collection Start Date	Sample Collection End Date	Trichloroethene ($\mu g/m^3$)
RAD1	RAD1-121720	12/17/2020	1/7/2021	**0.54**
	RAD1-032221	3/22/2021	4/12/2021	**0.44**
	RAD1-062121	6/21/2021	7/12/2021	**0.42**
	RAD1-092021	9/20/2021	10/11/2021	**0.27**
	RAD1-091622	9/16/2022	10/7/2022	**0.19**
	RAD1-022323	2/23/2023	3/2/2023	**0.052**
RAD2	RAD2-022323	2/23/2023	3/2/2023	0.048 U
RAD3	RAD3-022323	2/23/2023	3/2/2023	**0.089**
RAD4	RAD4-121720	12/17/2020	1/7/2021	**0.87**
	RAD4-032221	3/22/2021	4/12/2021	**0.95**
	RAD4-062121	6/21/2021	7/12/2021	**0.76**
	RAD4-092021	9/20/2021	10/11/2021	**0.28**
	RAD4-091622	9/16/2022	10/7/2022	**0.27**
	RAD4-022323	2/23/2023	3/2/2023	**0.089**
RAD5	RAD5-121720	12/17/2020	1/7/2021	**0.77**
	RAD5-032221	3/22/2021	4/12/2021	**0.71**
	RAD5-062121	6/21/2021	7/12/2021	**0.38**
	RAD5-092021	9/20/2021	10/11/2021	**0.16**
	RAD5-091622	9/16/2022	10/7/2022	**0.14**
	RAD5-022323	2/23/2023	3/2/2023	**0.085**
MTCA Method B VI CUL[(1)]				0.33
Indoor Air Action Level, Workplace Scenario[(2)]				7.5

Notes:

Each sample was collected over a three-week period using a Radiello R130 passive indoor air sampler.

A **bolded** value indicates that the analyte was detected at the reported concentration.

A shaded cell indicated that the analyte was detected at a concentration greater than the MTCA Method B VI CUL

CUL = cleanup level

MTCA = Model Toxics Control Act

$\mu g/m^3$ = microgram per cubic meter

VI = vapor intrusion

U = analyte not detected above laboratory reporting limits

Reference:

[1] Ecology Cleanup level and risk calculation data tables. Washington State Department of Ecology, Lacey, Washington

[2] Ecology Implementation Memorandum No. 22 vapor intrusion investigations and short-term trichloroethene toxicity. Washington State Department of Ecology, Lacey, Washington.



Legend

- Shallow Monitoring Well
- Deep Monitoring Well
- Property Parcel
- Trichloroethene Tank
- Passive Sampler
- Indoor/Ambient Air
- Sub-slab Soil Gas

Slab Inspection Areas

- Unsealed Crack and Seams[(a)]
- Minor Sealant Wear
- Sealant Peeling from Seams[(a)]

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. The slab inspection was conducted by GeoEngineers on September 16, 2022. Monitoring well locations were surveyed by True North Surveying. All other locations are approximate.
4. (a) Seams are approximately 1-centimeter deep, linear depressions in the concrete slab with a visible bottom. Seams are not anticipated to contribute to vapor intrusion.

Data Source: 2021 image from King County GIS.
Site features from Figure 2-4 Previous Sample Locations, July 9, 2021, Maul Foster Alongi.
Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N W E S

50 0 50

Feet

Passive Sampler Locations

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 1

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\25806001_FOX_SlabInspection_Sept2022 Date Exported: 11/17/22 by ccabrera

ATTACHMENT A
Analytical Lab Report

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3/9/2023
Ms. Katy Atakturk
GeoEngineers, Inc.
2101 4th Ave Suite 950

Seattle WA 98121

Project Name: Precision Engines
Project #: 25806-001-00
Workorder #: 2302589

Dear Ms. Katy Atakturk

The following report includes the data for the above referenced project for sample(s) received on 2/27/2023 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Passive S.E. RAD130/SKC are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

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WORK ORDER #: 2302589

Work Order Summary

CLIENT:	Ms. Katy Atakturk GeoEngineers, Inc. 2101 4th Ave Suite 950 Seattle, WA 98121	**BILL TO:**	CORP Accounts Payables GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052
PHONE:	206-728-2674	**P.O. #**	
FAX:	206-728-2732	**PROJECT #**	25806-001-00 Precision Engines
DATE RECEIVED:	02/27/2023	**CONTACT:**	Monica Tran
DATE COMPLETED:	03/09/2023		

FRACTION #	NAME	TEST
01A	RAD1-022323	Passive S.E. RAD130/SKC
02A	RAD2-022323	Passive S.E. RAD130/SKC
03A	RAD3-022323	Passive S.E. RAD130/SKC
04A	RAD4-022323	Passive S.E. RAD130/SKC
05A	RAD5-022323	Passive S.E. RAD130/SKC
06A	Lab Blank	Passive S.E. RAD130/SKC
07A	CCV	Passive S.E. RAD130/SKC
08A	LCS	Passive S.E. RAD130/SKC
08AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY: Heidi Hayes DATE: 03/09/23

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-017, Effective date: 10/18/2022, Expiration date: 10/17/2023.
Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
RAD130 Passive SE by Mod EPA TO-17
GeoEngineers, Inc.
Workorder# 2302589

Five Radiello 130 (Solvent) samples were received on February 27, 2023. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 30240 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: RAD1-022323

Lab ID#: 2302589-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	0.11	0.052

Client Sample ID: RAD2-022323

Lab ID#: 2302589-02A

No Detections Were Found.

Client Sample ID: RAD3-022323

Lab ID#: 2302589-03A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	0.18	0.089

Client Sample ID: RAD4-022323

Lab ID#: 2302589-04A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	0.18	0.089

Client Sample ID: RAD5-022323

Lab ID#: 2302589-05A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	0.18	0.085

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Client Sample ID: RAD1-022323

Lab ID#: 2302589-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c030145sim**	**Date of Collection: 2/23/23 9:00:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/2/23 04:23 AM**	
		Date of Extraction: 3/1/23	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	0.11	0.052

Temperature = 77.0F , duration time = 30240 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Client Sample ID: RAD2-022323

Lab ID#: 2302589-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c030146sim**	**Date of Collection: 2/23/23 9:10:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/2/23 04:50 AM**	
		Date of Extraction: 3/1/23	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	Not Detected	Not Detected

Temperature = 77.0F , duration time = 30230 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: RAD3-022323

Lab ID#: 2302589-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c030147sim**	**Date of Collection: 2/23/23 8:30:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/2/23 05:16 AM**	
		Date of Extraction: 3/1/23	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	0.18	0.089

Temperature = 77.0F , duration time = 30170 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Client Sample ID: RAD4-022323

Lab ID#: 2302589-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c030148sim**	**Date of Collection: 2/23/23 8:50:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/2/23 05:43 AM**	
		Date of Extraction: 3/1/23	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	0.18	0.089

Temperature = 77.0F , duration time = 30170 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Client Sample ID: RAD5-022323

Lab ID#: 2302589-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c030149sim**	**Date of Collection: 2/23/23 8:40:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/2/23 06:10 AM**	
		Date of Extraction: 3/1/23	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	0.18	0.085

Temperature = 77.0F , duration time = 30120 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2302589-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c030134sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/1/23 11:29 PM**	
		Date of Extraction: 3/1/23	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.048	Not Detected	Not Detected

Temperature = 77.0F , duration time = 30240 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130

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Client Sample ID: CCV

Lab ID#: 2302589-07A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c030131sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/1/23 10:08 PM**
		Date of Extraction: NA

Compound	%Recovery
Trichloroethene	111

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130

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Client Sample ID: LCS

Lab ID#: 2302589-08A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c030132sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/1/23 10:35 PM**	
		Date of Extraction: 3/1/23	

Compound	%Recovery	Method Limits
Trichloroethene	102	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130

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Client Sample ID: LCSD

Lab ID#: 2302589-08AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c030133sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/1/23 11:02 PM**	
		Date of Extraction: 3/1/23	

Compound	%Recovery	Method Limits
Trichloroethene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130

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Passive Sorbent Chain of Custody

Page 1 of 1

WO# 2302589

Case Seal #: _____

Company: GeoEngineers Project #: 25806-001-00 P.O. #:

Project Manager: Garrett Leque Project Name: PrecisionEngines

Contact phone/email: Collected by: K. Ataktürk

Lab I.D.	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other ( )	Analysis Requested	Sample Comments:
01A	RAD1-022323	QY244	02/02/23	~~02/23/23~~ 9:00	02/23/23	9:00			X		TCE by TO-17	
02A	RAD2-022323	QY245	↓	9:20	↓	9:10			X		↓	
03A	RAD3-022323	QY246		9:40		8:30			X			
04A	RAD4-022323	QY247		10:00		8:50			X			
05A	RAD5-022323	QY248	↓	10:40	↓	8:40			X		↓	
		NA										

Reporting Units (circle): ppbv, µg/m3, ppmv, mg/m3, µg, ng

Turn Around Time: ☒ Normal ☐ Rush _____ Specify

Relinquished by: (signature)	Date	Time	Received by: (signature)	Date	Time	Notes to Lab:
Katy	2/24/23	11:00AM	K. Mitchell EATL	2/27/23	0915	
Relinquished by: (signature)	Date	Time	Received by: (signature)	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples.

Lab Use Only

Shipper Name: Fedex Air Bill #:

Custody Seals Intact? Yes No (None) Temperature (°C) NA

Sample Condition Upon Receipt: (circle) (Good) SDR

ATTACHMENT B
Data Validation Memorandum

Data Validation Report

1101 Fawcett Avenue, Suite 200, Tacoma, Washington 98402, Telephone: 253.383.4940, Fax: 253.383.4923 www.geoengineers.com

Project: Dick Morgan – Precision Engineering Remedial Investigation
February 2023 Radiello Air Samples

GEI File No: 25806-001-00

Date: April 11, 2023

This report documents the results of a United States Environmental Protection Agency (USEPA)-defined Stage 2A data validation (USEPA Document 540-R-08-005; USEPA 2009) of analytical data from the analyses of air samples collected as part of the February 2023 sampling event, and the associated laboratory quality control (QC) samples. The samples were obtained from the Precision Engineering site located at 1231 S Director Street in Seattle, Washington.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2020) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide detection and reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

The data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times
- Surrogate Recoveries
- Method Blanks
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Continuing Calibrations (CCALs)

VALIDATED SAMPLE DELIVERY GROUPS

This data validation summary included review of the sample delivery group (SDG) listed below in Table 1.

TABLE 1. SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
2302589	RAD1-022323, RAD2-022323, RAD3-022323, RAD4-022323, RAD5-022323

CHEMICAL ANALYSIS PERFORMED

Eurofins Air Toxics, Inc. (Eurofins) located in Folsom, California, performed laboratory analysis on the air samples using the following method:

- Volatile Organic Compounds (VOCs) by GC/MS collected on Charcoal-based Passive Samplers

DATA VALIDATION SUMMARY

The results for each of the QC elements are summarized below.

DATA PACKAGE COMPLETENESS

Eurofins analyzed the air samples evaluated as part of this data validation. The laboratory provided the required deliverables for the data validation. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COC documentation parameters were met.

Holding Times

The holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection.

Established holding times were met for the requested analyses.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added at a known concentration and percent recoveries are calculated following analysis.

The surrogate recoveries for field samples were within the laboratory control limits.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. Method blanks were analyzed with each batch of

samples, at a frequency of 1 per 20 samples. None of the analytes of interest were detected above the reporting limits in the method blanks.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. As there is no actual sample matrix (such as soil or groundwater) in the analysis, the analytical expectations for accuracy and precision are usually more rigorous and qualification would apply to the samples in the batch, instead of the parent sample only.

Laboratory control sample analyses should be performed once per analytical batch or every 20 field samples, whichever is more frequent. The recovery criteria for laboratory control samples are specified in the laboratory documents, as are the relative percent difference (RPD) control limits for LCS/LCSD sample sets.

The frequency requirements were met for each analysis, and the percent recovery and RPD values were within the proper control limits.

Continuing Calibrations (CCALs)

The continuing calibrations were conducted according to the laboratory methods and consisted of the appropriate number of standards. The percent difference (%D) and relative response factors (RRF) were within the internal laboratory control limits, or the control limits stated in the National Functional Guidelines (USEPA 2020).

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD percent recovery values. Precision was acceptable, as demonstrated by the LCS/LCSD RPD values.

No analytical results were qualified. The data are acceptable for the intended use.

REFERENCES

U.S. Environmental Protection Agency (USEPA). 2009. "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," EPA-540-R-08-005. January 2009.

U.S. Environmental Protection Agency (USEPA). 2020. "Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review," EPA-540-R-201-005. November 2020.

Appendix H
Geophysics Report

Global Geophysics

P. O. Box 2229
Redmond, WA 98053
Tel: 425-890-4321
Fax: 360-805-0259

July 14, 2021 Our Ref.: 111-0520.000

Maul Foster & Alongi, Inc.
1329 N. State Street, Suite 301
Bellingham, WA 98225

Attention: Ms. Amanda Bixby

RE: REPORT ON THE GEOPHYSICAL SURVEY AT S. 1231 DIRECTOR ST., SEATTLE, WA

Dear Ms. Bixby:

Global Geophysics conducted geophysical surveys on June 17th, 18th and 19th, 2021 at S. 1231 Director St., Seattle, WA. The proposed objective of the geophysical investigation is to assist in locating potential buried UST in a boiler room, determining the concrete thickness, and mark rebar around proposed borings.

METHODOLOGY AND INSTRUMENTATION

GPR was used for this study. The following paragraphs describe the method and field procedure.

Ground Penetrating Radar

The GPR method uses electromagnetic pulses, emitted at regular intervals by an antenna to map subsurface features. The electromagnetic pulses are reflected where changes in electrical properties of materials occur such as changes in lithology or where underground utilities are present. The reflected electromagnetic energy is received by an antenna, converted into an electrical signal, and recorded on the GPR unit. The data is recorded and viewed in real time on a graphical display that depicts a continuous profile or cross-section image of the subsurface directly beneath the path of the antenna.

The depth of penetration of the GPR signal varies according to antenna frequency and the conductivity of the subsurface material. The depth of subsurface penetration with GPR decreases with an increase in the frequency of the antenna and an increase in soil conductivity. Low frequency antennas (50 to 500 MHz) provide the best compromise between obtaining good subsurface penetration and resolution.

The data were collected in the areas without shelves and mechanize on the floor using Geophysical Survey Systems, Inc. (GSSI) SIR 3000 GPR system with antennas having a center frequency of 400 MHz. The data was digitally recorded for post processing.

RESULTS

The site plan is shown in Figure 1. The photos of interpreted GPR rebar markings on floor are presented in Figures 2-10. The GPR profiles in the boiler room are presented in Figures 11-17.

- UST locate in the Boiler Room: As shown in the GPR profiles, there are some data gaps due to the presence of obstacles. No UST was located within the scanned areas. A potential excavated area is interpreted and shown in Figure 17.
- The interpreted concrete thickness is presented in Figure 18. The thickness of the concrete varies between 2.5 in to 11 in, but 5-6 inch for most of the areas.
- The spacing between the rebars is around 6” in original slabs, but 12” in new patches.

LIMITATIONS OF THE GEOPHYSICAL METHOD

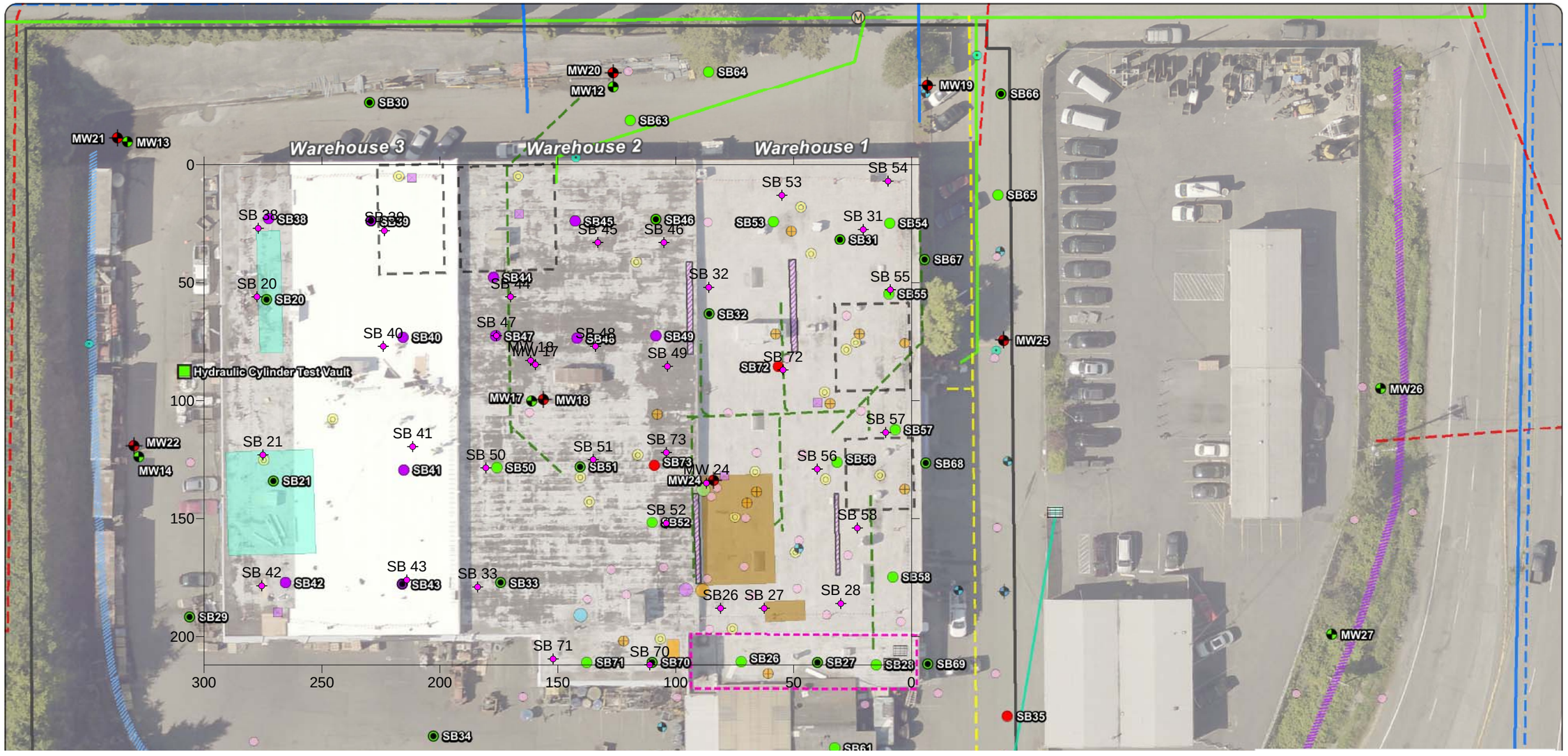
Global geophysics services are conducted in a manner consistent with the level of care and skill ordinarily exercised by other members of the geophysical community currently practicing under similar conditions subject to the time limits and financial and physical constraints applicable to the services. GPR is remote sensing geophysical method that may not detect all subsurface conditions due to the limitations of the methods, soil conditions, size of the features and their depths. The interpreted concrete thickness may deviate from the true thickness from the digitizing of the reflector and velocity assumptions.

Sincerely,

Global Geophysics

John Liu, Ph.D., R.G.
Principal Geophysicist

Path: X:\1803.01_01\Projects\Fig9_1 Proposed Sample Locations.mxd



GeoEngineers note about Figure 1: This figure shows the location of proposed investigation locations in a draft Work Plan that was not published. Actual investigation locations performed per the published final Work Plan are shown in report figures.

0 25 50

PROJECT
Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE
Site Plan

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		**FIGURE 1**
CHECK	JL		
REVIEW	--		



(159.5, 84.75) MW 17

(161.5, -83) MW 18

(277.5, 56) SB 20





(87, 135) MW 24

(275, 123) SB 21



PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

Photos for proposed boreholes and surrounding rebar markings

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.	
DESIGN	--		SCALE AS SHOWN	REV.
CADD	EJ			
CHECK	JL		**FIGURE 2**	
REVIEW	--			



(81, 188) SB26

(30, 186) SB 28





(62.5, 188) SB 27

(20.5, 27.5) SB 31



PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

Photos for proposed boreholes and surrounding rebar markings

Global Geophysics
P.O. Box 2229
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Tel: 425-890-4321

Project #: 111-0520.000			FILE No.	
DESIGN	--		SCALE AS SHOWN	REV.
CADD	EJ			
CHECK	JL		**FIGURE 3**	
REVIEW	--			



(86, 52) SB 32

(277, 27) SB 38





(184, 179) SB 33

(223.5, 28) SB 39



PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

Photos for proposed boreholes and surrounding rebar markings

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Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		**FIGURE 4**
CHECK	JL		
REVIEW	--		



(224, 77) SB 40



(275.5, 178.5) SB 42



(211.5, 119.5) SB 41



(214, 176) SB 43

PROJECT
Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE
Photos for proposed boreholes and surrounding rebar markings

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		**FIGURE 5**
CHECK	JL		
REVIEW	--		









PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

Photos for proposed boreholes and surrounding rebar markings

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

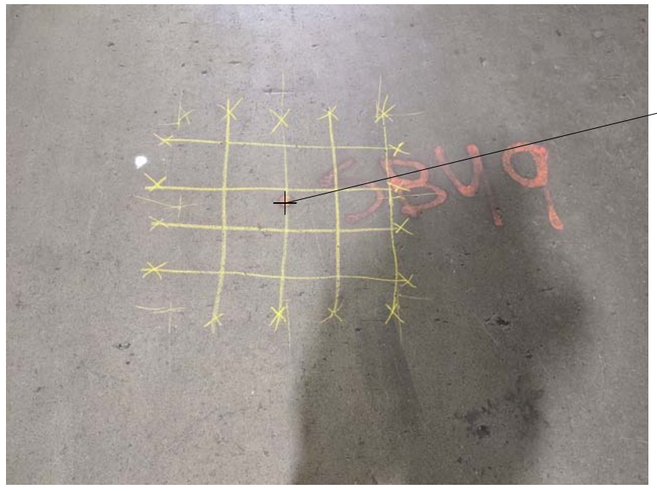
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DESIGN	--		SCALE AS SHOWN	REV.
CADD	EJ		**FIGURE 6**	
CHECK	JL			
REVIEW	--			



(134, 77) SB 48



(180.5, 128.5) SB 50



(103.5, 85.5) SB 49



(135, 125) SB 51

PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

Photos for proposed boreholes and surrounding rebar markings

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		**FIGURE 7**
CHECK	JL		
REVIEW	--		



(104, 152) SB 52



(10, 7) SB 54



(55, 13) SB 53



(9, 53) SB 55

PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

Photos for proposed boreholes and surrounding rebar markings

Global Geophysics
P.O. Box 2229
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Tel: 425-890-4321

Project #: 111-0520.000			FILE No.	
DESIGN	--		SCALE AS SHOWN	REV.
CADD	EJ		**FIGURE 8**	
CHECK	JL			
REVIEW	--			



(40, 129) SB 56



(23, 154) SB 58



(11, 113.5) SB 57



(111, 212) SB 70

PROJECT
Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE
Photos for proposed boreholes and surrounding rebar markings

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

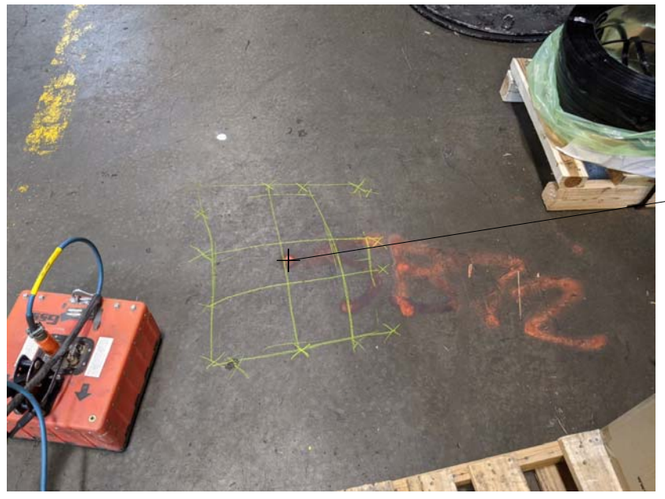
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CADD	EJ		**FIGURE 9**
CHECK	JL		
REVIEW	--		



(152, 209.5) SB 71



(104, 122) SB 73



(54.5, 87) SB 72

PROJECT

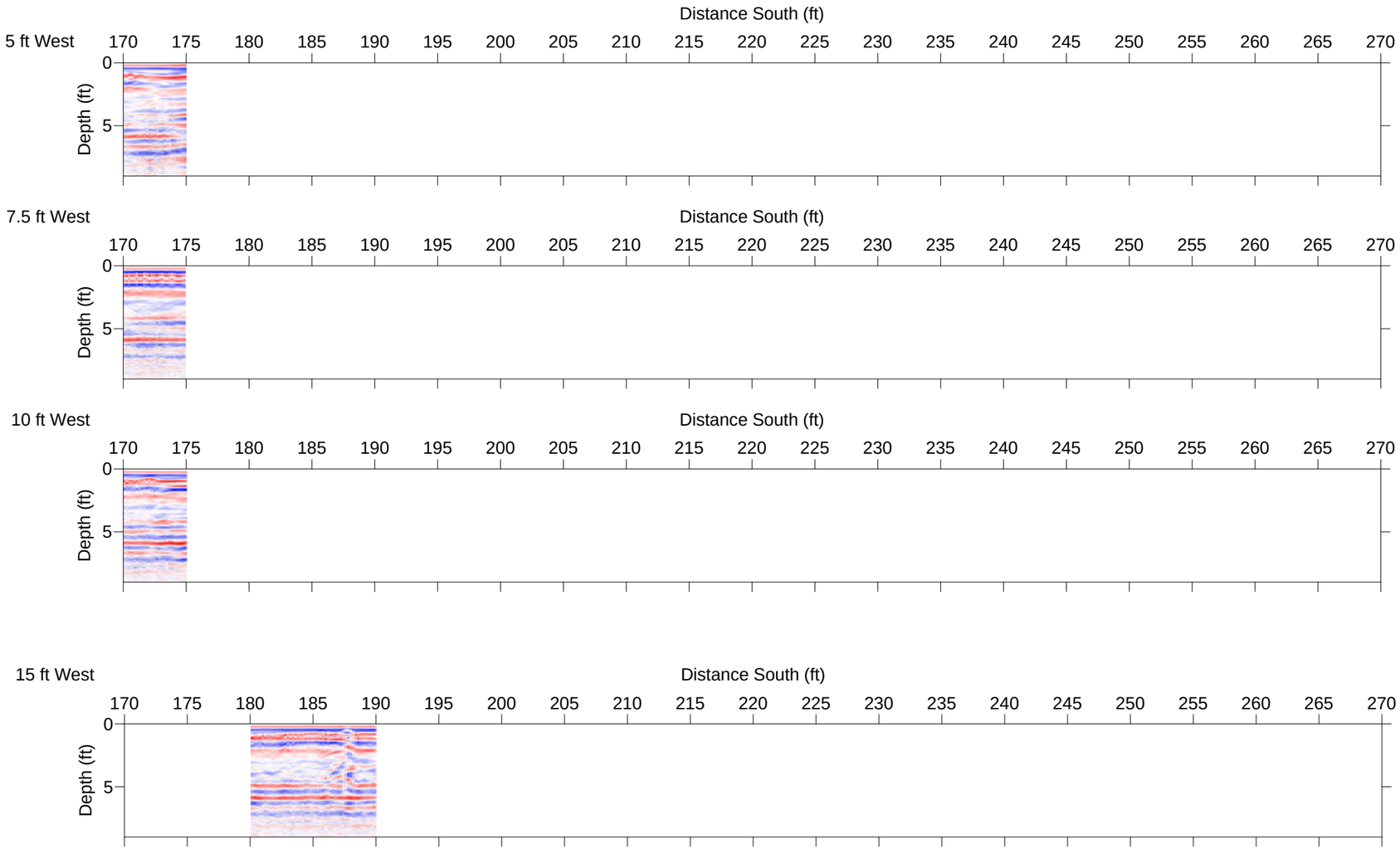
Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

Photos for proposed boreholes and surrounding rebar markings

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.	
DESIGN	--		SCALE AS SHOWN	REV.
CADD	EJ		**FIGURE 10**	
CHECK	JL			
REVIEW	--			



0 ft 10 ft 20 ft

PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

GPR Profiles

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		**FIGURE 11**
CHECK	JL		
REVIEW	--		

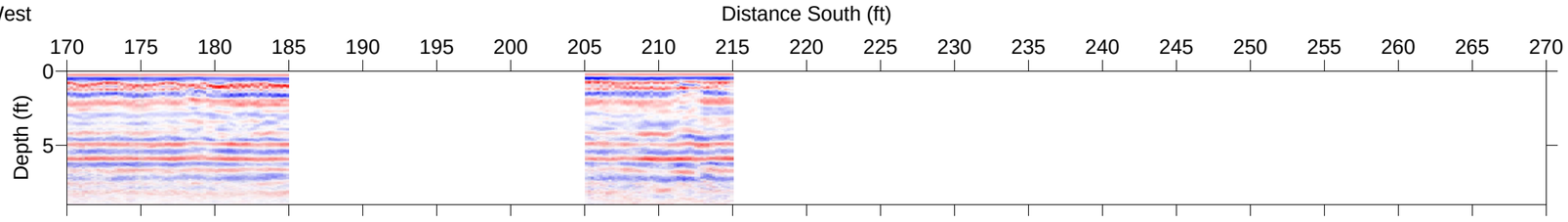
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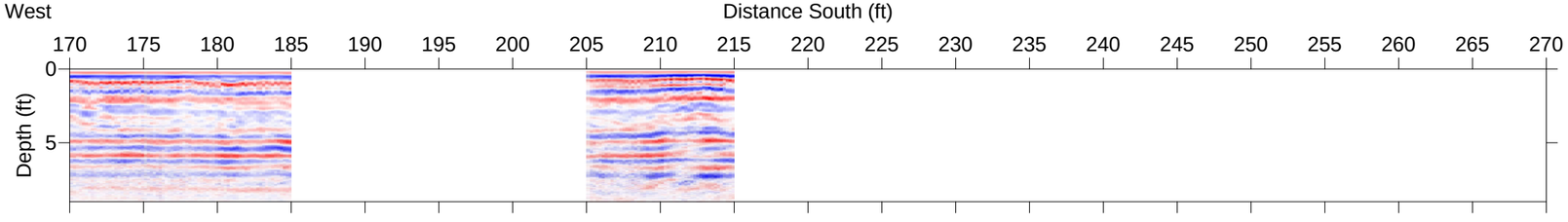
27.5 ft West

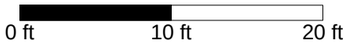


30 ft West



32.5 ft West





PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

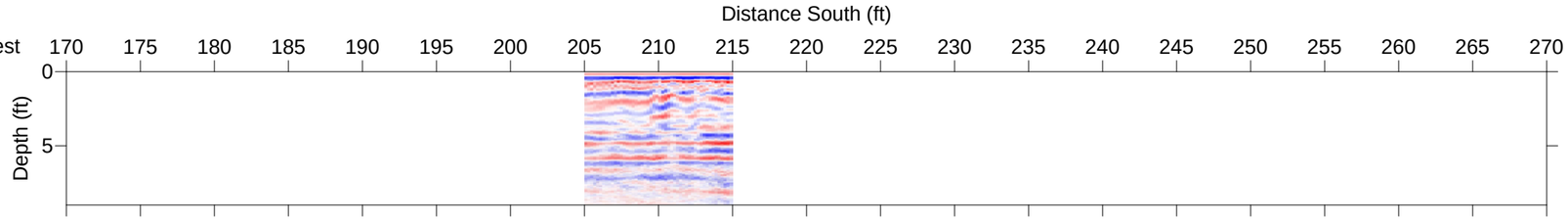
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GPR Profiles

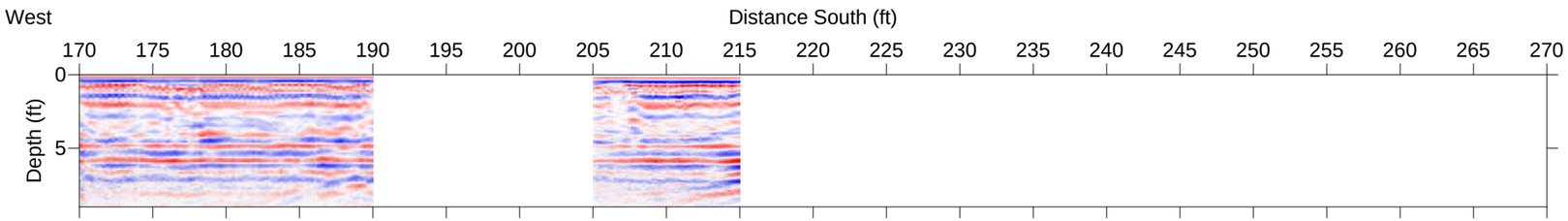
Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		**FIGURE 12**
CHECK	JL		
REVIEW	--		

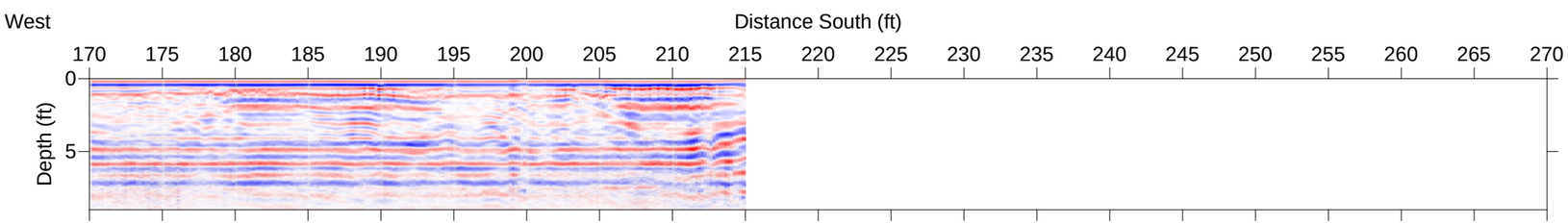
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37.5 ft West



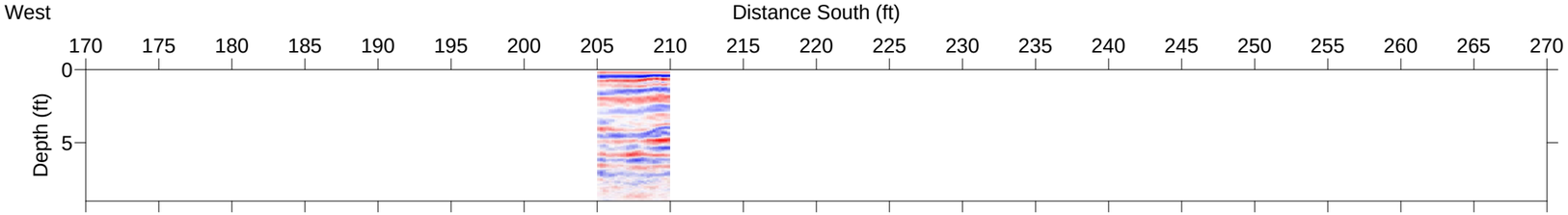
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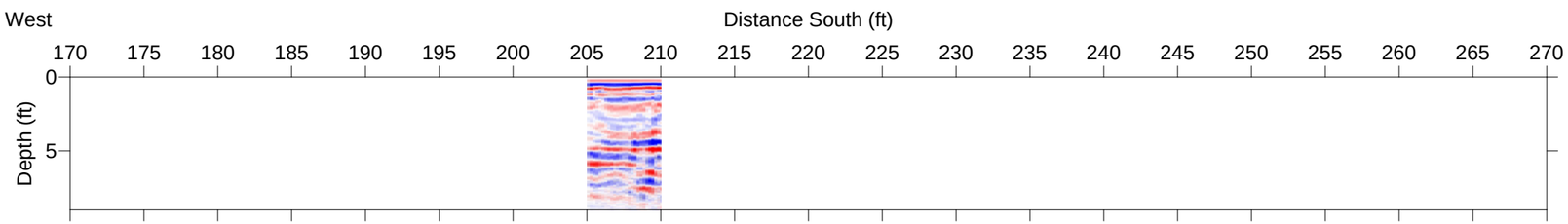
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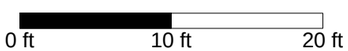


45 ft West



47.5 ft West





PROJECT

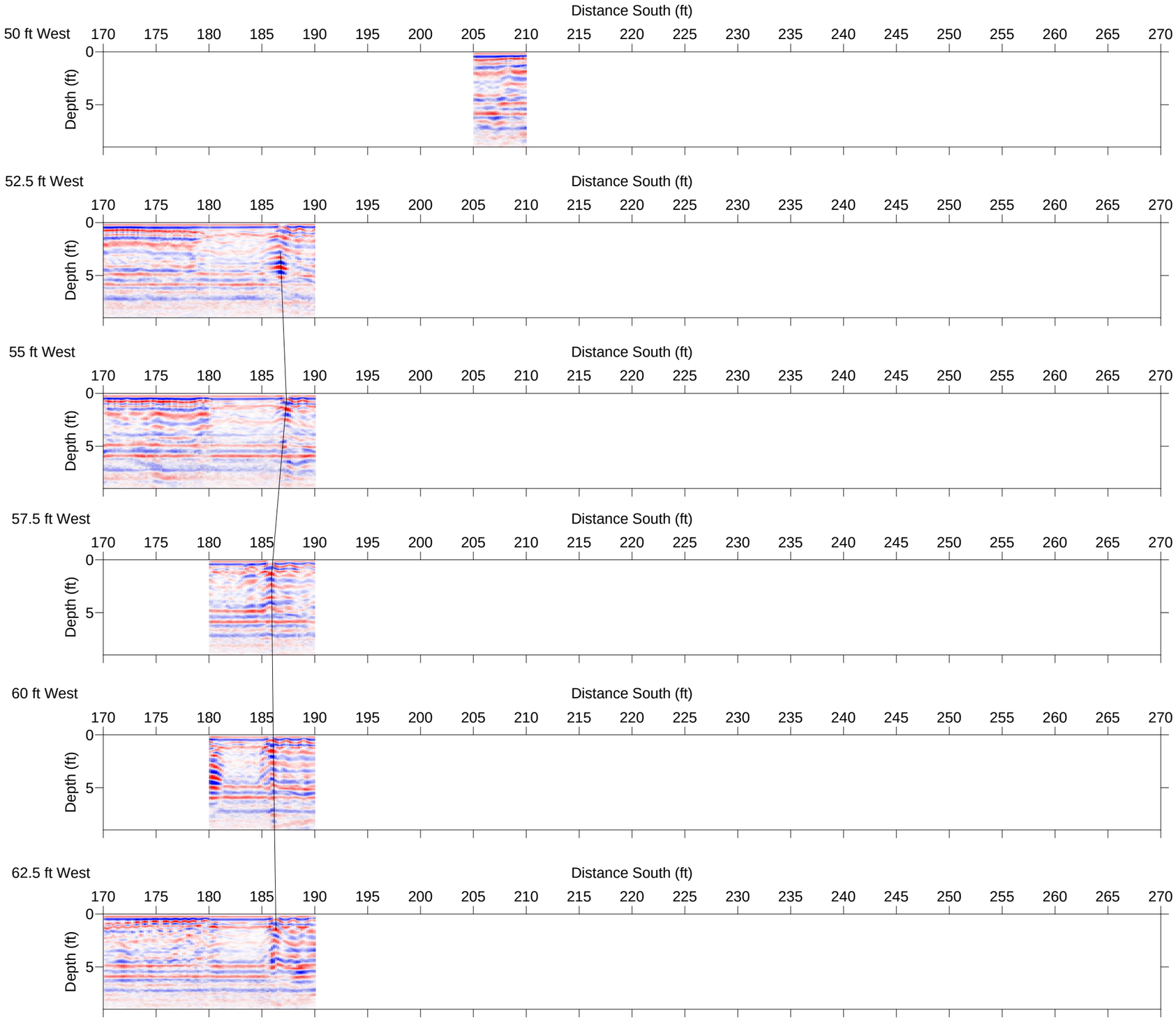
Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

GPR Profiles

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		
CHECK	JL		**FIGURE 13**
REVIEW	--		



0 ft 10 ft 20 ft

PROJECT

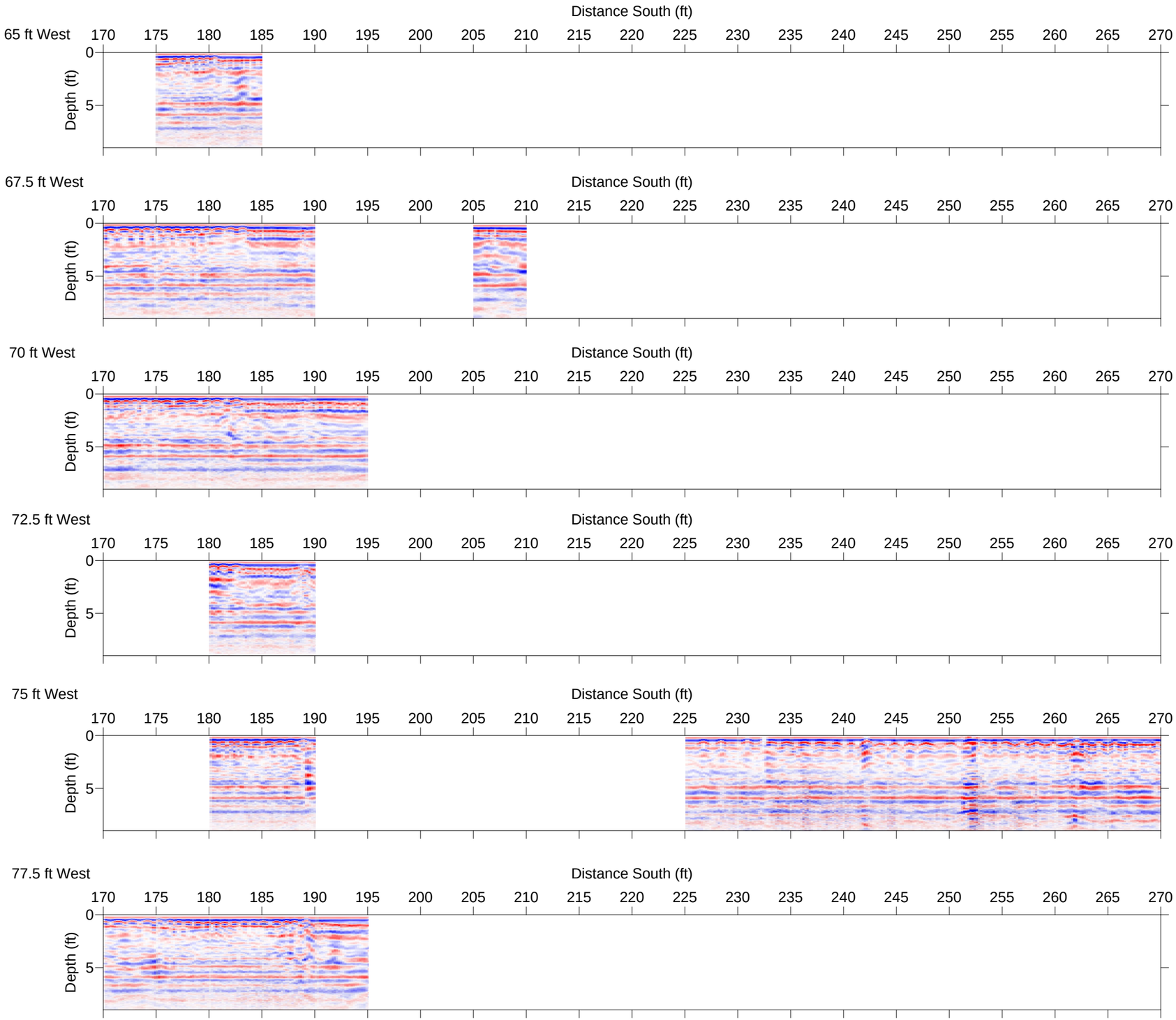
Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

GPR Profiles

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #. 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		**FIGURE 14**
CHECK	JL		
REVIEW	--		



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PROJECT

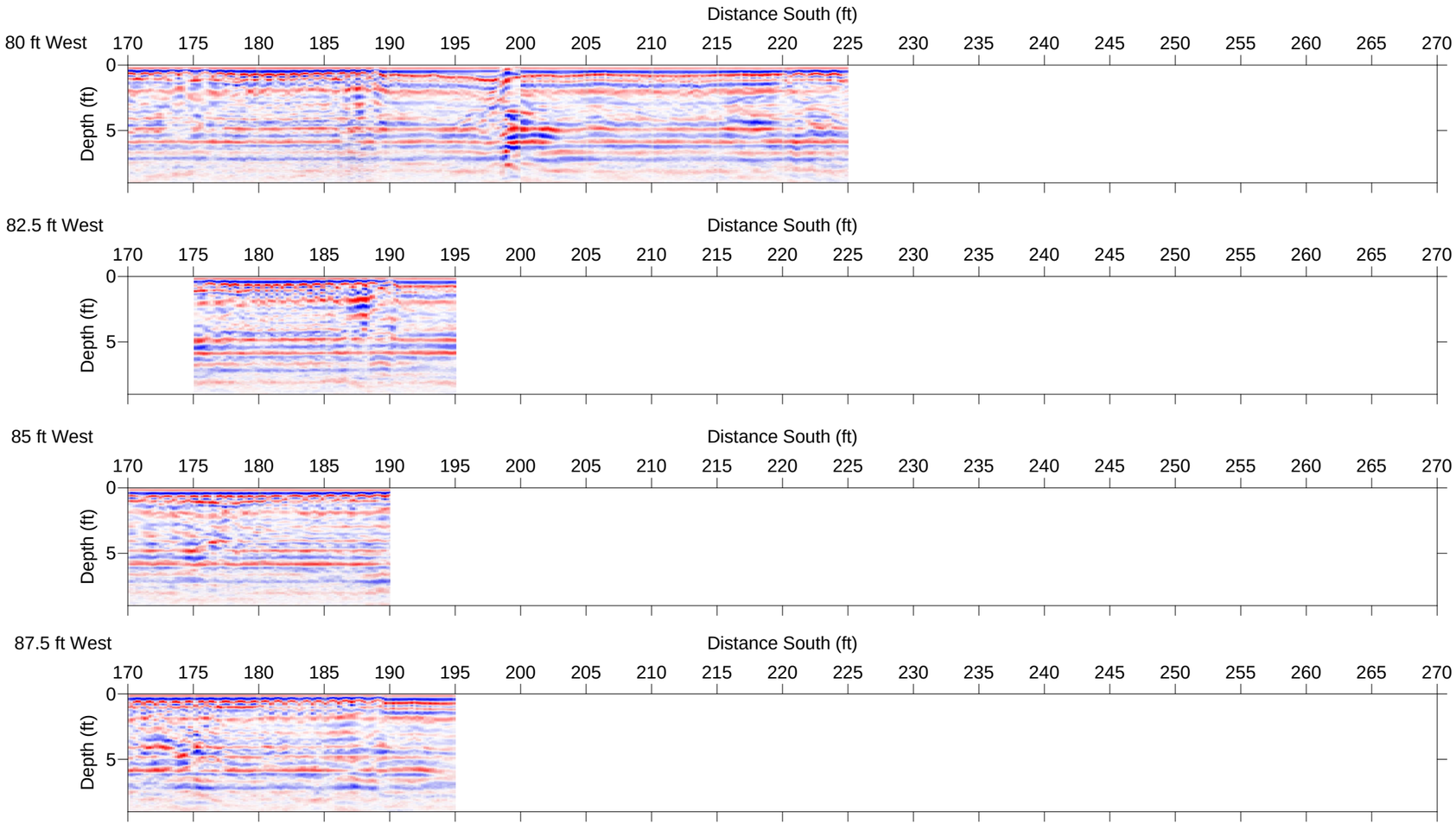
Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

GPR Profiles

Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.	
DESIGN	--		SCALE AS SHOWN	REV.
CADD	EJ			
CHECK	JL		**FIGURE 15**	
REVIEW	--			



0 ft 10 ft 20 ft

PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

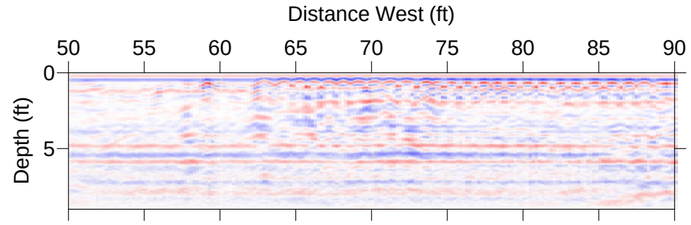
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GPR Profiles

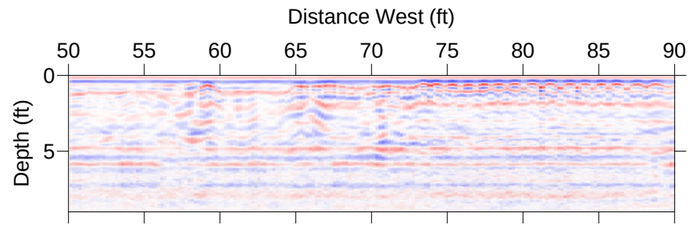
Global Geophysics
P.O. Box 2229
Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		**FIGURE 16**
CHECK	JL		
REVIEW	--		

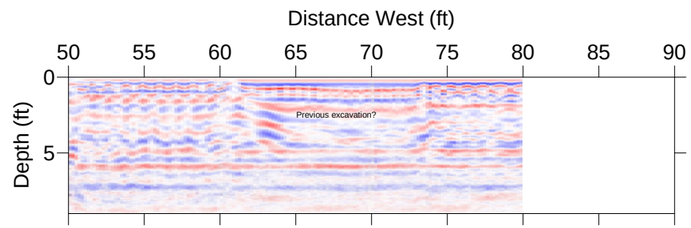
182.5 ft South



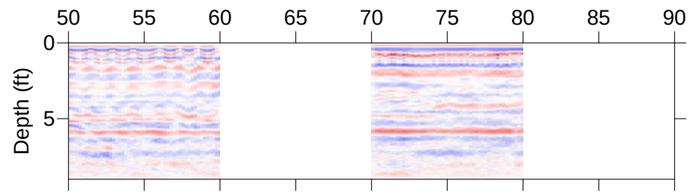
185 ft South



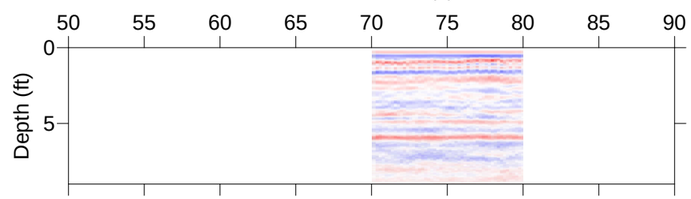
187.5 ft South

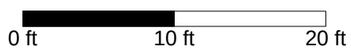


190 ft South



192.5 ft South





PROJECT

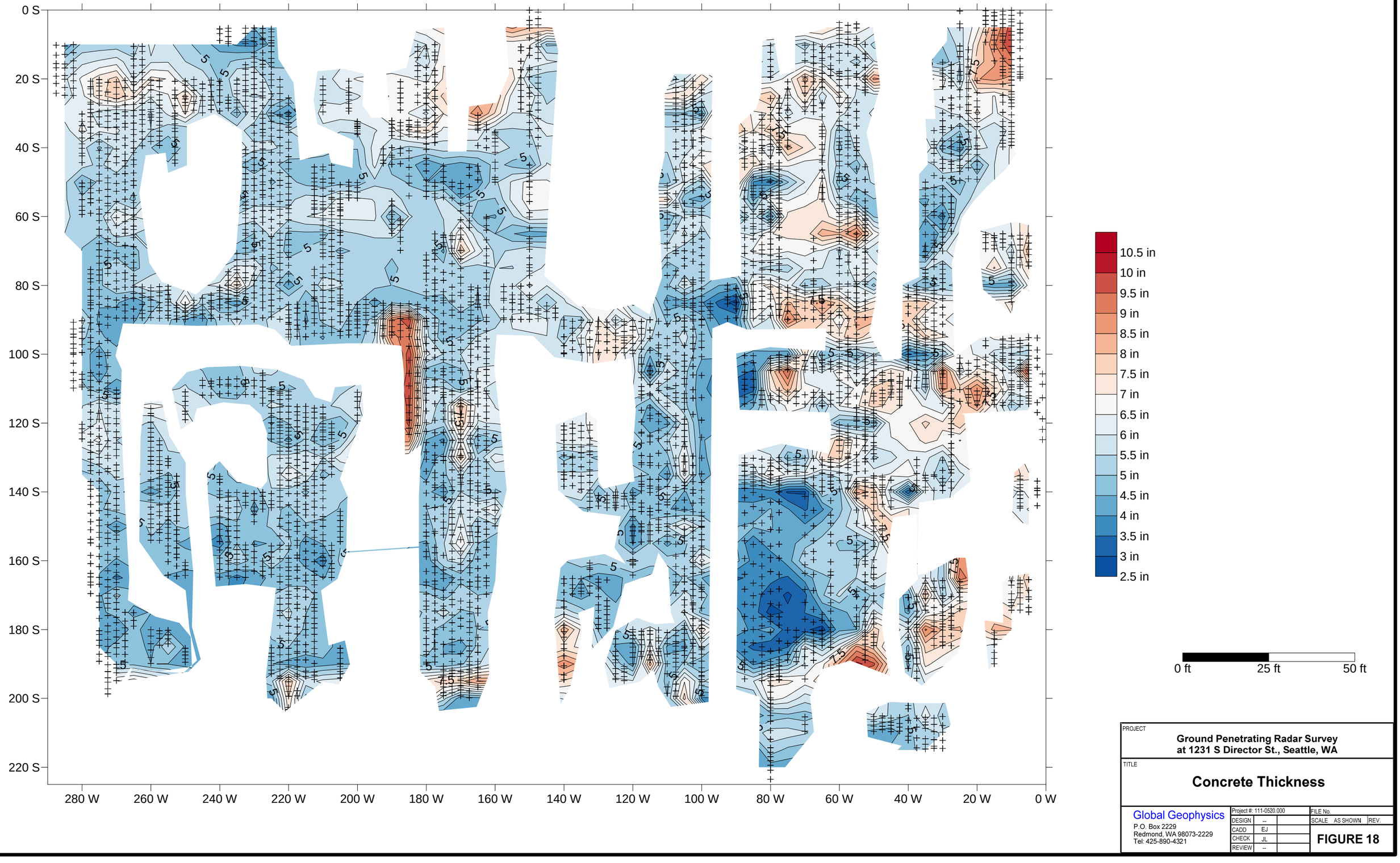
Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

GPR Profiles

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P.O. Box 2229
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Tel: 425-890-4321

Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		**FIGURE 17**
CHECK	JL		
REVIEW	--		



PROJECT

Ground Penetrating Radar Survey at 1231 S Director St., Seattle, WA

TITLE

Concrete Thickness

Global Geophysics
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Redmond, WA 98073-2229
Tel: 425-890-4321

Project #: 111-0520.000			FILE No.
DESIGN	--		SCALE AS SHOWN REV.
CADD	EJ		
CHECK	JL		**FIGURE 18**
REVIEW	--		

Appendix I
Kaspac Chiyoda Data



\\FWY01\data\Projects\2013\1396024.00 Ecology Precision Engineering\GIS\Events\RIReport\Fig8_SeattleLimo.mxd

Legend

- Seattle Limousine Monitoring Well
- Seattle Limousine Soil Boring
- Seattle Limousine Excavation Soil Sample
- Precision Engineering Deep Monitoring Well
- Precision Engineering Shallow Monitoring Well
- Seattle Limousine Excavations
- Parcel Boundary

Notes:

1. All locations are approximate.

Imagery Sources: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.
Seattle Limousine Map Sources: EMCON, Independent Remedial Action Report, Chiyoda International Property. 14 November 1995. and EMCON, Addendum to Independent Remedial Action Report, Chiyoda International Corporation Property. 9 September 1996.

N

0 17.5 35
Feet

Kennedy/ Jenks Consultants

Former Precision Engineering Property
Seattle, Washington

Seattle Limousine Property Sampling Locations

Figure 8

K/J Project Number 1396024.00
August 2015

Table A9: Historical Offsite Soil Analytical Results

Sample Location	Sample Depth (ft bgs)	Date	Hydrocarbons (mg/kg)				Metals (mg/kg)											VOCs (mg/kg)						
			Diesel-range	Oil-range	Gasoline-range	Total Petroleum Hydrocarbons (undifferentiated)	Antimony	Arsenic	Beryllium	Cadmium	Total Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Acetone	Benzene	Bromo-dichloro-methane	Bromo-form	Bromo-methane	2-Butanone	Carbon Disulfide
1	6.0	9/19/1989	57		20														<0.025					
2	6.0	9/19/1989	<5		<5														0.079					
3	11.0	9/19/1989	26		<5														0.058					
4	6.0	9/19/1989	214		<5														<0.025					
5	5.0	9/19/1989	<5		<5														<0.025					
B10-2	4.0	12/6/1994				27	<4.78	<4.78	<2.39	<2.39	20.6	14.4	7.66	<1.0	25.4	<4.78	<0.96	29.7		<0.50					
B10-4	6.0	12/6/1994				60														<0.50					
B10-8	11.0	12/6/1994				19														<0.50					
B11-1	2.0	12/6/1994				77	<4.78	<4.32	<2.16	<2.16	37.2	28.5	7.35	<1.0	47.5	<4.32	<0.86	43.2		<0.50					
B11-2	5.0	12/6/1994				17														<0.50					
B11-5	12.0	12/6/1994				19														<0.50					
B12-1	2..0	12/7/1994				120	<4.88	<4.89	<2.44	<2.44	15.6	24.4	9.77	<1.0	14.7	<4.88	<0.98	45.9		<0.50					
B12-4	7.0	12/7/1994				65														<0.50					
B12-7	12.0	12/7/1994				48														<0.50					
B7	0.5	8/28/1990																	<100	<5.0	<5.0	<25	<50	<50	<5.0
	1.5	8/28/1990																	<100	<5.0	<5.0	<25	<50	<50	<5.0
B-7 COMP	NA	4/18/1991																		<0.036	<0.014	<0.014	<0.036		
B-8 COMP	NA	4/18/1991																		<0.036	<0.014	<0.014	<0.036		
B-9 COMP	NA	4/18/1991																		<0.025	<0.010	<0.010	<0.050		
GB-1	1.5	6/6/1996	130	420	<20														2.90	0.074				1.00	
	3.0	6/6/1996	30	<100	<5														0.74	<0.005				0.28	
GB-2	1.5	6/6/1996	50	200	<5														0.25	<0.005				<0.10	
	3.0	6/6/1996	26	<100	<5														<0.10	<0.005				<0.10	
GB-3	1.5	6/6/1996	50	160	<5														0.38	<0.005				<0.10	
	3.0	6/6/1996	<25	<100	<5														0.26	<0.005				<0.10	
GB-4	1.5	6/6/1996						3		<1	10	10	<20					72	<0.10	<0.005				<0.10	
	3.0	6/6/1996	60	140				2		<1	7	8	<20					32	<0.10	<0.005				<0.10	
GB-5	3.0	6/6/1996	60	140	<5								25							<0.05					
GB-6	4.0	6/6/1996	60	120	<5								26							<0.05					
GB-7	4.0	6/6/1996	<25	<100	<5								17							<0.05					
GB-8	4.0	6/6/1996	100	100	237								16							0.12					
GB-9	4.0	6/6/1996	50	180	<5								<10							<0.05					
LD-EW-1	1.0	8/22/1996	262	1,162																					
LD-EW-2	1.0	8/26/1996	152	850																					
LD-EW2-1	1.0	1/2/1997	107	207 [a]																<0.05					
LD-EW3-1	1.0	1/4/1997		179																					
LD-FS-2	2.0	8/22/1996	31	131																					
LD-NW-1	1.0	8/22/1996	103	631																					
LD-NW-2	1.0	8/26/1996	54	190																					
LD-SW-1	1.0	8/22/1996	230	1,046																					
LD-SW-2	1.0	8/26/1996	172	558																					
LD-SW2-1	1.0	1/2/1997	97	194 [a]																0.32					
LD-WW-1	1.0	8/22/1996	148	505																					
LD-WW-2	1.0	8/236/1996	40	178																					
MW-3	8.5	1/26/1990			12																				
SP1	NA	4/17/1991	9 [b]		12															<0.025					
SP2	NA	4/17/1991	8 [b]		5															<0.025					
T1	NA	8/27/1990	<5		10															<0.025					
T2	NA	8/27/1990	<5		<5															<0.025					
T3	NA	8/27/1990	<5		<5															0.036					
T-NW-3.5	3.5	8/22/1996			<5															<0.05					
T-WW-3.5	3.5	8/22/1996			<5															<0.05					
T-EW-3.5	3.5	8/22/1996			<5															<0.05					
T-SW-3.5	3.5	8/22/1996			<5															<0.05					
B1-S1-D9	9.0	1/26/1990	<5		<5																				
B2-S1-D6	6.0	1/26/1990	<5		<5																				
B2-S2-D9	9.0	1/26/1990	<5		<5																				
B3-S1-D8.5	8.5	1/26/1990	<5		12																<0.010	<0.010	<0.025		

Table A9: Historical Offsite Soil Analytical Results

Sample Location	Sample Depth (ft bgs)	Date	VOCs (mg/kg)																								
			Carbon Tetra Chloride	Chloro-benzene	Chloro-ethane	Chloro-form	Chloro-methane	Dibromo-chloro-methane	1,2-Dichloro-benzene	1,3-Dichloro-benzene	1,4-Dichloro-benzene	1,1-Dichloro-ethane	1,1-Dichloro-ethylene	trans-1,2-Dichloro-ethylene	cis-1,2-Dichloro-ethylene	1,2-Dichloro-ethane	1,2-Dichloro-propane	trans-1,3-Dichloro-propene	cis-1,3-Dichloro-propene	Ethyl-benzene	Methylene Chloride	4-Methyl-2-Pentanone	Naph-thalene	Styrene	Toluene	1,1,2,2-Tetra chloro-ethane	Tetra-chloro-ethylene	1,1,1-Trichloro-ethane
1	6.0	9/19/1989																		<0.025					<0.025			
2	6.0	9/19/1989																		0.072					<0.025			
3	11.0	9/19/1989																		0.094					0.12			
4	6.0	9/19/1989																		<0.025					<0.025			
5	5.0	9/19/1989																		<0.025					<0.025			
B10-2	4.0	12/6/1994		<0.50					<1.0	<1.0	<1.0									<0.50					<0.50			
B10-4	6.0	12/6/1994		<0.50					<1.0	<1.0	<1.0									<0.50					<0.50			
B10-8	11.0	12/6/1994		<0.50					<1.0	<1.0	<1.0									<0.50					<0.50			
B11-1	2.0	12/6/1994		<0.50					<1.0	<1.0	<1.0									<0.50					<0.50			
B11-2	5.0	12/6/1994		<0.50					<1.0	<1.0	<1.0									<0.50					<0.50			
B11-5	12.0	12/6/1994		<0.50					<1.0	<1.0	<1.0									<0.50					<0.50			
B12-1	2..0	12/7/1994		<0.50					<1.0	<1.0	<1.0									<0.50					<0.50			
B12-4	7.0	12/7/1994		<0.50					<1.0	<1.0	<1.0									<0.50					<0.50			
B12-7	12.0	12/7/1994		<0.50					<1.0	<1.0	<1.0									<0.50					<0.50			
B7	0.5	8/28/1990	<5.0	<5.0	<5.0	<5.0	<50	<5.0				<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	<50		<5.0	4700 E	<5.0	<5.0	<5.0
	1.5	8/28/1990	<5.0	<5.0	<5.0	<5.0	<50	<5.0				<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	<50	30 E	<5.0	820 E	<5.0	<5.0	<5.0
B-7 COMP	NA	4/18/1991	<0.014	<0.036	<0.036	<0.014	<0.14	<0.014	<0.036	<0.036	<0.036	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.036	<0.14				<0.036	<0.014	<0.014	<0.014
B-8 COMP	NA	4/18/1991	<0.014	<0.036	<0.036	<0.014	<0.14	<0.014	<0.036	<0.036	<0.036	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.036	<0.14				0.053	<0.014	<0.014	<0.014
B-9 COMP	NA	4/18/1991	<0.010	<0.025	<0.040	<0.010	<0.10	<0.010	<0.025	<0.025	<0.025	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.025	<0.10				0.26	<0.010	<0.010	<0.010
GB-1	1.5	6/6/1996													0.074					1.40					980		1.90	
	3.0	6/6/1996													<0.005					0.031					9.20		0.017	
GB-2	1.5	6/6/1996													<0.005					<0.005					0.08		<0.005	
	3.0	6/6/1996													<0.005					<0.005					0.03		<0.005	
GB-3	1.5	6/6/1996													<0.005					<0.005					0.008		<0.005	
	3.0	6/6/1996													<0.005					<0.005					0.014		<0.005	
GB-4	1.5	6/6/1996													<0.005					<0.005					<0.005		<0.005	
	3.0	6/6/1996													<0.005					<0.005					<0.005		<0.005	
GB-5	3.0	6/6/1996																		<0.1					<0.1			
GB-6	4.0	6/6/1996																		<0.1					<0.1			
GB-7	4.0	6/6/1996																		<0.1					<0.1			
GB-8	4.0	6/6/1996																		0.2					0.3			
GB-9	4.0	6/6/1996																		<0.1					<0.1			
LD-EW-1	1.0	8/22/1996																										
LD-EW-2	1.0	8/26/1996																										
LD-EW2-1	1.0	1/2/1997																		<0.1					1.0			
LD-EW3-1	1.0	1/4/1997																										
LD-FS-2	2.0	8/22/1996																										
LD-NW-1	1.0	8/22/1996																										
LD-NW-2	1.0	8/26/1996																										
LD-SW-1	1.0	8/22/1996																										
LD-SW-2	1.0	8/26/1996																										
LD-SW2-1	1.0	1/2/1997																		3.2					6000			
LD-WW-1	1.0	8/22/1996																										
LD-WW-2	1.0	8/236/1996																										
MW-3	8.5	1/26/1990																										
SP1	NA	4/17/1991																		0.046					<0.025			
SP2	NA	4/17/1991																		0.046					<0.025			
T1	NA	8/27/1990		<0.025					<0.025	<0.025	<0.025									0.068					0.027			
T2	NA	8/27/1990		<0.025					<0.025	<0.025	<0.025									<0.025					0.13			
T3	NA	8/27/1990		<0.025					<0.025	<0.025	<0.025									1.1					0.35			
T-NW-3.5	3.5	8/22/1996																		<0.01					<0.01			
T-WW-3.5	3.5	8/22/1996																		<0.01					<0.01			
T-EW-3.5	3.5	8/22/1996																		<0.01					<0.01			
T-SW-3.5	3.5	8/22/1996																		<0.01					<0.01			
B1-S1-D9	9.0	1/26/1990																										
B2-S1-D6	6.0	1/26/1990																										
B2-S2-D9	9.0	1/26/1990																										
B3-S1-D8.5	8.5	1/26/1990	<0.010	<0.025	<0.025	<0.010	<0.10	<0.010				<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.10					<0.010	<0.010	<0.010

Table A9: Historical Offsite Soil Analytical Results

Sample Location	Sample Depth (ft bgs)	Date	VOCs (mg/kg)						DATA SOURCE
			1,1,2-Trichloro-ethane	Trichloro-ethylene	Trichloro-fluoro-methane	Vinyl Acetate	Vinyl Chloride	Total Xylenes	
1	6.0	9/19/1989						0.10	GeoEngineers 1989b
2	6.0	9/19/1989						1.62	GeoEngineers 1989b
3	11.0	9/19/1989						0.57	GeoEngineers 1989b
4	6.0	9/19/1989						<0.025	GeoEngineers 1989b
5	5.0	9/19/1989						<0.025	GeoEngineers 1989b
B10-2	4.0	12/6/1994						<0.50	Pacific Testing Labs 1995
B10-4	6.0	12/6/1994						<0.50	Pacific Testing Labs 1995
B10-8	11.0	12/6/1994						<0.50	Pacific Testing Labs 1995
B11-1	2.0	12/6/1994						<0.50	Pacific Testing Labs 1995
B11-2	5.0	12/6/1994						<0.50	Pacific Testing Labs 1995
B11-5	12.0	12/6/1994						<0.50	Pacific Testing Labs 1995
B12-1	2..0	12/7/1994						<0.50	Pacific Testing Labs 1995
B12-4	7.0	12/7/1994						<0.50	Pacific Testing Labs 1995
B12-7	12.0	12/7/1994						<0.50	Pacific Testing Labs 1995
B7	0.5	8/28/1990	<5.0	<5.0		<50	<5.0	30	Applied Consultants 1990b
	1.5	8/28/1990	<5.0	<5.0		<50	<5.0	<5.0	Applied Consultants 1990b
B-7 COMP	NA	4/18/1991	<0.014	<0.014	<0.036		<0.036	<0.036	Applied Consultants 1991
B-8 COMP	NA	4/18/1991	<0.014	<0.014	<0.036		<0.036	<0.036	Applied Consultants 1991
B-9 COMP	NA	4/18/1991	<0.010	<0.010	<0.025		<0.050	0.49	Applied Consultants 1991
GB-1	1.5	6/6/1996						10.0	EMCON 1996
	3.0	6/6/1996						0.110	EMCON 1996
GB-2	1.5	6/6/1996						<0.005	EMCON 1996
	3.0	6/6/1996						0.017	EMCON 1996
GB-3	1.5	6/6/1996						0.014	EMCON 1996
	3.0	6/6/1996						0.006	EMCON 1996
GB-4	1.5	6/6/1996						<0.005	EMCON 1996
	3.0	6/6/1996						<0.005	EMCON 1996
GB-5	3.0	6/6/1996						<0.1	EMCON 1996
GB-6	4.0	6/6/1996						<0.1	EMCON 1996
GB-7	4.0	6/6/1996						<0.1	EMCON 1996
GB-8	4.0	6/6/1996						1.4	EMCON 1996
GB-9	4.0	6/6/1996						<0.1	EMCON 1996
LD-EW-1	1.0	8/22/1996							EMCON 1996
LD-EW-2	1.0	8/26/1996							EMCON 1996
LD-EW2-1	1.0	1/2/1997						0.1	EMCON 1997
LD-EW3-1	1.0	1/4/1997							EMCON 1997
LD-FS-2	2.0	8/22/1996							EMCON 1996
LD-NW-1	1.0	8/22/1996							EMCON 1996
LD-NW-2	1.0	8/26/1996							EMCON 1996
LD-SW-1	1.0	8/22/1996							EMCON 1996
LD-SW-2	1.0	8/26/1996							EMCON 1996
LD-SW2-1	1.0	1/2/1997						9.7	EMCON 1997
LD-WW-1	1.0	8/22/1996							EMCON 1996
LD-WW-2	1.0	8/236/1996							EMCON 1996
MW-3	8.5	1/26/1990							Applied Consultants 1990a
SP1	NA	4/17/1991						0.41	Applied Consultants 1991
SP2	NA	4/17/1991						0.12	Applied Consultants 1991
T1	NA	8/27/1990						1.5	Applied Consultants 1990b
T2	NA	8/27/1990						0.14	Applied Consultants 1990b
T3	NA	8/27/1990						3.3	Applied Consultants 1990b
T-NW-3.5	3.5	8/22/1996						<0.01	EMCON 1996
T-WW-3.5	3.5	8/22/1996						<0.01	EMCON 1996
T-EW-3.5	3.5	8/22/1996						<0.01	EMCON 1996
T-SW-3.5	3.5	8/22/1996						<0.01	EMCON 1996
B1-S1-D9	9.0	1/26/1990							Applied Consultants 1990a
B2-S1-D6	6.0	1/26/1990							Applied Consultants 1990a
B2-S2-D9	9.0	1/26/1990							Applied Consultants 1990a
B3-S1-D8.5	8.5	1/26/1990	<0.010	<0.010	<0.025		<0.025		Applied Consultants 1990a

Notes:

(a) Sample contained components that eluted in oil range, but the chromatogram did not match the typical oil fingerprint.

(b) Sample contained components that eluted in diesel range, but the chromatogram did not match the typical diesel fingerprint.

"<" indicates analyte was not detected above the specified laboratory reporting limit.

Q qualifier indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria.

B qualifier indicates analyte detected in an associated method blank at a concentration greater than 1/2 the laboratory reporting limit or 5 percent of either the regulatory limit or analyte concentration in the sample.

E qualifier indicates an estimated value.

Indicates analysis not performed/reported.

VOCs = volatile organic compounds

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

Table A10: Historical Offsite Groundwater Analytical Results

Sample ID	Date	Hydrocarbons (µg/L)				Total Metals (µg/L)										VOCs (µg/L)				
		Diesel-range	Oil-range	Gasoline-range	Total Petroleum Hydrocarbons (undifferentiated)	Arsenic	Beryllium	Cadmium	Total Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Acetone	Benzene	Bromo-dichloro-methane	Bromoform	Bromo-methane
MW-1	1/31/1990																	<0.5	<0.2	<0.2	<0.5
MW-2	2/1/1990																	<0.5	<0.2	<0.2	<0.5
MW-3	2/1/1990																	46	<1.0	<1.0	<2.5
	3/29/1990																	75			
MW-4	8/28/1990	<1,000		<1,000														0.7	<0.2	<0.2	<0.5
	8/16/1995	280	<750	<50		22											<100	<0.5	<5	<5	<10
MW-5	8/28/1990	<1,000		<1,000														<0.5	<0.2	<0.2	<0.5
MW-6	8/28/1990	<1,000		26000 [a]														7.0	<1.0	<1.0	<2.5
	4/19/1991																	<2,500	<1,000	<1,000	<5,000
	12/2/1994	<250			6,900	41	4.5	5.0	118	280	126	<1.0	113	<2.5	9.5	450		9.0			
	12/15/1994																	8.1			
	5/9/1995	2080 [b]	1300 [c]			23		<3	24	40	20					116		13/<25			
	7/31/1995	890 [b]	<750	640		23											<100	20	<5	<5	<10
MW-7	4/19/1991																	<0.5	<0.2	<0.2	<1.0
	12/2/1994	<250			4,630	273	9.5	9.4	345	936	289	<1.0	165	<2.5	<2.5	10,000		<1.0			
	12/15/1994																	<0.5			
	5/9/1995	400 [b]	<750			104		<3	94	168	76					1,240		<5			
	7/31/1995	340 [b]	<750	<50		43											<100	<5	<5	<5	<10
	1/2/1997	360	<750	<50														<0.5			
MW-8	4/19/1991																	<0.5	<0.2	<0.2	<1.0
	12/2/1994	<250			3,180	50	5.7	5.6	257	574	128	<1.0	242	<2.5	51	602		<1.0			
	12/15/1994																	<0.5			
	5/9/1995	650 [b]	840 [a]			38		<3	62	86	14					99		<5			
	7/31/1995	<250	<750	<50		45											<100	<5	<5	<5	<10
	1/2/1997	340	<750	330														9.9			
MW-9	4/19/1991																	1.4	<0.2	<0.2	<1.0
	12/2/1994	<250			3,180	27	2.3	2.9	96	276	87	<1.0	100	28	4.7	350		<1.0			
	12/15/1994																	<0.5			
	5/9/1995	1470 [b]	980 [a]			9		<3	16	39	9					53		<5			
	7/31/1995	730 [b]	<750	<50		<5											<100	<5	<5	<5	<10
	1/2/1997	920	<750	3,930														1.8			
	4/8/1997																	1.8			
	6/23/1997																	1.0			
	9/30/1997																	8.9			
MW-10	12/15/1994																	<0.5			
	5/9/1995	850 [b]	940 [a]			22		<3	77	142	40					138		<5			
	7/31/1995	<250	<750	<50		6											<100	<5	<5	<5	<10
	1/2/1997	340	<750	<50														<0.5			
	4/8/1997																	<0.5			
	6/23/1997																	<0.5			
	9/30/1997																	<0.5			
MW-11	12/15/1994																	5.1			
	5/9/1995	700 [b]	<750			52		<3	70	85	32					108		<5			
	7/31/1995	430 [b]	<750	<50		50											<100	<5	<5	<5	<10
	4/14/1997																	6.0			
	6/23/1997																	4.3			
	9/30/1997																	<0.5			
MW-12	12/15/1994																	<0.5			
	5/9/1995	<250	<750			42		<3	27	47	8					55		<5			
	7/31/1995	310 [b]	<750	<50		29											<100	<5	<5	<5	<10
	1/2/1997	<250	<750	<50														<0.5			
GB-4-WS	6/6/1996	690	<750	<50		<5		<4	11	12	<2					23		<5			
GB-5-WS	6/6/1996	990	<750	70														<5			
OB-1	4/19/1991																	14	<0.2	<0.2	<1.0
RW-1	8/28/1990	<1,000		3,000														1.9	<0.2	<0.2	<0.5
	4/19/1991	<1,000		<1,000														4.8			

Table A10: Historical Offsite Groundwater Analytical Results

Sample ID	Date	VOCs (µg/L)																	
		2-Butanone	Carbon Disulfide	Carbon Tetrachloride	Chloro-benzene	Chloro-ethane	2-Chloroethyl Vinyl Ether	Chloroform	Chloro-methane	Dibromo-chloro-methane	1,2-Dichloro-benzene	1,3-Dichloro-benzene	1,4-Dichloro-benzene	1,1-Dichloro-ethane	1,2-Dichloro-ethane	1,1-Dichloro-ethene	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene
MW-1	1/31/1990			<0.2	<0.5	<0.5		<0.2	<2.0	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MW-2	2/1/1990			<0.2	<0.5	<0.5		<0.2	<2.0	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MW-3	2/1/1990			<1.0	<2.5	<2.5		<1.0	<10	<1.0	<2.5	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/29/1990																		
MW-4	8/28/1990			<0.2	<0.5	<0.5		<0.2	<2.0	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	8/16/1995	<100	<100	<5	<5	<10	<10	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-5	8/28/1990			<0.2	<0.5	<0.5		<0.2	<2.0	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MW-6	8/28/1990			<1.0	<2.5	<2.5		<1.0	<10	<1.0	<2.5	<2.5	<2.5	<1.0	<1.0	<1.0	1.0	<1.0	<1.0
	4/19/1991			<1,000	<2,500	<5,000		<1,000	<10,000	<1,000	<2,500	<2,500	<2,500	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
	12/2/1994																		
	12/15/1994																		
	5/9/1995																		
	7/31/1995	<100	<100	<5	<5	<10	<10	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-7	4/19/1991			<0.2	<0.5	<1.0		<0.2	<2.0	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	12/2/1994																		
	12/15/1994																		
	5/9/1995																		
	7/31/1995	<100	<100	<5	<5	<10	<10	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	1/2/1997																		
MW-8	4/19/1991			<0.2	<0.5	<1.0		<0.2	<2.0	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	12/2/1994																		
	12/15/1994																		
	5/9/1995																		
	7/31/1995	<100	<100	<5	<5	<10	<10	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	1/2/1997																		
MW-9	4/19/1991			<0.2	<0.5	<1.0		<0.2	<2.0	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	1.2	<0.2	<0.2
	12/2/1994																		
	12/15/1994																		
	5/9/1995																		
	7/31/1995	<100	<100	<5	<5	<10	<10	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	1/2/1997																		
	4/8/1997																		
	6/23/1997																		
	9/30/1997																		
MW-10	12/15/1994																		
	5/9/1995																		
	7/31/1995	<100	<100	<5	<5	<10	<10	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	1/2/1997																		
	4/8/1997																		
	6/23/1997																		
	9/30/1997																		
MW-11	12/15/1994																		
	5/9/1995																		
	7/31/1995	<100	<100	<5	<5	<10	<10	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	4/14/1997																		
	6/23/1997																		
	9/30/1997																		
MW-12	12/15/1994																		
	5/9/1995																		
	7/31/1995	<100	<100	<5	<5	<10	<10	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	1/2/1997																		
GB-4-WS	6/6/1996																		
GB-5-WS	6/6/1996																		
OB-1	4/19/1991			<0.2	<0.5	<1.0		<0.2	<2.0	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
RW-1	8/28/1990			<0.2	<0.5	<0.5		<0.2	<2.0	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	4/19/1991																		

Table A10: Historical Offsite Groundwater Analytical Results

Sample ID	Date	VOCs (µg/L)													
		trans-1.3-Dichloro-propene	1,2-Dichloro-propane	Ethylbenzene	2-Hexanone	Methylene Chloride	4-Methyl-2-pentanone	Styrene	Tetrachloro-ethylene	1,1,2,2-Tetrochloro-ethane	Toluene	1,1,1-Trichloro-ethane	1,1,2-Trichloro-ethane	Trichloro-ethylene	Trichloro-fluoro-methane
MW-1	1/31/1990	<0.2	<0.2	<0.5		<2.0			<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.5
MW-2	2/1/1990	<0.2	<0.2	<0.5		<2.0			<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.5
MW-3	2/1/1990	<1.0	<1.0	11		<10			<1.0	<1.0	<2.5	<1.0	<1.0	6.2	<2.5
	3/29/1990			11							490				
MW-4	8/28/1990	<0.2	<0.2	<0.5		<2.0			<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.5
	8/16/1995	<5	<5	<5	<50	<5	<50	<5	<5	<5	<5	<5	<5	<5	<10
MW-5	8/28/1990	<0.2	<0.2	<0.5		<2.0			<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.5
MW-6	8/28/1990	<1.0	<1.0	29		<10			10.0	<1.0	15,000	<1.0	<1.0	<1.0	<2.5
	4/19/1991	<1,000	1,200	<2,500		<10,000			<1,000	<1,000	430,000	<1,000	<1,000	<1,000	<2,500
	12/2/1994			<50							15,036				
	12/15/1994			57							10,000				
	5/9/1995			76/ 63							4,400/ 4,300				
	7/31/1995	<5	<5	22	<50	<5	<50	<5	<5	<5	630	<5	<5	<5	<10
MW-7	4/19/1991	<0.2	<0.2	<0.5		<2.0			<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.5
	12/2/1994			3.0							215				
	12/15/1994			<0.5							<0.5				
	5/9/1995			<5							<5				
	7/31/1995	<5	<5	<5	<50	<5	<50	<5	<5	<5	<5	<5	<5	<5	<10
	1/2/1997			<1							<1				
MW-8	4/19/1991	<0.2	<0.2	<0.5		<2.0			<0.2	<0.2	0.9	<0.2	<0.2	<0.2	<0.5
	12/2/1994			<1.0							8.0				
	12/15/1994			<0.5							10				
	5/9/1995			<5							<5				
	7/31/1995	<5	<5	<5	<50	<5	<50	<5	<5	<5	<5	<5	<5	<5	<10
	1/2/1997			4							36				
MW-9	4/19/1991	<0.2	<0.2	1.9		<2.0			1.6	<0.2	560	<0.2	<0.2	0.3	<0.5
	12/2/1994			<1.0							31				
	12/15/1994			<0.5							0.61				
	5/9/1995			<5							<5				
	7/31/1995	<5	<5	<5	<50	<5	<50	<5	<5	<5	<5	<5	<5	<5	<10
	1/2/1997			240							14,000				
	4/8/1997			75							27,000				
	6/23/1997			25							3,950				
	9/30/1997			<1.0							3.0				
MW-10	12/15/1994			<0.5							1.4				
	5/9/1995			<5							<5				
	7/31/1995	<5	<5	<5	<50	<5	<50	<5	<5	<5	<5	<5	<5	<5	<10
	1/2/1997			<1							<1				
	4/8/1997			<1.0							<1.0				
	6/23/1997			<1.0							<1.0				
	9/30/1997			<1.0							<1.0				
MW-11	12/15/1994			1.6							560				
	5/9/1995			<5							<5				
	7/31/1995	<5	<5	<5	<50	<5	<50	<5	<5	<5	<5	<5	<5	<5	<10
	4/14/1997			1.0							121				
	6/23/1997			<1.0							<1.0				
	9/30/1997			1.0							53				
MW-12	12/15/1994			<0.5							<0.5				
	5/9/1995			<5							<5				
	7/31/1995	<5	<5	<5	<50	<5	<50	<5	<5	<5	<5	<5	<5	<5	<10
	1/2/1997			<1							<1				
GB-4-WS	6/6/1996			<5							<5				
GB-5-WS	6/6/1996			<5							<5				
OB-1	4/19/1991	<0.2	<0.2	45		<2.0			<0.2	<0.2	170	<0.2	<0.2	<0.2	<0.5
RW-1	8/28/1990	<0.2	<0.2	<0.5		<2.0			<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.5
	4/19/1991			14							<0.5				

Table A10: Historical Offsite Groundwater Analytical Results

Sample ID	Date	VOCs (µg/L)			DATA SOURCE
		Total Xylenes	Vinyl Acetate	Vinyl Chloride	
MW-1	1/31/1990	<0.5		<0.5	Applied Consultants 1990a
MW-2	2/1/1990	<0.5		<0.5	Applied Consultants 1990a
MW-3	2/1/1990	390		<2.5	Applied Consultants 1990a
	3/29/1990	490			Chiyoda 1992b
MW-4	8/28/1990	<0.5		<0.5	Applied Consultants 1990b
	8/16/1995	<5	<50	<10	EMCON 1995b
MW-5	8/28/1990	<0.5		<0.5	Applied Consultants 1990b
MW-6	8/28/1990	130		<2.5	Applied Consultants 1990b
	4/19/1991	<2,500		<5,000	Applied Consultants 1991
	12/2/1994	<50			Pacific Testing Labs 1995
	12/15/1994	430			Pacific Testing Labs 1995
	5/9/1995	510/ 570			EMCON 1995a
	7/31/1995	160	<50	<10	EMCON 1995b
MW-7	4/19/1991	<0.5		<1.0	Pacific Testing Labs 1995
	12/2/1994	9.0			Pacific Testing Labs 1995
	12/15/1994	<1.0			Pacific Testing Labs 1995
	5/9/1995	<5			EMCON 1995a
	7/31/1995	<5	<50	<10	EMCON 1995b
	1/2/1997	<1			EMCON 1997
MW-8	4/19/1991	1.5		<1.0	Applied Consultants 1991
	12/2/1994	<1.0			Pacific Testing Labs 1995
	12/15/1994	<1.0			Pacific Testing Labs 1995
	5/9/1995	<5			EMCON 1995a
	7/31/1995	<5	<50	<10	EMCON 1995b
	1/2/1997	30			EMCON 1997
MW-9	4/19/1991	14		<1.0	Applied Consultants 1991
	12/2/1994	<1.0			Pacific Testing Labs 1995
	12/15/1994	<1.0			Pacific Testing Labs 1995
	5/9/1995	<5			EMCON 1995a
	7/31/1995	<5	<50	<10	EMCON 1995b
	1/2/1997	1,100			EMCON 1997
	4/8/1997	344			EMCON 1998
	6/23/1997	122			EMCON 1998
	9/30/1997	6.0			EMCON 1998
MW-10	12/15/1994	<0.5			Pacific Testing Labs 1995
	5/9/1995	<5			Pacific Testing Labs 1995
	7/31/1995	<5	<50	<10	EMCON 1995b
	1/2/1997	<1			EMCON 1997
	4/8/1997	<1.0			EMCON 1998
	6/23/1997	<1.0			EMCON 1998
	9/30/1997	<1.0			EMCON 1998
MW-11	12/15/1994	13			Pacific Testing Labs 1995
	5/9/1995	<5			Pacific Testing Labs 1995
	7/31/1995	<5	<50	<10	EMCON 1995b
	4/14/1997	9.0			EMCON 1998
	6/23/1997	3.0			EMCON 1998
	9/30/1997	5..0			EMCON 1998
MW-12	12/15/1994	<1.0			Pacific Testing Labs 1995
	5/9/1995	<5			Pacific Testing Labs 1995
	7/31/1995	<5	<50	<10	EMCON 1995b
	1/2/1997	<1			EMCON 1997
GB-4-WS	6/6/1996	<5			EMCON 1996
GB-5-WS	6/6/1996	9			EMCON 1996
OB-1	4/19/1991	330		<1.0	Applied Consultants 1991
RW-1	8/28/1990	180		<0.5	Applied Consultants 1990b
	4/19/1991	180			Applied Consultants 1991

Notes:
(a) Sample contained components that eluted in oil range, but the chromatogram did not match the typical oil fingerprint.
(b) Sample contained components that eluted in diesel range, but the chromatogram did not match the typical diesel fingerprint.
(c) Sample contained components that eluted in gasoline range, but the chromatogram did not match the typical gasoline fingerprint.
"<" indicates analyte was not detected above the specified laboratory reporting limit.
Indicates analysis not performed/reported.
VOCs = volatile organic compounds
µg/L = micrograms per liter

Appendix J
Ecology PCUL Tables

Table J-1

PCUL Workbook - Soil Summary

Precision Engineering, Inc.

Seattle, Washington

Chemical (all concentrations are in mg/kg)	Most Stringent Soil PCUL Vadose Zone Potable GW SL #s 1-4, 8-10	Most Stringent Soil PCUL Saturated Zone Potable GW SL #s 1, 5-10	SL-1 Direct Contact Unrestricted SL-Det	SL-2 Protect Drinking Water Vadose Zone Leach	SL-3 Protect Surface Water via Ground Water Vadose Zone Leach	SL-4 Protect Sediment via Ground Water Vadose Zone Leach	SL-5 Protect Drinking Water Saturated Zone Leach	SL-6 Protect Surface Water via Ground Water Saturated Zone Leach	SL-7 Protect Sediment via Ground Water Saturated Zone Leach	SL-8 Protect Sediment via Erosion Min. ROD CUL + SMS Lower Tier Sed	SL-9 Simplifed TEE Unrestricted SL-Det	SL-10 Natural Background Ecology (1994)	Basis - Vadose, Potable GW							Basis - Saturated, Potable GW						
													Direct Contact	Drinking Water	SW via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background	Direct Contact	Drinking Water	SW via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background
PCBs													***PCBs***													
Total PCB Aroclors	1.1E-05	5.5E-07	1.0E+00	3.4E-01	1.1E-05	1.4E-01	1.7E-02	5.5E-07	6.8E-03	1.3E-01	ended	na			X							X				
Total PCB congeners	1.1E-05	5.5E-07	1.0E+00	3.4E-01	1.1E-05	2.1E-03	1.7E-02	5.5E-07	1.1E-04	2.0E-03	ended	na			X							X				
Total PCB TEQ	6.9E-09	3.5E-10	1.3E-05	5.3E-07	6.9E-09	7.4E-07	2.6E-08	3.5E-10	3.7E-08	7.0E-07	ended	na			X							X				
Metals													***Metals***													
Aluminum	8.0E+04	3.3E+04	8.0E+04	4.8E+05	na	na	2.4E+04	na	na	2.4E+05	ended	3.3E+04	X													X
Antimony	5.4E+00	2.7E-01	3.2E+01	5.4E+00	8.1E+01	na	2.7E-01	4.1E+00	na	9.7E+01	ended	na		X							X					
Arsenic	7.3E+00	7.3E+00	6.7E-01	3.4E-01	8.2E-02	1.3E+02	1.7E-02	4.1E-03	6.5E+00	7.0E+00	ended	7.3E+00							X							X
Barium	1.6E+02	8.3E+00	1.6E+04	1.6E+03	1.6E+02	7.6E+05	8.3E+01	8.3E+00	3.8E+04	4.9E+04	ended	na			X							X				
Beryllium	6.3E+01	3.2E+00	1.6E+02	6.3E+01	1.2E+03	7.7E+01	3.2E+00	6.0E+01	3.8E+00	4.9E+02	ended	6.1E-01		X							X					
Cadmium	7.7E-01	7.7E-01	8.0E+01	6.9E-01	1.1E+00	1.6E-01	3.5E-02	5.5E-02	8.3E-03	5.1E+00	ended	7.7E-01							X							X
Chromium, total	2.6E+02	2.6E+02	na	na	na	na	na	na	na	2.6E+02	ended	4.8E+01					X							X		
Chromium, trivalent	5.5E+02	2.7E+01	1.2E+05	4.8E+05	5.5E+02	1.7E+03	2.4E+04	2.7E+01	8.5E+01	3.7E+05	ended	na			X							X				
Chromium, hexavalent	1.8E-02	8.9E-04	3.8E-01	1.8E-02	1.4E-01	3.0E+01	8.9E-04	6.9E-03	1.5E+00	1.1E+00	ended	na		X							X					
Cobalt	4.3E+00	2.2E-01	2.4E+01	4.3E+00	na	na	2.2E-01	na	na	7.3E+01	ended	na		X							X					
Copper	3.6E+01	3.6E+01	3.2E+03	2.8E+02	1.4E+00	6.1E+00	1.4E+01	6.9E-02	3.0E-01	3.9E+02	ended	3.6E+01							X							X
Iron	3.6E+04	3.6E+04	5.6E+04	1.5E+02	na	na	7.6E+00	na	na	1.7E+05	ended	3.6E+04							X							X
Lead	2.5E+02	5.6E+01	2.5E+02	3.0E+03	1.1E+03	3.9E+03	1.5E+02	5.6E+01	1.9E+02	4.5E+02	ended	2.4E+01	X									X				
Manganese	1.1E+03	1.1E+03	3.7E+03	6.5E+01	1.3E+02	na	3.3E+00	6.5E+00	na	1.1E+04	ended	1.1E+03							X							X
Mercury, inorganic	7.0E-02	7.0E-02	2.4E+01	2.1E+00	2.6E-02	2.1E+00	1.0E-01	1.3E-03	1.1E-01	4.1E-01	ended	7.0E-02							X							X
Methylmercury	8.0E+00	8.0E+00	8.0E+00	2.2E+02	na	na	1.1E+01	na	na	2.4E+01	ended	na	X							X						
Molybdenum	3.2E+01	1.6E+00	4.0E+02	3.2E+01	na	na	1.6E+00	na	na	1.2E+03	ended	na		X							X					
Nickel	4.8E+01	4.8E+01	1.6E+03	1.3E+02	1.1E+01	3.3E+03	6.5E+00	5.4E-01	1.7E+02	4.9E+03	ended	4.8E+01							X							X
Selenium	5.2E+00	2.6E-01	4.0E+02	5.2E+00	7.4E+00	4.5E+04	2.6E-01	3.8E-01	2.3E+03	1.2E+03	ended	na		X							X					
Silver	3.2E-01	1.6E-02	4.0E+02	1.4E+01	3.2E-01	9.4E+00	6.9E-01	1.6E-02	4.7E-01	6.1E+00	ended	na			X							X				
Thallium	8.8E-02	4.4E-03	8.0E-01	2.3E-01	8.8E-02	3.6E+01	1.1E-02	4.4E-03	1.8E+00	2.4E+00	ended	na			X							X				
Tin	4.8E+04	2.4E+03	4.8E+04	4.8E+04	na	na	2.4E+03	na	na	1.5E+05	ended	na	X								X					
Vanadium	7.2E+02	1.4E+02	7.2E+02	2.9E+03	na	na	1.4E+02	na	na	2.2E+03	ended	na	X								X					
Zinc	1.0E+02	8.5E+01	2.4E+04	6.0E+03	1.0E+02	9.6E+02	3.0E+02	5.0E+00	4.8E+01	4.1E+02	ended	8.5E+01			X											X
SVOCs - PAHs													***SVOCs - PAHs***													
Acenaphthene	5.0E-01	2.8E-02	4.8E+03	4.9E+01	3.1E+00	5.4E-01	2.5E+00	1.6E-01	2.8E-02	5.0E-01	ended	na					X						X			
Acenaphthylene	1.3E+00	1.3E+00	na	na	na	na	na	na	na	1.3E+00	ended	na					X							X		
Anthracene	9.6E-01	5.1E-02	2.4E+04	1.1E+03	4.7E+01	1.0E+00	5.7E+01	2.4E+00	5.1E-02	9.6E-01	ended	na					X						X			
Benzo(a)anthracene	na	na	na	na	na	na	na	na	na	na	ended	na														
Benzo(b)fluoranthene	na	na	na	na	na	na	na	na	na	na	ended	na														
Benzo(k)fluoranthene	na	na	na	na	na	na	na	na	na	na	ended	na														
Total benzofluoranthenes	3.2E+00	3.2E+00	na	na	na	na	na	na	na	3.2E+00	ended	na					X							X		
Benzo(g,h,i)perylene	6.7E-01	6.7E-01	na	na	na	na	na	na	na	6.7E-01	ended	na					X							X		
Benzo(a)pyrene	3.1E-04	1.6E-05	1.9E-01	3.9E+00	3.1E-04	1.7E+00	1.9E-01	1.6E-05	8.4E-02	1.6E+00	ended	na			X							X				
Chrysene	na	na	na	na	na	na	na	na	na	na	ended	na														
Dibenz(a,h)anthracene	na	na	na	na	na	na	na	na	na	na	ended	na														
Dibenzofuran	5.4E-01	2.9E-02	8.0E+01	1.5E+00	na	5.8E-01	7.6E-02	na	2.9E-02	5.4E-01	ended	na					X						X			
Fluoranthene	1.7E+00	9.0E-02	3.2E+03	6.3E+02	5.9E+00	1.8E+00	3.2E+01	3.0E-01	9.0E-02	1.7E+00	ended	na					X						X			
Fluorene	5.4E-01	2.9E-02	3.2E+03	5.1E+01	1.6E+00	5.8E-01	2.6E+00	8.0E-02	2.9E-02	5.4E-01	ended	na					X						X			
Indeno(1,2,3-cd)pyrene	na	na	na	na	na	na	na	na	na	na	ended	na														
Methyl isopropyl phenanthrene	na	na	na	na	na	na	na	na	na	na	ended	na														
1-Methylnaphthalene	8.2E-02	4.2E-03	3.4E+01	8.2E-02	na	4.4E+01	4.2E-03	na	2.3E+00	3.9E+01	ended	na		X							X					
2-Methylnaphthalene	6.7E-01	3.9E-02	3.2E+02	1.7E+00	na	7.5E-01	8.9E-02	na	3.9E-02	6.7E-01	ended	na					X						X			
Naphthalene	3.9E-02	2.1E-03	1.6E+03	4.5E+00	3.9E-02	2.5E+00	2.4E-01	2.1E-03	1.3E-01	2.1E+00	ended	na			X							X				
Phenanthrene	1.5E+00	1.5E+00	na	na	na	na	na	na	na	1.5E+00	ended	na					X							X		
Pyrene	2.6E+00	1.4E-01	2.4E+03	3.3E+02	1.1E+01	2.7E+00	1.6E+01	5.5E-01	1.4E-01	2.6E+00	ended	na					X						X			
Total LPAHs	5.2E+00	5.2E+00	na	na	na	na	na	na	na	5.2E+00	ended	na					X							X		
Total HPAHs	1.2E+01	1.2E+01	na	na	na	na	na	na	na	1.2E+01	ended	na					X							X		
Total PAHs	na	na	na	na	na	na	na	na	na	na	ended	na														
Total cPAH TEQ	3.1E-04	1.6E-05	1.9E-01	4.5E-01	3.1E-04	6.2E-01	2.2E-02	1.6E-05	3.1E-02	5.9E-01	ended	na			X							X				

Chemical (all concentrations are in mg/kg)	Most Stringent Soil PCUL Vadose Zone Potable GW SL #s 1-4, 8-10	Most Stringent Soil PCUL Saturated Zone Potable GW SL #s 1, 5-10	SL-1 Direct Contact Unrestricted SL-Det	SL-2 Protect Drinking Water Vadose Zone Leach	SL-3 Protect Surface Water via Ground Water Vadose Zone Leach	SL-4 Protect Sediment via Ground Water Vadose Zone Leach	SL-5 Protect Drinking Water Saturated Zone Leach	SL-6 Protect Surface Water via Ground Water Saturated Zone Leach	SL-7 Protect Sediment via Ground Water Saturated Zone Leach	SL-8 Protect Sediment via Erosion Min. ROD CUL + SMS Lower Tier Sed	SL-9 Simplifed TEE Unrestricted SL-Det	SL-10 Natural Background Ecology (1994)	Basis - Vadose, Potable GW							Basis - Saturated, Potable GW						
													Direct Contact	Drinking Water	SW via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background	Direct Contact	Drinking Water	SW via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background
Other SVOCs													***Other SVOCs***													
Aniline	8.3E-02	5.5E-03	1.8E+02	8.3E-02	na	6.5E+02	5.5E-03	na	4.3E+01	2.3E+02	ended	na		X							X					
Azobenzene	9.1E+00	9.1E+00	9.1E+00	na	na	na	na	na	na	1.2E+01	ended	na	X							X						
Benzidine	6.4E-07	3.4E-08	8.2E-04	2.8E-06	6.4E-07	2.4E-03	1.5E-07	3.4E-08	1.3E-04	2.0E-03	ended	na			X							X				
Benzoic acid	6.5E-01	1.7E-01	3.2E+05	2.6E+02	na	2.4E+00	1.8E+01	na	1.7E-01	6.5E-01	ended	na					X						X			
Benzyl alcohol	5.7E-02	1.7E-02	8.0E+03	7.1E+00	na	2.5E-01	4.9E-01	na	1.7E-02	5.7E-02	ended	na					X						X			
Bis(2-chloroethoxy)methane	na	na	na	na	na	na	na	na	na	na	ended	na														
Bis(2-chloroethyl)ether	2.2E-04	1.4E-05	9.1E-01	2.2E-04	3.3E-04	3.2E+00	1.4E-05	2.2E-05	2.1E-01	1.2E+00	ended	na		X							X					
Bis(chloromethyl)ether	4.5E-03	4.5E-03	4.5E-03	na	na	na	na	na	na	6.0E-03	ended	na	X							X						
Bis(2-chloro-1-methylethyl)ether	1.8E+00	1.2E-01	3.2E+03	1.8E+00	5.1E+00	2.1E+04	1.2E-01	3.3E-01	1.4E+03	8.0E+03	ended	na		X							X					
2,6-Bis(1,1-dimethylethyl) phenol	na	na	na	na	na	na	na	na	na	na	ended	na														
Bis(2-ethylhexyl) phthalate	1.0E-01	5.1E-03	7.1E+01	1.3E+01	1.0E-01	1.4E+00	6.7E-01	5.1E-03	6.9E-02	1.3E+00	ended	na			X							X				
4-Bromophenyl phenyl ether	na	na	na	na	na	na	na	na	na	na	ended	na														
Butyl benzyl phthalate	3.6E-03	1.8E-04	5.3E+02	1.3E+01	3.6E-03	6.7E-02	6.4E-01	1.8E-04	3.4E-03	6.3E-02	ended	na			X							X				
Butyl diphenyl phosphate	na	na	na	na	na	na	na	na	na	na	ended	na														
Carbazole	na	na	na	na	na	na	na	na	na	na	ended	na														
4-Chloroaniline	2.7E-03	1.7E-04	5.0E+00	2.7E-03	na	1.5E+01	1.7E-04	na	9.6E-01	6.6E+00	ended	na		X							X					
4-Chloro-3-methylphenol	5.0E-01	2.8E-02	na	na	5.0E-01	na	na	2.8E-02	na	na	ended	na			X							X				
2-Chloronaphthalene	5.4E+00	2.8E-01	6.4E+03	3.4E+01	5.4E+00	1.8E+04	1.8E+00	2.8E-01	9.3E+02	1.6E+04	ended	na			X							X				
2-Chlorophenol	2.0E-01	1.1E-02	4.0E+02	4.7E-01	2.0E-01	4.1E+01	2.7E-02	1.1E-02	2.3E+00	1.0E+03	ended	na			X							X				
4-Chlorophenyl phenyl ether	na	na	na	na	na	na	na	na	na	na	ended	na														
Dibutyl phthalate	2.8E-01	1.5E-02	8.0E+03	5.7E+01	2.8E-01	1.6E+00	3.0E+00	1.5E-02	8.5E-02	1.4E+00	ended	na			X							X				
Dibutyl phenyl phosphate	na	na	na	na	na	na	na	na	na	na	ended	na														
1,2-Dichlorobenzene	3.5E-02	3.0E-03	7.2E+03	7.0E+00	9.3E+00	5.2E-02	4.0E-01	5.3E-01	3.0E-03	3.5E-02	ended	na					X							X		
1,3-Dichlorobenzene	2.3E-02	1.3E-03	na	na	2.3E-02	na	na	1.3E-03	na	na	ended	na			X							X				
1,4-Dichlorobenzene	1.1E-01	8.1E-03	1.9E+02	1.2E+00	9.8E-01	1.5E-01	6.8E-02	5.4E-02	8.1E-03	1.1E-01	ended	na					X							X		
3,3'-Dichlorobenzidine	3.4E-05	2.0E-06	2.2E+00	2.0E-03	3.4E-05	4.6E+00	1.2E-04	2.0E-06	2.7E-01	2.9E+00	ended	na			X							X				
2,4-Dichlorophenol	6.9E-02	4.3E-03	2.4E+02	3.3E-01	6.9E-02	5.7E+01	2.1E-02	4.3E-03	3.6E+00	6.0E+02	ended	na			X							X				
Di(2-ethylhexyl)adipate	8.3E+02	8.3E+02	8.3E+02	na	na	na	na	na	na	1.1E+03	ended	na	X							X						
Diethyl phthalate	2.0E-01	3.4E-02	6.4E+04	7.2E+01	1.1E+00	5.2E-01	4.7E+00	7.4E-02	3.4E-02	2.0E-01	ended	na					X							X		
Dimethyl phthalate	7.1E-02	1.9E-02	na	na	2.8E+00	2.7E-01	na	1.9E-01	1.9E-02	7.1E-02	ended	na					X							X		
2,4-Dimethylphenol	2.9E-02	2.3E-03	1.6E+03	4.4E+00	1.3E+00	4.0E-02	2.5E-01	7.6E-02	2.3E-03	2.9E-02	ended	na					X							X		
1,2-Dinitrobenzene	8.0E+00	8.0E+00	8.0E+00	na	na	na	na	na	na	2.0E+01	ended	na	X							X						
1,3-Dinitrobenzene	8.0E+00	8.0E+00	8.0E+00	na	na	na	na	na	na	2.0E+01	ended	na	X							X						
1,4-Dinitrobenzene	8.0E+00	8.0E+00	8.0E+00	na	na	na	na	na	na	2.0E+01	ended	na	X							X						
4,6-Dinitro-2-methylphenol	1.3E-01	7.3E-03	na	na	1.3E-01	na	na	7.3E-03	na	na	ended	na			X							X				
2,4-Dinitrophenol	1.3E-01	9.2E-03	1.6E+02	1.3E-01	4.0E-01	2.6E+03	9.2E-03	2.9E-02	1.9E+02	4.0E+02	ended	na		X							X					
2,4-Dinitrotoluene	2.8E-03	1.6E-04	3.2E+00	4.4E-03	2.8E-03	5.7E+00	2.4E-04	1.6E-04	3.2E-01	4.3E+00	ended	na			X							X				
2,6-Dinitrotoluene	9.2E-04	5.1E-05	6.7E-01	9.2E-04	na	1.2E+00	5.1E-05	na	6.5E-02	8.8E-01	ended	na		X							X					
Di-n-octyl phthalate	6.2E+00	3.3E-01	8.0E+02	4.5E+02	na	6.5E+00	2.3E+01	na	3.3E-01	6.2E+00	ended	na					X							X		
1,4-Dioxane	1.8E-03	1.3E-04	1.0E+01	1.8E-03	na	8.2E+01	1.3E-04	na	5.9E+00	1.3E+01	ended	na		X							X					
1,2-Diphenylhydrazine	6.8E-04	3.6E-05	1.3E+00	3.7E-03	6.8E-04	1.9E+00	2.0E-04	3.6E-05	1.0E-01	1.7E+00	ended	na			X							X				
Hexachlorobenzene	8.0E-06	4.0E-07	6.3E-01	4.4E-01	8.0E-06	2.3E-02	2.2E-02	4.0E-07	1.2E-03	2.2E-02	ended	na			X							X				
Hexachlorobutadiene	2.1E-04	1.1E-05	1.3E+01	1.2E-02	2.1E-04	1.4E-02	6.3E-04	1.1E-05	7.5E-04	1.1E-02	ended	na			X							X				
Hexachlorocyclopentadiene	3.2E-02	1.7E-03	4.8E+02	1.5E+00	3.2E-02	1.4E+03	8.1E-02	1.7E-03	7.4E+01	1.2E+03	ended	na			X							X				
Hexachloroethane	1.6E-04	9.7E-06	2.5E+01	8.8E-03	1.6E-04	6.1E+01	5.3E-04	9.7E-06	3.7E+00	3.3E+01	ended	na			X							X				
Isophorone	4.9E-01	3.2E-02	1.1E+03	4.9E-01	5.8E-01	4.0E+03	3.2E-02	3.9E-02	2.7E+02	1.4E+03	ended	na		X							X					
2-Methoxynaphthalene	na	na	na	na	na	na	na	na	na	na	ended	na														
2-Methylphenol (o-cresol)	6.9E-02	6.4E-03	4.0E+03	8.1E+00	na	1.1E-01	4.7E-01	na	6.4E-03	6.9E-02	ended	na					X							X		
3-Methylphenol (m-cresol)	4.0E+03	4.0E+03	4.0E+03	na	na	na	na	na	na	1.0E+04	ended	na	X							X						
4-Methylphenol (p-cresol)	6.7E-01	6.2E-02	8.0E+03	1.6E+01	na	1.1E+00	9.4E-01	na	6.2E-02	6.7E-01	ended	na					X							X		
2-Nitroaniline	1.0E+00	6.4E-02	8.0E+02	1.0E+00	na	4.6E+03	6.4E-02	na	2.9E+02	2.0E+03	ended	na		X							X					
3-Nitroaniline	na	na	na	na	na	na	na	na	na	na	ended	na														
4-Nitroaniline	1.8E-02	1.3E-03	5.0E+01	1.8E-02	na	4.3E+02	1.3E-03	na	3.0E+01	6.6E+01	ended	na		X							X					
Nitrobenzene	1.0E-01	6.5E-03	1.6E+02	1.0E-01	6.4E-01	8.9E+02	6.5E-03	4.1E-02	5.7E+01	4.0E+02	ended	na		X							X					
2-Nitrophenol	na	na	na	na	na	na	na	na	na	na	ended	na														
4-Nitrophenol	na	na	na	na	na	na	na	na	na	na	ended	na														
n-Nitrosodimethylamine	1.0E-06	7.1E-08	3.7E-03	1.0E-06	1.5E-03	3.9E-02	7.1E-08	1.1E-04	2.7E-03	9.2E-03	ended	na		X							X					
n-Nitrosodiphenylamine	2.8E-02	1.6E-03	2.0E+02	1.0E+00	3.9E-02	3.1E-02	5.2E-02	2.0E-03	1.6E-03	2.8E-02	ended	na					X							X		
n-Nitrosodi-n-propylamine	1.2E-04	7.0E-06	1.4E-01	1.2E-04	5.5E-04	3.1E-01	7.0E-06	3.3E-05	1.8E-02	1.9E-01	ended	na		X							X					
Pentachlorophenol	3.2E-05	1.8E-06	2.5E+00	1.6E-02	3.2E-05	1.4E-02	8.8E-04	1.8E-06	7.7E-04	3.6E-01	ended	na			X							X				
Phenol	4.2E-01	4.8E-02	2.4E+04	3.7E+01	5.4E+02	7.8E-01	2.3E+00	3.3E+01	4.8E-02	4.2E-01	ended	na					X							X		

Chemical (all concentrations are in mg/kg)	Most Stringent Soil PCUL Vadose Zone Potable GW SL #s 1-4, 8-10	Most Stringent Soil PCUL Saturated Zone Potable GW SL #s 1, 5-10	SL-1 Direct Contact Unrestricted SL-Det	SL-2 Protect Drinking Water Vadose Zone Leach	SL-3 Protect Surface Water via Ground Water Vadose Zone Leach	SL-4 Protect Sediment via Ground Water Vadose Zone Leach	SL-5 Protect Drinking Water Saturated Zone Leach	SL-6 Protect Surface Water via Ground Water Saturated Zone Leach	SL-7 Protect Sediment via Ground Water Saturated Zone Leach	SL-8 Protect Sediment via Erosion Min. ROD CUL + SMS Lower Tier Sed	SL-9 Simplifed TEE Unrestricted SL-Det	SL-10 Natural Background Ecology (1994)	Basis - Vadose, Potable GW							Basis - Saturated, Potable GW						
													Direct Contact	Drinking Water	SW via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background	Direct Contact	Drinking Water	SW via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background
Pyridine	4.3E-02	2.9E-03	8.0E+01	4.3E-02	na	5.5E+02	2.9E-03	na	3.6E+01	2.0E+02	ended	na		X							X						
2,3,4,5-Tetrachlorophenol	na	na	na	na	na	na	na	na	na	na	ended	na															
2,3,4,6-Tetrachlorophenol	2.4E+03	2.4E+03	2.4E+03	na	na	na	na	na	na	6.0E+03	ended	na	X							X							
1,2,4-Trichlorobenzene	3.1E-02	1.9E-03	3.4E+01	5.6E-01	na	3.6E-02	2.9E-02	na	1.9E-03	3.1E-02	ended	na					X							X			
2,4,5-Trichlorophenol	1.3E-03	7.0E-05	8.0E+03	5.8E+01	1.3E-03	2.4E+03	3.0E+00	7.0E-05	1.3E+02	2.0E+04	ended	na			X							X					
2,4,6-Trichlorophenol	9.2E-02	5.3E-03	8.0E+01	9.2E-02	7.0E+00	1.1E+01	5.3E-03	4.0E-01	6.1E-01	1.2E+02	ended	na		X							X					
Volatile Organic Compounds																				***Volatile Organic Compounds***						
Acetone	2.9E+01	2.1E+00	7.2E+04	2.9E+01	na	1.4E+06	2.1E+00	na	9.8E+04	2.2E+05	ended	na		X							X					
Acrolein	4.4E-03	3.2E-04	4.0E+01	1.6E-02	4.4E-03	7.9E+02	1.2E-03	3.2E-04	5.6E+01	1.2E+02	ended	na			X							X				
Acrylonitrile	1.2E-04	8.3E-06	1.9E+00	3.4E-04	1.2E-04	2.9E+01	2.4E-05	8.3E-06	2.1E+00	5.4E+00	ended	na			X							X				
Benzaldehyde	4.6E-02	3.3E-03	2.5E+02	4.6E-02	na	3.8E+03	3.3E-03	na	2.7E+02	7.3E+02	ended	na		X							X					
Benzene	8.8E-03	5.6E-04	1.8E+01	2.7E-02	8.8E-03	1.6E+02	1.7E-03	5.6E-04	1.0E+01	5.3E+01	ended	na			X							X				
Bromobenzene	5.6E-01	3.3E-02	6.4E+02	5.6E-01	na	3.4E+03	3.3E-02	na	2.0E+02	1.9E+03	ended	na		X							X					
Bromochloromethane	na	na	na	na	na	na	na	na	na	na	ended	na															
Bromoethane	na	na	na	na	na	na	na	na	na	na	ended	na															
Bromoform	7.8E-02	5.0E-03	1.3E+02	3.6E-01	7.8E-02	8.1E+02	2.3E-02	5.0E-03	5.1E+01	3.7E+02	ended	na			X							X				
Bromomethane	5.1E-02	3.3E-03	1.1E+02	5.1E-02	1.2E+00	2.0E+03	3.3E-03	7.9E-02	1.3E+02	3.4E+02	ended	na		X							X					
2-Butoxyethanol	3.2E+00	2.3E-01	8.0E+03	3.2E+00	na	1.5E+05	2.3E-01	na	1.1E+04	2.4E+04	ended	na		X							X					
n-Butylbenzene	1.4E+01	7.1E-01	4.0E+03	1.4E+01	na	1.4E+04	7.1E-01	na	7.5E+02	1.2E+04	ended	na		X							X					
sec-Butylbenzene	2.5E+01	1.3E+00	8.0E+03	2.5E+01	na	2.9E+04	1.3E+00	na	1.5E+03	2.4E+04	ended	na		X							X					
tert-Butylbenzene	1.9E+01	1.0E+00	8.0E+03	1.9E+01	na	3.0E+04	1.0E+00	na	1.6E+03	2.4E+04	ended	na		X							X					
Carbon disulfide	4.1E+00	2.5E-01	8.0E+03	4.1E+00	na	1.2E+05	2.5E-01	na	7.4E+03	2.4E+04	ended	na		X							X					
Carbon tetrachloride	2.9E-03	1.5E-04	1.4E+01	4.1E-02	2.9E-03	9.8E+01	2.2E-03	1.5E-04	5.2E+00	4.2E+01	ended	na			X							X				
Chlorobenzene	8.6E-01	5.1E-02	1.6E+03	8.6E-01	1.7E+00	8.6E+03	5.1E-02	1.0E-01	5.1E+02	4.9E+03	ended	na		X							X					
Chloroethane	na	na	na	na	na	na	na	na	na	na	ended	na															
2-Chloroethyl vinyl ether	na	na	na	na	na	na	na	na	na	na	ended	na															
Chloroform	7.4E-02	4.8E-03	3.2E+01	7.4E-02	8.1E-01	3.0E+02	4.8E-03	5.2E-02	2.0E+01	9.4E+01	ended	na		X							X					
Chloromethane	na	na	na	na	na	na	na	na	na	na	ended	na															
3-Chloro-1-propene	1.1E-02	6.8E-04	4.8E+01	1.1E-02	na	5.4E+02	6.8E-04	na	3.3E+01	1.4E+02	ended	na		X							X					
2-Chlorotoluene	1.9E+00	1.1E-01	1.6E+03	1.9E+00	na	7.3E+03	1.1E-01	na	4.1E+02	4.9E+03	ended	na		X							X					
4-Chlorotoluene	na	na	na	na	na	na	na	na	na	na	ended	na															
Dibromochloromethane	1.0E-02	7.0E-04	1.2E+01	2.4E-02	1.0E-02	1.3E+02	1.7E-03	7.0E-04	9.2E+00	3.5E+01	ended	na			X							X				
1,2-Dibromo-3-chloropropane	8.9E-04	5.6E-05	2.3E-01	8.9E-04	na	1.6E+00	5.6E-05	na	1.0E-01	7.1E-01	ended	na		X							X					
Dibromomethane	4.2E-01	2.8E-02	8.0E+02	4.2E-01	na	7.2E+03	2.8E-02	na	4.7E+02	2.4E+03	ended	na		X							X					
Dichlorobromomethane	1.3E-02	8.9E-04	1.6E+01	3.3E-02	1.3E-02	1.8E+02	2.2E-03	8.9E-04	1.2E+01	4.7E+01	ended	na			X							X				
trans-1,4-Dichloro-2-butene	na	na	na	na	na	na	na	na	na	na	ended	na															
Dichlorodifluoromethane	3.8E+01	5.3E-01	1.6E+04	3.8E+01	na	8.0E+05	5.3E-01	na	1.1E+04	4.9E+04	ended	na		X							X					
1,1-Dichloroethane	4.1E-02	2.6E-03	1.8E+02	4.1E-02	na	1.7E+03	2.6E-03	na	1.1E+02	5.1E+02	ended	na		X							X					
1,2-Dichloroethane (EDC)	2.3E-02	1.6E-03	1.1E+01	2.3E-02	3.5E-01	1.2E+02	1.6E-03	2.4E-02	7.9E+00	3.2E+01	ended	na		X							X					
1,1-Dichloroethylene	4.6E-02	2.5E-03	4.0E+03	4.6E-02	2.6E+01	4.3E+04	2.5E-03	1.4E+00	2.3E+03	1.2E+04	ended	na		X							X					
cis-1,2-Dichloroethylene	7.9E-02	5.2E-03	1.6E+02	7.9E-02	na	1.8E+03	5.2E-03	na	1.2E+02	4.9E+02	ended	na		X							X					
trans-1,2-Dichloroethylene	5.2E-01	3.2E-02	1.6E+03	5.2E-01	5.2E+00	1.9E+04	3.2E-02	3.2E-01	1.2E+03	4.9E+03	ended	na		X							X					
1,2-Dichloroethylene (mixed isomers)	3.7E-01	2.3E-02	7.2E+02	3.7E-01	na	8.8E+03	2.3E-02	na	5.5E+02	2.2E+03	ended	na		X							X					
1,2-Dichloropropane	1.6E-02	1.0E-03	2.7E+01	2.5E-02	1.6E-02	2.7E+02	1.7E-03	1.0E-03	1.8E+01	7.9E+01	ended	na			X							X				
1,3-Dichloropropane	8.8E-01	5.7E-02	1.6E+03	8.8E-01	na	1.4E+04	5.7E-02	na	8.8E+02	4.9E+03	ended	na		X							X					
2,2-Dichloropropane	na	na	na	na	na	na	na	na	na	na	ended	na															
1,1-Dichloropropene	na	na	na	na	na	na	na	na	na	na	ended	na															
cis-1,3-Dichloropropene	2.3E-03	1.4E-04	1.0E+01	2.3E-03	6.3E-03	1.4E+02	1.4E-04	3.8E-04	8.2E+00	2.9E+01	ended	na		X							X					
trans-1,3-Dichloropropene	2.3E-03	1.4E-04	1.0E+01	2.3E-03	6.3E-03	1.4E+02	1.4E-04	3.8E-04	8.2E+00	2.9E+01	ended	na		X							X					
Diisopropyl ether	na	na	na	na	na	na	na	na	na	na	ended	na															
Ethane	na	na	na	na	na	na	na	na	na	na	ended	na															
Ethylbenzene	1.8E-01	1.0E-02	8.0E+03	5.9E+00	1.8E-01	4.5E+04	3.4E-01	1.0E-02	2.7E+03	2.4E+04	ended	na			X							X				
Ethylene oxide	1.5E-04	1.1E-05	6.0E-01	1.5E-04	na	1.1E+01	1.1E-05	na	8.0E-01	1.8E+00	ended	na		X							X					
Ethyl ether	6.8E+00	4.7E-01	1.6E+04	6.8E+00	na	2.6E+05	4.7E-01	na	1.8E+04	4.9E+04	ended	na		X							X					
Ethylene dibromide (EDB)	2.7E-04	1.8E-05	5.0E-01	2.7E-04	na	4.2E+00	1.8E-05	na	2.8E-01	1.5E+00	ended	na		X							X					
Formaldehyde	8.4E-03	6.0E-04	4.8E+01	8.4E-03	na	9.0E+02	6.0E-04	na	6.4E+01	1.4E+02	ended	na		X							X					
n-Hexane	7.2E+01	1.8E+00	4.8E+03	7.2E+01	na	3.3E+04	1.8E+00	na	8.3E+02	1.5E+04	ended	na		X							X					
2-Hexanone	1.7E-01	1.2E-02	4.0E+02	1.7E-01	na	8.4E+03	1.2E-02	na	5.9E+02	1.2E+03	ended	na		X							X					
Isopropylbenzene (cumene)	1.5E+01	7.9E-01	8.0E+03	1.5E+01	na	3.2E+04	7.9E-01	na	1.7E+03	2.4E+04	ended	na		X							X					
4-Isopropyltoluene	na	na	na	na	na	na	na	na	na	na	ended	na															
Methane	na	na	na	na	na	na	na	na	na	na	ended	na															
Methyl ethyl ketone (2-butanone)	2.0E+01	1.4E+00	4.8E+04	2.0E+01	na	8.7E+05	1.4E+00	na	6.2E+04	1.5E+05	ended	na		X							X					
Methyl iodide	na	na	na	na	na	na	na	na	na	na	ended	na															

Chemical (all concentrations are in mg/kg)	Most Stringent Soil PCUL Vadose Zone Potable GW SL #s 1-4, 8-10	Most Stringent Soil PCUL Saturated Zone Potable GW SL #s 1, 5-10	SL-1 Direct Contact Unrestricted SL-Det	SL-2 Protect Drinking Water Vadose Zone Leach	SL-3 Protect Surface Water via Ground Water Vadose Zone Leach	SL-4 Protect Sediment via Ground Water Vadose Zone Leach	SL-5 Protect Drinking Water Saturated Zone Leach	SL-6 Protect Surface Water via Ground Water Saturated Zone Leach	SL-7 Protect Sediment via Ground Water Saturated Zone Leach	SL-8 Protect Sediment via Erosion Min. ROD CUL + SMS Lower Tier Sed	SL-9 Simplifed TEE Unrestricted SL-Det	SL-10 Natural Background Ecology (1994)	Basis - Vadose, Potable GW						Basis - Saturated, Potable GW						
													Direct Contact	Drinking Water	SW via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background	Direct Contact	Drinking Water	SW via GW	Sediment via GW	Bank Erosion	TEE	Nat. Background
Methyl isobutyl ketone (4-methyl-2-pentanone)	2.7E+00	1.9E-01	6.4E+03	2.7E+00	na	9.8E+04	1.9E-01	na	6.9E+03	1.9E+04	ended	na		X							X					
Methyl tert-butyl ether	1.0E-01	7.2E-03	5.6E+02	1.0E-01	na	8.5E+03	7.2E-03	na	6.0E+02	1.6E+03	ended	na		X							X					
Methylene chloride	2.2E-02	1.5E-03	9.4E+01	2.2E-02	4.3E-01	1.6E+03	1.5E-03	3.0E-02	1.1E+02	2.9E+02	ended	na		X							X					
2-Pentanone	na	na	na	na	na	na	na	na	na	na	ended	na														
n-Propylbenzene	1.6E+01	8.8E-01	8.0E+03	1.6E+01	na	3.1E+04	8.8E-01	na	1.7E+03	2.4E+04	ended	na		X							X					
Styrene	2.2E+00	1.2E-01	1.6E+04	2.2E+00	na	6.1E+04	1.2E-01	na	3.3E+03	4.9E+04	ended	na		X							X					
1,1,1,2-Tetrachloroethane	9.8E-03	6.3E-04	3.8E+01	9.8E-03	na	2.9E+02	6.3E-04	na	1.9E+01	1.1E+02	ended	na		X							X					
1,1,2,2-Tetrachloroethane	1.2E-03	8.0E-05	5.0E+00	1.2E-03	1.7E-03	3.9E+01	8.0E-05	1.1E-04	2.5E+00	1.5E+01	ended	na		X							X					
Tetrachloroethylene (PCE)	2.9E-02	1.6E-03	4.8E+02	5.0E-02	2.9E-02	2.5E+03	2.8E-03	1.6E-03	1.4E+02	1.4E+03	ended	na			X							X				
Tetrahydrofuran	2.5E-02	1.8E-03	7.2E+04	2.5E-02	na	1.1E+06	1.8E-03	na	8.1E+04	2.2E+05	ended	na		X							X					
Toluene	7.2E-01	4.4E-02	6.4E+03	4.5E+00	7.2E-01	4.2E+04	2.7E-01	4.4E-02	2.5E+03	1.9E+04	ended	na			X							X				
1,2,3-Trichlorobenzene	2.0E-01	1.1E-02	6.4E+01	2.0E-01	na	2.3E+02	1.1E-02	na	1.2E+01	1.9E+02	ended	na		X							X					
1,1,1-Trichloroethane	1.5E+00	8.4E-02	1.6E+05	1.5E+00	3.7E+02	1.1E+06	8.4E-02	2.1E+01	6.5E+04	4.9E+05	ended	na		X							X					
1,1,2-Trichloroethane	5.0E-03	3.3E-04	1.8E+01	1.7E-02	5.0E-03	1.4E+02	1.1E-03	3.3E-04	9.1E+00	5.1E+01	ended	na			X							X				
Trichloroethylene (TCE)	4.4E-03	2.7E-04	1.2E+01	2.5E-02	4.4E-03	3.2E+01	1.5E-03	2.7E-04	2.0E+00	1.2E+01	ended	na			X							X				
Trichlorofluoroethane	na	na	na	na	na	na	na	na	na	na	ended	na														
Trichlorofluoromethane	2.3E+01	7.9E-01	2.4E+04	2.3E+01	na	4.8E+05	7.9E-01	na	1.7E+04	7.3E+04	ended	na		X							X					
1,2,3-Trichloropropane	2.4E-06	1.5E-07	6.3E-03	2.4E-06	na	4.3E-02	1.5E-07	na	2.7E-03	1.9E-02	ended	na		X							X					
Trichlorotrifluoroethane	7.6E+03	1.2E+02	2.4E+06	7.6E+03	na	5.3E+07	1.2E+02	na	8.1E+05	7.3E+06	ended	na		X							X					
1,2,3-Trimethylbenzene	1.3E+00	7.3E-02	8.0E+02	1.3E+00	na	3.2E+03	7.3E-02	na	1.8E+02	2.4E+03	ended	na		X							X					
1,2,4-Trimethylbenzene	1.3E+00	7.2E-02	8.0E+02	1.3E+00	na	3.3E+03	7.2E-02	na	1.8E+02	2.4E+03	ended	na		X							X					
1,3,5-Trimethylbenzene	1.3E+00	7.1E-02	8.0E+02	1.3E+00	na	3.3E+03	7.1E-02	na	1.8E+02	2.4E+03	ended	na		X							X					
Vinyl acetate	3.3E+01	2.3E+00	8.0E+04	3.3E+01	na	1.4E+06	2.3E+00	na	1.0E+05	2.4E+05	ended	na		X							X					
Vinyl chloride	1.1E-03	5.6E-05	6.7E-01	1.7E-03	1.1E-03	1.1E+01	9.0E-05	5.6E-05	5.9E-01	1.9E+00	ended	na			X							X				
Total xylenes	9.4E-01	5.5E-02	1.6E+04	1.4E+01	9.4E-01	8.6E+04	8.3E-01	5.5E-02	5.0E+03	4.9E+04	ended	na			X							X				
Petroleum Hydrocarbons													***Petroleum Hydrocarbons***													
Gasoline range hydrocarbons, fresh	3.0E+01	3.0E+01	1.5E+03	3.0E+01	3.0E+01	na	3.0E+01	3.0E+01	na	na	ended	na		X	X						X	X				
Gasoline range hydrocarbons, weathered	1.0E+02	1.0E+02	1.5E+03	1.0E+02	1.0E+02	na	1.0E+02	1.0E+02	na	na	ended	na		X	X						X	X				
Diesel range hydrocarbons, fresh	2.0E+03	2.0E+03	na	2.0E+03	2.0E+03	na	2.0E+03	2.0E+03	na	na	ended	na		X	X						X	X				
Diesel range hydrocarbons, weathered	2.0E+03	2.0E+03	na	2.0E+03	2.0E+03	na	2.0E+03	2.0E+03	na	na	ended	na		X	X						X	X				
Oil range hydrocarbons	2.0E+03	2.0E+03	na	2.0E+03	2.0E+03	na	2.0E+03	2.0E+03	na	na	ended	na		X	X						X	X				
Total diesel & oil range hydrocarbons	2.0E+03	2.0E+03	na	2.0E+03	2.0E+03	na	2.0E+03	2.0E+03	na	na	ended	na		X	X						X	X				

Table J-2

PCUL Workbook - Groundwater Summary

Precision Engineering, Inc.

Seattle, Washington

Chemical (all concentrations are in µg/L)	Most Stringent PCUL Potable Water GW #s 1-5	GW-1 Protect Drinking Water PW	GW-2 Protect Surface Water SW	GW-3 Protect Sediment Partit	GW-4 Screening Level Protect Indoor Air PW	GW-5 Natural Background	Basis - Potable GW: Drinking Water	Surface Water	Sediment	Indoor Air	Nat. Background
PCBs							***PCBs***				
Total PCB Aroclors	7.0E-06	2.2E-01	7.0E-06	8.6E-02	na	na		X			
Total PCB congeners	7.0E-06	2.2E-01	7.0E-06	1.3E-03	na	na		X			
Total PCB TEQ	4.4E-09	3.4E-07	4.4E-09	4.7E-07	na	na		X			
Metals							***Metals***				
Aluminum	1.6E+04	1.6E+04	na	na	na	na	X				
Antimony	6.0E+00	6.0E+00	9.0E+01	na	na	na	X				
Arsenic	8.0E+00	5.8E-01	1.4E-01	2.2E+02	na	8.0E+00					X
Barium	2.0E+02	2.0E+03	2.0E+02	9.3E+05	na	na		X			
Beryllium	4.0E+00	4.0E+00	7.6E+01	4.9E+00	na	na	X				
Cadmium	1.2E+00	5.0E+00	7.9E+00	1.2E+00	na	na			X		
Chromium, total	1.0E+02	1.0E+02	na	na	na	na	X				
Chromium, trivalent	2.7E+01	2.4E+04	2.7E+01	8.5E+01	na	na		X			
Chromium, hexavalent	4.6E-02	4.6E-02	3.6E-01	7.8E+01	na	na	X				
Cobalt	4.8E+00	4.8E+00	na	na	na	na	X				
Copper	3.1E+00	6.4E+02	3.1E+00	1.4E+01	na	na		X			
Iron	3.0E+02	3.0E+02	na	na	na	na	X				
Lead	5.6E+00	1.5E+01	5.6E+00	1.9E+01	na	na		X			
Manganese	5.0E+01	5.0E+01	1.0E+02	na	na	na	X				
Mercury, inorganic	2.5E-02	2.0E+00	2.5E-02	2.0E+00	1.1E+00	na		X			
Methylmercury	1.6E+00	1.6E+00	na	na	na	na	X				
Molybdenum	8.0E+01	8.0E+01	na	na	na	na	X				
Nickel	8.2E+00	1.0E+02	8.2E+00	2.6E+03	na	na		X			
Selenium	5.0E+01	5.0E+01	7.1E+01	4.3E+05	na	na	X				
Silver	1.9E+00	8.0E+01	1.9E+00	5.5E+01	na	na		X			
Thallium	6.2E-02	1.6E-01	6.2E-02	2.5E+01	na	na		X			
Tin	9.6E+03	9.6E+03	na	na	na	na	X				
Vanadium	1.4E+02	1.4E+02	na	na	na	na	X				
Zinc	8.1E+01	4.8E+03	8.1E+01	7.7E+02	na	na		X			
SVOCs - PAHs							***SVOCs - PAHs***				
Acenaphthene	5.3E+00	4.8E+02	3.0E+01	5.3E+00	na	na			X		
Acenaphthylene	na	na	na	na	na	na					
Anthracene	2.1E+00	2.4E+03	1.0E+02	2.1E+00	na	na			X		
Benzo(a)anthracene	1.6E-04	na	1.6E-04	1.9E-01	na	na		X			
Benzo(b)fluoranthene	1.6E-04	na	1.6E-04	na	na	na		X			
Benzo(k)fluoranthene	1.6E-03	na	1.6E-03	na	na	na		X			
Total benzofluoranthenes	na	na	na	na	na	na					
Benzo(g,h,i)perylene	na	na	na	na	na	na					
Benzo(a)pyrene	1.6E-05	2.0E-01	1.6E-05	8.7E-02	na	na		X			
Chrysene	1.6E-02	na	1.6E-02	4.0E-01	na	na		X			
Dibenz(a,h)anthracene	1.6E-05	na	1.6E-05	6.8E-03	na	na		X			
Dibenzofuran	3.1E+00	8.0E+00	na	3.1E+00	na	na			X		
Fluoranthene	1.8E+00	6.4E+02	6.0E+00	1.8E+00	na	na			X		
Fluorene	3.7E+00	3.2E+02	1.0E+01	3.7E+00	na	na			X		
Indeno(1,2,3-cd)pyrene	1.6E-04	na	1.6E-04	1.6E-02	na	na		X			
Methyl isopropyl phenanthrene	na	na	na	na	na	na					
1-Methylnaphthalene	1.5E+00	1.5E+00	na	8.0E+02	na	na	X				
2-Methylnaphthalene	1.4E+01	3.2E+01	na	1.4E+01	na	na			X		
Naphthalene	1.4E+00	1.6E+02	1.4E+00	9.0E+01	8.9E+00	na		X			
Phenanthrene	na	na	na	na	na	na					
Pyrene	2.0E+00	2.4E+02	8.0E+00	2.0E+00	na	na			X		
Total LPAHs	na	na	na	na	na	na					
Total HPAHs	na	na	na	na	na	na					
Total PAHs	na	na	na	na	na	na					
Total cPAH TEQ	9.7E-03	2.3E-02	9.7E-03	3.2E-02	na	na		X			
Other SVOCs							***Other SVOCs***				
Aniline	1.5E+01	1.5E+01	na	1.2E+05	na	na	X				
Azobenzene	4.0E-01	4.0E-01	na	na	na	na	X				
Benzidine	2.3E-05	1.0E-04	2.3E-05	8.8E-02	na	na		X			
Benzoic acid	5.9E+02	6.4E+04	na	5.9E+02	na	na			X		
Benzyl alcohol	5.6E+01	1.6E+03	na	5.6E+01	na	na			X		
Bis(2-chloroethoxy)methane	na	na	na	na	na	na					
Bis(2-chloroethyl)ether	4.0E-02	4.0E-02	6.0E-02	5.9E+02	na	na	X				
Bis(chloromethyl)ether	2.0E-04	2.0E-04	1.7E-02	7.6E+00	na	na	X				
Bis(2-chloro-1-methylethyl)ether	3.2E+02	3.2E+02	9.0E+02	3.7E+06	na	na	X				
2,6-Bis(1,1-dimethylethyl) phenol	na	na	na	na	na	na					
Bis(2-ethylhexyl) phthalate	4.6E-02	6.0E+00	4.6E-02	6.2E-01	na	na		X			
4-Bromophenyl phenyl ether	na	na	na	na	na	na					
Butyl benzyl phthalate	1.3E-02	4.6E+01	1.3E-02	2.4E-01	na	na		X			
Butyl diphenyl phosphate	na	na	na	na	na	na					
Carbazole	na	na	na	na	na	na					
4-Chloroaniline	4.4E-01	4.4E-01	na	2.4E+03	na	na	X				
4-Chloro-3-methylphenol	3.6E+01	na	3.6E+01	na	na	na		X			

Chemical (all concentrations are in µg/L)	Most Stringent PCUL Potable Water GW #s 1-5	GW-1 Protect Drinking Water PW	GW-2 Protect Surface Water SW	GW-3 Protect Sediment Partit	GW-4 Screening Level Protect Indoor Air PW	GW-5 Natural Background	Basis - Potable GW: Drinking Water	Surface Water	Sediment	Indoor Air	Nat. Background
2-Chloronaphthalene	1.0E+02	6.4E+02	1.0E+02	3.3E+05	na	na		X			
2-Chlorophenol	1.7E+01	4.0E+01	1.7E+01	3.5E+03	na	na		X			
4-Chlorophenyl phenyl ether	na	na	na	na	na	na					
Dibutyl phthalate	8.0E+00	1.6E+03	8.0E+00	4.6E+01	na	na		X			
Dibutyl phenyl phosphate	na	na	na	na	na	na					
1,2-Dichlorobenzene	4.5E+00	6.0E+02	8.0E+02	4.5E+00	2.5E+03	na			X		
1,3-Dichlorobenzene	2.0E+00	na	2.0E+00	na	na	na		X			
1,4-Dichlorobenzene	5.0E+00	7.5E+01	6.0E+01	8.9E+00	5.0E+00	na				X	
3,3'-Dichlorobenzidine	3.3E-03	1.9E-01	3.3E-03	4.4E+02	na	na		X			
2,4-Dichlorophenol	1.0E+01	4.8E+01	1.0E+01	8.2E+03	na	na		X			
Di(2-ethylhexyl)adipate	4.0E+02	4.0E+02	na	na	na	na	X				
Diethyl phthalate	9.3E+01	1.3E+04	2.0E+02	9.3E+01	na	na			X		
Dimethyl phthalate	5.9E+01	na	6.0E+02	5.9E+01	na	na			X		
2,4-Dimethylphenol	2.9E+00	3.2E+02	9.7E+01	2.9E+00	na	na			X		
1,2-Dinitrobenzene	1.6E+00	1.6E+00	na	na	na	na	X				
1,3-Dinitrobenzene	1.6E+00	1.6E+00	na	na	na	na	X				
1,4-Dinitrobenzene	1.6E+00	1.6E+00	na	na	na	na	X				
4,6-Dinitro-2-methylphenol	7.0E+00	na	7.0E+00	na	na	na		X			
2,4-Dinitrophenol	3.2E+01	3.2E+01	1.0E+02	6.5E+05	na	na	X				
2,4-Dinitrotoluene	1.8E-01	2.8E-01	1.8E-01	3.7E+02	na	na		X			
2,6-Dinitrotoluene	5.8E-02	5.8E-02	na	7.5E+01	na	na	X				
Di-n-octyl phthalate	2.3E+00	1.6E+02	na	2.3E+00	na	na			X		
1,4-Dioxane	4.4E-01	4.4E-01	na	2.0E+04	na	na	X				
1,2-Diphenylhydrazine	2.0E-02	1.1E-01	2.0E-02	5.6E+01	na	na		X			
Hexachlorobenzene	5.0E-06	2.7E-01	5.0E-06	1.4E-02	2.4E-01	na		X			
Hexachlorobutadiene	1.0E-02	5.6E-01	1.0E-02	6.6E-01	6.4E-01	na		X			
Hexachlorocyclopentadiene	1.0E+00	4.8E+01	1.0E+00	4.4E+04	4.2E+00	na		X			
Hexachloroethane	2.0E-02	1.1E+00	2.0E-02	7.6E+03	3.8E+00	na		X			
Isophorone	9.2E+01	9.2E+01	1.1E+02	7.5E+05	na	na	X				
2-Methoxynaphthalene	na	na	na	na	na	na					
2-Methylphenol (o-cresol)	1.1E+01	8.0E+02	na	1.1E+01	na	na			X		
3-Methylphenol (m-cresol)	8.0E+02	8.0E+02	na	na	na	na	X				
4-Methylphenol (p-cresol)	1.1E+02	1.6E+03	na	1.1E+02	na	na			X		
2-Nitroaniline	1.6E+02	1.6E+02	na	7.4E+05	na	na	X				
3-Nitroaniline	na	na	na	na	na	na					
4-Nitroaniline	4.4E+00	4.4E+00	na	1.1E+05	na	na	X				
Nitrobenzene	1.6E+01	1.6E+01	1.0E+02	1.4E+05	na	na	X				
2-Nitrophenol	na	na	na	na	na	na					
4-Nitrophenol	na	na	na	na	na	na					
n-Nitrosodimethylamine	2.3E-04	2.3E-04	3.4E-01	8.8E+00	na	na	X				
n-Nitrosodiphenylamine	5.5E-01	1.8E+01	6.9E-01	5.5E-01	na	na			X		
n-Nitrosodi-n-propylamine	1.3E-02	1.3E-02	5.8E-02	3.2E+01	na	na	X				
Pentachlorophenol	2.0E-03	1.0E+00	2.0E-03	8.8E-01	na	na		X			
Phenol	1.0E+02	4.8E+03	7.0E+04	1.0E+02	na	na			X		
Pyridine	8.0E+00	8.0E+00	na	1.0E+05	na	na	X				
2,3,4,5-Tetrachlorophenol	na	na	na	na	na	na					
2,3,4,6-Tetrachlorophenol	4.8E+02	4.8E+02	na	na	na	na	X				
1,2,4-Trichlorobenzene	9.6E-01	1.5E+01	na	9.6E-01	3.9E+01	na			X		
2,4,5-Trichlorophenol	3.7E-02	1.6E+03	3.7E-02	6.7E+04	na	na		X			
2,4,6-Trichlorophenol	8.0E+00	8.0E+00	6.0E+02	9.1E+02	na	na	X				
Volatile Organic Compounds							***Volatile Organic Compounds***				
Acetone	7.2E+03	7.2E+03	na	3.4E+08	na	na	X				
Acrolein	1.1E+00	4.0E+00	1.1E+00	2.0E+05	2.9E+00	na		X			
Acrylonitrile	2.8E-02	8.1E-02	2.8E-02	7.1E+03	1.2E+01	na		X			
Benzaldehyde	1.1E+01	1.1E+01	na	9.0E+05	na	na	X				
Benzene	1.6E+00	5.0E+00	1.6E+00	3.0E+04	2.4E+00	na		X			
Bromobenzene	6.4E+01	6.4E+01	na	3.9E+05	6.3E+02	na	X				
Bromochloromethane	na	na	na	na	na	na					
Bromoethane	na	na	na	na	na	na					
Bromoform	1.2E+01	5.5E+01	1.2E+01	1.2E+05	2.2E+02	na		X			
Bromomethane	1.1E+01	1.1E+01	2.7E+02	4.4E+05	1.1E+01	na				X	
2-Butoxyethanol	8.0E+02	8.0E+02	na	3.7E+07	na	na	X				
n-Butylbenzene	4.0E+02	4.0E+02	na	4.2E+05	na	na	X				
sec-Butylbenzene	8.0E+02	8.0E+02	na	9.4E+05	na	na	X				
tert-Butylbenzene	8.0E+02	8.0E+02	na	1.2E+06	na	na	X				
Carbon disulfide	8.0E+02	8.0E+02	na	2.4E+07	8.4E+02	na	X				
Carbon tetrachloride	3.5E-01	5.0E+00	3.5E-01	1.2E+04	6.2E-01	na		X			
Chlorobenzene	1.0E+02	1.0E+02	2.0E+02	1.0E+06	3.5E+02	na	X				
Chloroethane	1.5E+04	na	na	na	1.5E+04	na				X	
2-Chloroethyl vinyl ether	na	na	na	na	na	na					
Chloroform	1.2E+00	1.4E+01	1.5E+02	5.8E+04	1.2E+00	na				X	
Chloromethane	1.5E+02	na	na	na	1.5E+02	na				X	
3-Chloro-1-propene	2.1E+00	2.1E+00	na	1.0E+05	na	na	X				
2-Chlorotoluene	1.6E+02	1.6E+02	na	6.2E+05	na	na	X				
4-Chlorotoluene	na	na	na	na	na	na					
Dibromochloromethane	2.2E+00	5.2E+00	2.2E+00	2.9E+04	na	na		X			
1,2-Dibromo-3-chloropropane	4.2E-02	1.4E-01	na	2.5E+02	4.2E-02	na				X	
Dibromomethane	8.0E+01	8.0E+01	na	1.4E+06	8.6E+01	na	X				

Chemical (all concentrations are in µg/L)	Most Stringent PCUL Potable Water GW #s 1-5	GW-1 Protect Drinking Water PW	GW-2 Protect Surface Water SW	GW-3 Protect Sediment Partit	GW-4 Screening Level Protect Indoor Air PW	GW-5 Natural Background	Basis - Potable GW: Drinking Water	Surface Water	Sediment	Indoor Air	Nat. Background
Dichlorobromomethane	1.4E+00	7.1E+00	2.8E+00	3.9E+04	1.4E+00	na				X	
trans-1,4-Dichloro-2-butene	na	na	na	na	na	na					
Dichlorodifluoromethane	4.2E+00	1.6E+03	na	3.4E+07	4.2E+00	na				X	
1,1-Dichloroethane	7.7E+00	7.7E+00	na	3.2E+05	1.1E+01	na	X				
1,2-Dichloroethane (EDC)	3.5E+00	4.8E+00	7.3E+01	2.4E+04	3.5E+00	na				X	
1,1-Dichloroethylene	7.0E+00	7.0E+00	4.0E+03	6.6E+06	1.3E+02	na	X				
cis-1,2-Dichloroethylene	1.6E+01	1.6E+01	na	3.6E+05	na	na	X				
trans-1,2-Dichloroethylene	7.7E+01	1.0E+02	1.0E+03	3.7E+06	7.7E+01	na				X	
1,2-Dichloroethylene (mixed isomers)	7.2E+01	7.2E+01	na	1.7E+06	na	na	X				
1,2-Dichloropropane	3.1E+00	5.0E+00	3.1E+00	5.3E+04	1.0E+01	na		X			
1,3-Dichloropropane	1.6E+02	1.6E+02	na	2.5E+06	na	na	X				
2,2-Dichloropropane	na	na	na	na	na	na					
1,1-Dichloropropene	na	na	na	na	na	na					
cis-1,3-Dichloropropene	4.4E-01	4.4E-01	1.2E+00	2.6E+04	na	na	X				
trans-1,3-Dichloropropene	4.4E-01	4.4E-01	1.2E+00	2.6E+04	na	na	X				
Diisopropyl ether	na	na	na	na	na	na					
Ethane	na	na	na	na	na	na					
Ethylbenzene	2.1E+01	7.0E+02	2.1E+01	5.4E+06	2.8E+03	na		X			
Ethylene oxide	3.7E-02	3.7E-02	na	2.8E+03	5.4E-02	na	X				
Ethyl ether	1.6E+03	1.6E+03	na	6.2E+07	na	na	X				
Ethylene dibromide (EDB)	5.0E-02	5.0E-02	na	7.9E+02	3.0E-01	na	X				
Formaldehyde	2.1E+00	2.1E+00	na	2.2E+05	na	na	X				
n-Hexane	4.1E+00	4.8E+02	na	2.2E+05	4.1E+00	na				X	
2-Hexanone	4.0E+01	4.0E+01	na	2.0E+06	7.3E+03	na	X				
Isopropylbenzene (cumene)	8.0E+02	8.0E+02	na	1.8E+06	9.1E+02	na	X				
4-Isopropyltoluene	na	na	na	na	na	na					
Methane	na	na	na	na	na	na					
Methyl ethyl ketone (2-butanone)	4.8E+03	4.8E+03	na	2.1E+08	1.7E+06	na	X				
Methyl iodide	na	na	na	na	na	na					
Methyl isobutyl ketone (4-methyl-2-pentanone)	6.4E+02	6.4E+02	na	2.3E+07	4.7E+05	na	X				
Methyl tert-butyl ether	2.4E+01	2.4E+01	na	2.0E+06	8.0E+02	na	X				
Methylene chloride	5.0E+00	5.0E+00	1.0E+02	3.6E+05	7.8E+02	na	X				
2-Pentanone	na	na	na	na	na	na					
n-Propylbenzene	8.0E+02	8.0E+02	na	1.5E+06	2.3E+03	na	X				
Styrene	1.0E+02	1.0E+02	na	2.7E+06	8.2E+03	na	X				
1,1,1,2-Tetrachloroethane	1.7E+00	1.7E+00	na	5.0E+04	7.1E+00	na	X				
1,1,2,2-Tetrachloroethane	2.2E-01	2.2E-01	3.0E-01	6.9E+03	5.9E+00	na	X				
Tetrachloroethylene (PCE)	2.9E+00	5.0E+00	2.9E+00	2.5E+05	2.5E+01	na		X			
Tetrahydrofuran	6.0E+00	6.0E+00	na	2.7E+08	1.3E+06	na	X				
Toluene	1.0E+02	6.4E+02	1.0E+02	6.0E+06	1.5E+04	na		X			
1,2,3-Trichlorobenzene	6.4E+00	6.4E+00	na	7.3E+03	na	na	X				
1,1,1-Trichloroethane	2.0E+02	2.0E+02	5.0E+04	1.5E+08	5.4E+03	na	X				
1,1,2-Trichloroethane	9.0E-01	3.0E+00	9.0E-01	2.5E+04	5.1E+00	na		X			
Trichloroethylene (TCE)	7.0E-01	4.0E+00	7.0E-01	5.1E+03	1.4E+00	na		X			
Trichlorofluoroethane	na	na	na	na	na	na					
Trichlorofluoromethane	1.2E+02	2.4E+03	na	5.1E+07	1.2E+02	na				X	
1,2,3-Trichloropropane	3.8E-04	3.8E-04	na	6.8E+00	na	na	X				
Trichlorotrifluoroethane	1.7E+02	2.4E+05	na	1.7E+09	1.7E+02	na				X	
1,2,3-Trimethylbenzene	8.0E+01	8.0E+01	na	1.9E+05	4.1E+02	na	X				
1,2,4-Trimethylbenzene	8.0E+01	8.0E+01	na	2.0E+05	2.4E+02	na	X				
1,3,5-Trimethylbenzene	8.0E+01	8.0E+01	na	2.0E+05	1.7E+02	na	X				
Vinyl acetate	7.8E+03	8.0E+03	na	3.4E+08	7.8E+03	na				X	
Vinyl chloride	1.8E-01	2.9E-01	1.8E-01	1.9E+03	3.3E-01	na		X			
Total xylenes	1.1E+02	1.6E+03	1.1E+02	9.7E+06	3.2E+02	na		X			
Petroleum Hydrocarbons							***Petroleum Hydrocarbons***				
Gasoline range hydrocarbons, fresh	8.0E+02	8.0E+02	8.0E+02	na	na	na	X	X			
Gasoline range hydrocarbons, weathered	1.0E+03	1.0E+03	1.0E+03	na	na	na	X	X			
Diesel range hydrocarbons, fresh	5.0E+01	5.0E+02	5.0E+01	na	na	na		X			
Diesel range hydrocarbons, weathered	5.0E+02	5.0E+02	5.0E+02	na	na	na	X	X			
Oil range hydrocarbons	5.0E+02	5.0E+02	5.0E+02	na	na	na	X	X			
Total diesel & oil range hydrocarbons	5.0E+02	5.0E+02	5.0E+02	na	na	na	X	X			

Table J-3

PCUL Workbook - Soil Vapor and Air Summary

Precision Engineering, Inc.

Seattle, Washington

Chemical (All concentrations in ug/m^3)	**AR-1 Air PCUL Air-Det**	**SG-1 Sub-Slab Soil Gas Screening Level Protect Indoor Air Air-Det**
PCBs		
Total PCB Aroclors	4.4E-03	na
Total PCB congeners	4.4E-03	na
Total PCB TEQ	6.6E-08	na
Metals		
Aluminum	2.3E+00	na
Antimony	1.4E-01	na
Arsenic	5.8E-04	na
Barium	2.3E-01	na
Beryllium	1.0E-03	na
Cadmium	1.4E-03	na
Chromium, total	na	na
Chromium, trivalent	na	na
Chromium, hexavalent	7.8E-06	na
Cobalt	2.8E-04	na
Copper	na	na
Iron	na	na
Lead	na	na
Manganese	2.3E-02	na
Mercury, inorganic	1.4E-01	4.6E+00
Methylmercury	na	na
Molybdenum	9.1E-01	na
Nickel	9.6E-03	na
Selenium	9.1E+00	na
Silver	na	na
Thallium	na	na
Tin	na	na
Vanadium	3.2E-03	na
Zinc	na	na
Metals - Butyltins		
Monobutyltin	na	na
Dibutyltin	na	na
Tributyltin oxide	na	na
Tetrabutyltin	na	na
SVOCs - PAHs		
Acenaphthene	na	na
Acenaphthylene	na	na
Anthracene	na	na
Benzo(a)anthracene	na	na
Benzo(b)fluoranthene	na	na
Benzo(k)fluoranthene	na	na
Total benzofluoranthenes	na	na
Benzo(g,h,i)perylene	na	na
Benzo(a)pyrene	9.1E-04	na
Chrysene	na	na
Dibenz(a,h)anthracene	na	na
Dibenzofuran	na	na
Fluoranthene	na	na
Fluorene	na	na
Indeno(1,2,3-cd)pyrene	na	na
Methyl isopropyl phenanthrene	na	na
1-Methylnaphthalene	na	na
2-Methylnaphthalene	na	na
Naphthalene	7.4E-02	2.5E+00
Phenanthrene	na	na
Pyrene	na	na
Total LPAHs	na	na
Total HPAHs	na	na
Total PAHs	na	na
Total cPAH TEQ	1.1E-03	na
Other SVOCs		
Aniline	4.6E-01	na
Azobenzene	8.0E-02	na
Benzidine	9.8E-06	na
Benzoic acid	na	na
Benzyl alcohol	na	na
Bis(2-chloroethoxy)methane	na	na
Bis(2-chloroethyl)ether	7.5E-03	na
Bis(chloromethyl)ether	4.0E-05	na
Bis(2-chloro-1-methylethyl)ether	na	na
2,6-Bis(1,1-dimethylethyl) phenol	na	na
Bis(2-ethylhexyl) phthalate	1.0E+00	na
4-Bromophenyl phenyl ether	na	na
Butyl benzyl phthalate	na	na
Butyl diphenyl phosphate	na	na

PCUL Workbook - Soil Vapor and Air Summary

Precision Engineering, Inc.
Seattle, Washington

Chemical (All concentrations in ug/m^3)	**AR-1 Air PCUL Air-Det**	**SG-1 Sub-Slab Soil Gas Screening Level Protect Indoor Air Air-Det**
Carbazole	na	na
4-Chloroaniline	na	na
4-Chloro-3-methylphenol	na	na
2-Chloronaphthalene	na	na
2-Chlorophenol	na	na
4-Chlorophenyl phenyl ether	na	na
Dibutyl phthalate	na	na
Dibutyl phenyl phosphate	na	na
1,2-Dichlorobenzene	9.1E+01	3.0E+03
1,3-Dichlorobenzene	na	na
1,4-Dichlorobenzene	2.3E-01	7.6E+00
3,3'-Dichlorobenzidine	7.4E-03	na
2,4-Dichlorophenol	na	na
Di(2-ethylhexyl)adipate	na	na
Diethyl phthalate	na	na
Dimethyl phthalate	na	na
2,4-Dimethylphenol	na	na
1,2-Dinitrobenzene	na	na
1,3-Dinitrobenzene	na	na
1,4-Dinitrobenzene	na	na
4,6-Dinitro-2-methylphenol	na	na
2,4-Dinitrophenol	na	na
2,4-Dinitrotoluene	2.8E-02	na
2,6-Dinitrotoluene	na	na
Di-n-octyl phthalate	na	na
1,4-Dioxane	5.0E-01	na
1,2-Diphenylhydrazine	1.1E-02	na
Hexachlorobenzene	5.4E-03	1.8E-01
Hexachlorobutadiene	1.1E-01	3.8E+00
Hexachlorocyclopentadiene	9.1E-02	3.0E+00
Hexachloroethane	2.3E-01	7.6E+00
Isophorone	9.1E+02	na
2-Methoxynaphthalene	na	na
2-Methylphenol (o-cresol)	2.7E+02	na
3-Methylphenol (m-cresol)	2.7E+02	na
4-Methylphenol (p-cresol)	2.7E+02	na
2-Nitroaniline	2.3E-02	na
3-Nitroaniline	na	na
4-Nitroaniline	2.7E+00	na
Nitrobenzene	6.3E-02	na
2-Nitrophenol	na	na
4-Nitrophenol	na	na
n-Nitrosodimethylamine	4.7E-05	na
n-Nitrosodiphenylamine	9.6E-01	na
n-Nitrosodi-n-propylamine	1.3E-03	na
Pentachlorophenol	4.9E-01	na
Phenol	9.1E+01	na
Pyridine	na	na
2,3,4,5-Tetrachlorophenol	na	na
2,3,4,6-Tetrachlorophenol	na	na
1,2,4-Trichlorobenzene	9.1E-01	3.0E+01
2,4,5-Trichlorophenol	na	na
2,4,6-Trichlorophenol	8.0E-01	na
Volatile Organic Compounds		
Acetone	na	na
Acrolein	9.1E-03	3.0E-01
Acrylonitrile	3.7E-02	1.2E+00
Benzaldehyde	na	na
Benzene	3.2E-01	1.1E+01
Bromobenzene	2.7E+01	9.1E+02
Bromochloromethane	1.8E+01	na
Bromoethane	na	na
Bromoform	2.3E+00	7.6E+01
Bromomethane	2.3E+00	7.6E+01
2-Butoxyethanol	7.3E+02	na
n-Butylbenzene	na	na
sec-Butylbenzene	na	na
tert-Butylbenzene	na	na
Carbon disulfide	3.2E+02	1.1E+04
Carbon tetrachloride	4.2E-01	1.4E+01
Chlorobenzene	2.3E+01	7.6E+02
Chloroethane	4.6E+03	1.5E+05
2-Chloroethyl vinyl ether	na	na
Chloroform	1.1E-01	3.6E+00
Chloromethane	4.1E+01	1.4E+03
3-Chloro-1-propene	4.2E-01	na
2-Chlorotoluene	na	na

PCUL Workbook - Soil Vapor and Air Summary

Precision Engineering, Inc.

Seattle, Washington

Chemical (All concentrations in ug/m^3)	**AR-1 Air PCUL** Air-Det	**SG-1 Sub-Slab Soil Gas Screening Level Protect Indoor Air** Air-Det
4-Chlorotoluene	na	na
Dibromochloromethane	na	na
1,2-Dibromo-3-chloropropane	1.1E-04	3.7E-03
Dibromomethane	1.8E+00	6.1E+01
Dichlorobromomethane	6.7E-02	2.2E+00
trans-1,4-Dichloro-2-butene	6.0E-04	na
Dichlorodifluoromethane	4.6E+01	1.5E+03
1,1-Dichloroethane	1.6E+00	5.2E+01
1,2-Dichloroethane (EDC)	9.6E-02	3.2E+00
1,1-Dichloroethylene	9.1E+01	3.0E+03
cis-1,2-Dichloroethylene	na	na
trans-1,2-Dichloroethylene	1.8E+01	6.1E+02
1,2-Dichloroethylene (mixed isomers)	na	na
1,2-Dichloropropane	6.8E-01	2.3E+01
1,3-Dichloropropane	na	na
2,2-Dichloropropane	na	na
1,1-Dichloropropene	na	na
cis-1,3-Dichloropropene	na	na
trans-1,3-Dichloropropene	na	na
Diisopropyl ether	na	na
Ethane	na	na
Ethylbenzene	4.6E+02	1.5E+04
Ethylene oxide	2.2E-04	7.3E-03
Ethyl ether	na	na
Ethylene dibromide (EDB)	4.2E-03	1.4E-01
Formaldehyde	1.9E-01	na
n-Hexane	3.2E+02	1.1E+04
2-Hexanone	1.4E+01	4.6E+02
Isopropylbenzene (cumene)	1.8E+02	6.1E+03
4-Isopropyltoluene	na	na
Methane	na	na
Methyl ethyl ketone (2-butanone)	2.3E+03	7.6E+04
Methyl iodide	na	na
Methyl isobutyl ketone (4-methyl-2-pentanone)	1.4E+03	4.6E+04
Methyl tert-butyl ether	9.6E+00	3.2E+02
Methylene chloride	6.6E+01	2.2E+03
2-Pentanone	na	na
n-Propylbenzene	4.6E+02	1.5E+04
Styrene	4.6E+02	1.5E+04
1,1,1,2-Tetrachloroethane	3.4E-01	1.1E+01
1,1,2,2-Tetrachloroethane	4.3E-02	1.4E+00
Tetrachloroethylene (PCE)	9.6E+00	3.2E+02
Tetrahydrofuran	2.3E+03	7.6E+04
Toluene	2.3E+03	7.6E+04
1,2,3-Trichlorobenzene	na	na
1,1,1-Trichloroethane	2.3E+03	7.6E+04
1,1,2-Trichloroethane	9.1E-02	3.0E+00
Trichloroethylene (TCE)	3.3E-01	1.1E+01
Trichlorofluoroethane	na	na
Trichlorofluoromethane	3.2E+02	1.1E+04
1,2,3-Trichloropropane	1.4E-01	na
Trichlorotrifluoroethane	2.3E+03	7.6E+04
1,2,3-Trimethylbenzene	2.7E+01	9.1E+02
1,2,4-Trimethylbenzene	2.7E+01	9.1E+02
1,3,5-Trimethylbenzene	2.7E+01	9.1E+02
Vinyl acetate	9.1E+01	3.0E+03
Vinyl chloride	2.8E-01	9.4E+00
Total xylenes	4.6E+01	1.5E+03
Petroleum Hydrocarbons		
Gasoline range hydrocarbons, fresh	1.4E+02	4.7E+03
Gasoline range hydrocarbons, weathered	1.4E+02	4.7E+03
Diesel range hydrocarbons, fresh	1.4E+02	na
Diesel range hydrocarbons, weathered	1.4E+02	na
Oil range hydrocarbons	na	na
Total diesel & oil range hydrocarbons	na	na
Pesticides		
Aldrin	5.1E-04	1.7E-02
alpha-BHC	1.4E-03	na
beta-BHC	4.7E-03	na
delta-BHC	na	na
gamma-BHC	8.0E-03	na
cis-Chlordane	2.5E-02	na
trans-Chlordane	2.5E-02	na
Chlordane	2.5E-02	na
Chlorpyrifos	na	na
4,4'-DDD	3.6E-02	na
4,4'-DDE	2.6E-02	na

PCUL Workbook - Soil Vapor and Air Summary

Precision Engineering, Inc.
Seattle, Washington

Chemical (All concentrations in ug/m^3)	AR-1 **Air PCUL** Air-Det	SG-1 **Sub-Slab Soil Gas Screening Level Protect Indoor Air** Air-Det
4,4'-DDT	2.6E-02	na
Total DDD	3.6E-02	na
Total DDE	2.6E-02	na
Total DDT	2.6E-02	na
Diazinon	na	na
Dieldrin	5.4E-04	na
Endosulfan I	na	na
Endosulfan II	na	na
Endosulfan sulfate	na	na
Endrin	na	na
Endrin aldehyde	na	na
Endrin ketone	na	na
Heptachlor	1.9E-03	6.4E-02
Heptachlor epoxide	9.6E-04	na
Malathion	na	na
Methoxychlor	na	na
Mirex	4.9E-04	1.6E-02
Nonachlor	na	na
Toxaphene	7.8E-03	na
Herbicides		
2,4-D	na	na
2,4-DB	na	na
2,4,5-TP	na	na
2,4,5-T	na	na
Dalapon	na	na
Dicamba	na	na
Dichloroprop	na	na
Dinoseb	na	na
MCPA	na	na
MCPP	na	na

Appendix K
Data Tables

Table K-1

Vadose Soil Data

Former Precision Engineering Property

Seattle, Washington

Location ID		GP1	GP2	GP3	GP4	GP5	GP6	GP7	GP8	GP9	GP10	GP11	GP12	GP12	GP13	GP14	GP15	GP16	GP16	GP17	GP18	GP19
Sample ID		GP1-S-1.5	GP2-S-1.0	GP3-S-2.0	GP4-S-1.5	GP5-S-1.5	GP6-S-1.0	GP7-S-2.0	GP8-S-1.5	GP9-S-2.0	GP10-S-1.5	GP11-S-2.0	GP12-S-3.0	GP12-S-5.0	GP13-S-1.0	GP14-S-3.0	GP15-S-3.0	GP16-S-1.0	GP16-S-5.0	GP17-S-1.0	GP18-S-1.0	GP19-S-1.0
Sample Date		6/7/05	6/7/05	6/9/05	6/16/05	6/16/05	6/16/05	6/16/05	6/16/05	6/17/05	6/17/05	6/17/05	12/13/05	12/13/05	12/14/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05
Start Depth (feet)		1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1	5	1	1	1
End Depth (feet)		1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1	5	1	1	1
Analyte	Soil PCUL - Vadose																					
Metals (mg/kg)																						
Antimony	5.4	–	–	–	–	–	–	–	–	–	–	–	1.77 U	–	1.78 U	1.83 U	1.59 U	–	–	–	1.84 U	–
Arsenic	7.3	–	**11.3**	–	–	–	–	–	–	–	–	–	**2.79**	–	**9.45**	**3**	**7.76**	–	–	–	**3.55**	–
Beryllium	63	–	–	–	–	–	–	–	–	–	–	–	0.591 U	–	0.593 U	0.609 U	0.529 U	–	–	–	0.615 U	–
Cadmium	0.77	–	0.542 U	–	–	–	–	–	–	–	–	–	0.591 U	–	**1.29**	0.609 U	**0.714**	–	–	–	0.615 U	–
Chromium	260	**205**	**2680**	**915**	**1230**	**18.9**	**584**	**23.6**	**22.2**	**43.3**	**21.8**	**21.7**	**24.3**	**25.2**	**26.6**	**24.8**	**24.7**	**30**	**26.2**	**254**	**4430**	**22**
Chromium, Hexavalent	0.018	**152**	**523**	**27.7**	**53.4**	0.111 U	**627**	**0.119**	**0.661**	**2.97**	**0.142**	**0.573**	1.1 U	1 U	1.4 U	2 U	1.2 U	2.1 U	2.1 U	1.7 U	**2300 J**	2.5 U
Chromium, Trivalent	548	**53**	**2157**	**887.3**	**1176.6**	**18.9**	ND	**23.481**	**21.539**	**40.33**	**21.658**	**21.127**	**24.3**	**25.2**	**26.6**	**24.8**	**24.7**	**30**	**26.2**	**254**	**2130 J**	**22**
Copper	36	–	–	–	–	–	–	–	–	–	–	–	**17.6**	–	**29**	**14.4**	**30.4**	–	–	–	**113**	–
Lead	250	–	**34.8**	–	–	–	–	–	–	–	–	–	**2.45**	–	**21.1**	**2.2**	**18.7**	–	–	–	**26.3**	–
Mercury	0.07	–	–	–	–	–	–	–	–	–	–	–	0.131 U	–	0.168 U	0.12 U	0.154 U	–	–	–	**1.1**	–
Nickel	48	–	–	–	–	–	–	–	–	–	–	–	**25.6**	–	**21.8**	**32.9**	**16.4**	–	–	–	**23.1**	–
Selenium	5.2	–	–	–	–	–	–	–	–	–	–	–	0.591 U	–	0.593 U	0.609 U	0.529 U	–	–	–	0.615 U	–
Silver	0.32	–	–	–	–	–	–	–	–	–	–	–	0.591 U	–	0.593 U	0.609 U	0.529 U	–	–	–	0.615 U	–
Thallium	0.088	–	–	–	–	–	–	–	–	–	–	–	0.591 U	–	0.593 U	0.609 U	0.529 U	–	–	–	0.615 U	–
Zinc	101	–	–	–	–	–	–	–	–	–	–	–	**32.9**	–	**84.9**	**38.4**	**71.6**	–	–	–	**40.9**	–
Total Petroleum Hydrocarbons (mg/kg)																						
Gasoline-range hydrocarbons - HCID	30	**20**	**21.3**	**19.5**	**24.2**	**19.4**	**21**	**19.7**	**20.8**	**20.6**	**21**	**21.1**	–	–	–	–	–	–	–	–	–	–
Diesel-range hydrocarbons - HCID	2,000	**49.9**	**53.3**	**48.9**	**60.4**	**48.4**	**52.4**	**49.2**	**51.9**	**51.5**	**52.6**	**52.8**	–	–	–	–	–	–	–	–	–	–
Lube oil-range hydrocarbons - HCID	2,000	**99.8**	**107**	**97.7**	**121**	**96.9**	**105**	**98.5**	**104**	**103**	**105**	**106**	–	–	–	–	–	–	–	–	–	–
Total TPH - HCID	2,000	**149.7**	**160.3**	**146.6**	**181.4**	**145.3**	**157.4**	**147.7**	**155.9**	**154.5**	**157.6**	**158.8**	–	–	–	–	–	–	–	–	–	–
Gasoline-range hydrocarbons	30	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diesel-range hydrocarbons	2,000	–	–	–	–	–	–	–	–	–	–	–	10.7 U	–	–	–	17.7	–	11.2 U	**11.6**	**156**	**52.8**
Lube oil-range hydrocarbons	2,000	–	–	–	–	–	–	–	–	–	–	–	26.6 U	–	–	–	59.1	–	28 U	**63.1**	**742**	**172**
Total TPH	2,000	–	–	–	–	–	–	–	–	–	–	–	ND	–	–	–	76.8	–	ND	**74.7**	**898**	**224.8**
Diesel-range hydrocarbons w/SGC	2,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lube oil-range hydrocarbons w/SGC	2,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total TPH w/SGC	2,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons (EPH) (mg/kg)																						
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C8-C10 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C10-C12 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C10-C12 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C12-C16 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C12-C16 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C16-C21 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C16-C21 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C21-C34 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C21-C34 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Volatile Organic Compounds (VOCs) (mg/kg)																						
1,1,1,2-Tetrachloroethane	0.0098	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,1,1-Trichloroethane	1.5	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	–	–	–	–	–	–	–	–	–	–
1,1,2,2-Tetrachloroethane	0.0012	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	–	–	–	–	–	–	–	–	–	–
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	7600	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,1,2-Trichloroethane	0.005	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,1-Dichloroethane	0.041	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,1-Dichloroethylene	0.046	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	**0.0237**	0.00837 U	–	–	–	–	–	–	–	–	–	–
1,1-Dichloropropene	NE	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,2,3-Trichlorobenzene	0.20	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,2,3-Trichloropropane	0.0000024	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	–	–	–	–	–	–	–	–	–	–
1,2,4-Trichlorobenzene	0.031	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,2,4-Trimethylbenzene	1.3	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,2-Dibromo-3-Chloropropane	0.00089	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,2-Dibromoethane	0.00027	0.000839 U	0.00096 U	0.00291 U	0.00189 U	0.0013 U	0.00156 U	0.00143 U	0.0018 U	0.00136 U	0.00204 U	0.00153 U	–	–	–	–	–	–	–	–	–	–
1,2-Dichlorobenzene	0.035	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,2-Dichloroethane	0.023	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	–	–	–	–	–	–	–	–	–	–

Location ID		GP1	GP2	GP3	GP4	GP5	GP6	GP7	GP8	GP9	GP10	GP11	GP12	GP12	GP13	GP14	GP15	GP16	GP16	GP17	GP18	GP19
Sample ID		GP1-S-1.5	GP2-S-1.0	GP3-S-2.0	GP4-S-1.5	GP5-S-1.5	GP6-S-1.0	GP7-S-2.0	GP8-S-1.5	GP9-S-2.0	GP10-S-1.5	GP11-S-2.0	GP12-S-3.0	GP12-S-5.0	GP13-S-1.0	GP14-S-3.0	GP15-S-3.0	GP16-S-1.0	GP16-S-5.0	GP17-S-1.0	GP18-S-1.0	GP19-S-1.0
Sample Date		6/7/05	6/7/05	6/9/05	6/16/05	6/16/05	6/16/05	6/16/05	6/16/05	6/17/05	6/17/05	6/17/05	12/13/05	12/13/05	12/14/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05
Start Depth (feet)		1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1	5	1	1	1
End Depth (feet)		1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1	5	1	1	1
Analyte	**Soil PCUL - Vadose**																					
1,2-Dichloropropane	0.016	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	–	–	–	–	–	–	–	–	–	–
1,3,5-Trichlorobenzene	NE	0.000839 U	0.00096 U	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,3,5-Trimethylbenzene	1.3	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,3-Dichlorobenzene	0.023	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
1,3-Dichloropropane	0.88	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	–	–	–	–	–	–	–	–	–	–
1,4-Dichlorobenzene	0.11	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
2,2-Dichloropropane	NE	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
2-Chloroethyl vinyl ether	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2-Chlorotoluene	1.9	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
2-Hexanone	0.17	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4-Chlorotoluene	NE	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
4-Isopropyltoluene	NE	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Acetone	29	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Acrolein	0.0044	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Acrylonitrile	0.00012	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Benzene	0.0088	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	–	–	–	–	–	–	–	–	–	–
Bromobenzene	0.56	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Bromochloromethane	NE	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Bromoform	0.078	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Bromomethane	0.051	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Carbon Disulfide	4.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Carbon Tetrachloride	0.0029	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	–	–	–	–	–	–	–	–	–	–
Chlorobenzene	0.86	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Chloroethane	NE	0.000839 U	0.00096 U	0.159 U	0.103 U	0.0712 U	0.085 U	0.0781 U	0.0986 U	0.0742 U	0.112 U	0.0837 U	–	–	–	–	–	–	–	–	–	–
Chloroform	0.074	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Chloromethane	NE	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
cis-1,2-Dichloroethylene	0.079	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	0.00286 U	0.00273 U	0.0119 U	0.00293 U	0.00326 U	0.00222 U	0.00255 U	0.00251 U	0.00283 U	0.0032 U
cis-1,3-Dichloropropene	0.0023	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Dibromochloromethane	0.01	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Dibromomethane	0.42	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Dichlorobromomethane	0.013	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Dichlorodifluoromethane	38	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Ethylbenzene	0.18	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Hexachlorobutadiene	0.00021	0.000839 U	0.00096 U	–	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Isopropylbenzene	15	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Methyl ethyl ketone (MEK)	20	–	–	–	–	–	–	–	–	–	–	–	0.0143 U	0.0136 U	**0.215**	0.0147 U	**0.123**	0.0111 U	0.0127 U	**0.0295**	0.0142 U	**0.0601**
Methyl Iodide	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Methyl isobutyl ketone	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Methyl tert-butyl ether	0.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Methylene Chloride	0.022	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	**0.0179**	0.00837 U	–	–	–	–	–	–	–	–	–	–
Naphthalene	0.039	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
n-Butylbenzene	14	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
n-Propylbenzene	16	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Sec-Butylbenzene	25	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Styrene	2.2	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Tert-Butylbenzene	19	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Tetrachloroethylene	0.029	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	–	–	–	–	–	–	–	–	–	–
Toluene	0.72	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
trans-1,2-Dichloroethylene	0.52	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	0.00239 U	0.00227 U	0.00989 U	0.00244 U	0.00272 U	0.00185 U	0.00212 U	0.00209 U	0.00236 U	0.00267 U
trans-1,3-Dichloropropene	0.0023	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
trans-1,4-Dichloro-2-butene	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Trichloroethylene	0.0044	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	**0.0405**	0.00781 U	0.00986 U	0.00742 U	0.0112 U	**0.0872**	0.00239 U	0.00227 U	0.00989 U	**0.00449**	0.00272 U	**0.00363**	0.00212 U	0.00209 U	**0.00343**	0.00267 U
Trichlorofluoromethane	23	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Vinyl Acetate	33	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Vinyl Chloride	0.0011	0.000839 U	0.00096 U	0.0159 U	0.0103 U	0.00712 U	0.0085 U	0.00781 U	0.00986 U	0.00742 U	0.0112 U	0.00837 U	0.00239 U	0.00227 U	0.00989 U	0.00244 U	0.00272 U	0.00185 U	0.00212 U	0.00209 U	0.00236 U	0.00267 U
Xylene, m-,p-	NE	0.00168 U	0.00192 U	0.159 U	0.103 U	0.0712 U	0.085 U	0.0781 U	0.0986 U	0.0742 U	0.112 U	0.0837 U	–	–	–	–	–	–	–	–	–	–
Xylene, o-	NE	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	–	–	–	–	–	–	–	–	–	–
Total Xylenes	0.94	0.00168 U	0.00192 U	0.159 U	0.103 U	0.0712 U	0.085 U	0.0781 U	0.0986 U	0.0742 U	0.112 U	0.0837 U	–	–	–	–	–	–	–	–	–	–
Semivolatile Compounds (SVOCs) (mg/kg)																						
1,2,4-Trichlorobenzene	0.031	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2-Dichlorobenzene	0.035	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

	Location ID	GP1	GP2	GP3	GP4	GP5	GP6	GP7	GP8	GP9	GP10	GP11	GP12	GP12	GP13	GP14	GP15	GP16	GP16	GP17	GP18	GP19
	Sample ID	GP1-S-1.5	GP2-S-1.0	GP3-S-2.0	GP4-S-1.5	GP5-S-1.5	GP6-S-1.0	GP7-S-2.0	GP8-S-1.5	GP9-S-2.0	GP10-S-1.5	GP11-S-2.0	GP12-S-3.0	GP12-S-5.0	GP13-S-1.0	GP14-S-3.0	GP15-S-3.0	GP16-S-1.0	GP16-S-5.0	GP17-S-1.0	GP18-S-1.0	GP19-S-1.0
	Sample Date	6/7/05	6/7/05	6/9/05	6/16/05	6/16/05	6/16/05	6/16/05	6/16/05	6/17/05	6/17/05	6/17/05	12/13/05	12/13/05	12/14/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05
	Start Depth (feet)	1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1	5	1	1	1
	End Depth (feet)	1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1	5	1	1	1
Analyte	**Soil PCUL - Vadose**																					
1,3-Dichlorobenzene	0.023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	0.0018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-Oxybis[1-chloropropane]	1.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	0.092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	0.069	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	0.029	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.0028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.0009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	5.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol	0.069	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.000034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	0.0027	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	0.018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	0.057	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.00022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.0036	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	0.071	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	6.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.000008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.00021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	0.00016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	0.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.00012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	0.000032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	0.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																						
1-Methylnaphthalene	0.082	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0167**	0.0124 U
2-Methylnaphthalene	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0202**	0.0124 U
Acenaphthene	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0111 U	0.0124 U
Acenaphthylene	1.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0111 U	0.0124 U
Anthracene	0.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0111 U	0.0124 U
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0235**	0.0124 U
Benzo(a)pyrene	0.00031	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0111 U	0.0124 U
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0746**	0.0124 U
Benzo(g,h,i)perylene	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0111 U	0.0124 U
Benzo(j,k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.137**	0.0247 U
Benzo(j)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.056**	0.0124 U
Benzofluoranthenes (Total)	3.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location ID		GP1	GP2	GP3	GP4	GP5	GP6	GP7	GP8	GP9	GP10	GP11	GP12	GP12	GP13	GP14	GP15	GP16	GP16	GP17	GP18	GP19
Sample ID		GP1-S-1.5	GP2-S-1.0	GP3-S-2.0	GP4-S-1.5	GP5-S-1.5	GP6-S-1.0	GP7-S-2.0	GP8-S-1.5	GP9-S-2.0	GP10-S-1.5	GP11-S-2.0	GP12-S-3.0	GP12-S-5.0	GP13-S-1.0	GP14-S-3.0	GP15-S-3.0	GP16-S-1.0	GP16-S-5.0	GP17-S-1.0	GP18-S-1.0	GP19-S-1.0
Sample Date		6/7/05	6/7/05	6/9/05	6/16/05	6/16/05	6/16/05	6/16/05	6/16/05	6/17/05	6/17/05	6/17/05	12/13/05	12/13/05	12/14/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05	12/13/05
Start Depth (feet)		1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1	5	1	1	1
End Depth (feet)		1.5	1	2	1.5	1.5	1	2	1.5	2	1.5	2	3	5	1	3	3	1	5	1	1	1
Analyte	**Soil PCUL - Vadose**																					
Chrysene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0717**	**0.0127**
Dibenzo(a,h)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0111 U	0.0124 U
Dibenzofuran	0.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	1.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.195**	**0.0245**
Fluorene	0.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0111 U	0.0124 U
Indeno(1,2,3-c,d)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0111 U	0.0124 U
Naphthalene	0.039	0.000839 U	0.00096 U	0.0795 U	0.0517 U	0.0356 U	0.0425 U	0.039 U	0.0493 U	0.0371 U	0.0558 U	0.0419 U	--	--	--	--	--	--	--	--	**0.0179**	0.0124 U
Phenanthrene	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.109**	**0.0161**
Pyrene	2.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0884**	**0.0203**
Total cPAH TEQ (ND=0.5RL)	0.00031	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.03649**	**0.01066**
Polychlorinated Biphenyls (PCBs) (mg/kg)																						
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																						
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NEtFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NMeFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	0.0018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	0.00041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic acid (PFHxA)	0.0035	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic acid (PFNA)	0.00008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.00017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location ID		GP20		GP21		GP22		GP24		GP25		GP26		GP27		GP28		GP29		GP30		GP31		GP32		HA1		HA1		HA2		HA2		HA6		HA7		HA8		HA9		HA10	
Sample ID		GP20-S-1.0		GP21-S-1.0		GP22-S-1.0		GP24-S-3.0		GP25-S-1.0		GP26-S-1.0		GP27-S-1.0		GP28-S-1.0		GP29-S-1.0		GP30-S-1.0		GP31-S-1.0		GP32-S-1.0		HA1-0.5		HA1-1.5		HA2-0.5		HA2-1.5		HA6-0.5		HA7-0.5		HA8-0.5		HA9-0.5		HA10-0.5	
Sample Date		12/14/05		12/14/05		12/13/05		12/14/05		12/12/05		12/12/05		12/12/05		12/12/05		12/12/05		12/12/05		12/12/05		12/14/05		12/15/05		12/15/05		12/15/05		12/15/05		4/18/06		4/18/06		4/18/06		4/19/06		4/19/06	
Start Depth (feet)		1		1		1		3		1		1		1		1		1		1		1		1		0.5		1.5		0.5		1.5		0.5		0.5		0.5		0.5		0.5	
End Depth (feet)		1		1		1		3		1		1		1		1		1		1		1		1		0.5		1.5		0.5		1.5		0.5		0.5		0.5		0.5		0.5	
Analyte	**Soil PCUL - Vadose**																																								
Metals (mg/kg)																																									
Antimony	5.4	1.78	U	–		–		1.63	U	–		–		–		1.63	U	1.73	U	–		1.65	U	–		1.73	U	1.65	U	2.17	U	1.84	U	–		–		–		–		–	
Arsenic	7.3	**5.47**		–		–		**3.06**		–		–		–		**1.89**		**5.91**		–		**5.72**		–		**3.81**		**2.88**	J	**3.94**		**2.71**		–		–		–		–		–	
Beryllium	63	0.592	U	–		–		0.542	U	–		–		–		0.542	U	0.577	U	–		0.549	U	–		0.576	U	0.55	U	0.723	U	0.613	U	–		–		–		–		–	
Cadmium	0.77	0.592	U	–		–		0.542	U	–		–		–		0.542	U	0.577	U	–		0.549	U	–		0.576	U	0.55	U	**0.984**		0.613	U	–		–		–		–		–	
Chromium	260	**17.6**		**25.6**		**46.8**		**30.2**		**19.3**		**23.7**		**22**		**20.5**		**29.6**		**27.2**		**19.2**		**6750**		**34.3**		**110**		**206**		**215**		–		–		–		–		–	
Chromium, Hexavalent	0.018	1.1	U	1	U	**2.9**	J	1	U	1.8	U	2.2	U	2.2	U	2.2	U	2.4	U	2.1	U	2.1	U	**3500**	J	2.9	U	**6.5**	J	**89**	J	**3.2**	J	**3.33**		**0.22**		**0.26**		**3.4**		**0.074**	
Chromium, Trivalent	548	**17.6**		**25.6**		**43.9**	J	**30.2**		**19.3**		**23.7**		**22**		**20.5**		**29.6**		**27.2**		**19.2**		**3250**	J	**34.3**		**103.5**	J	**117**	J	**211.8**	J	–		–		–		–		–	
Copper	36	**29.4**		–		–		**16.5**		–		–		–		**12.6**		**15.6**		–		**40.2**		–		**32.8**		**16.2**	J	**70.9**		**28.2**		–		–		–		–		–	
Lead	250	**10.1**		–		–		**3.09**		–		–		–		**1.54**		**18**		–		**14.2**		–		**34.6**		**15.3**	J	**81.4**		**36.5**		–		–		–		–		–	
Mercury	0.07	0.152	U	–		–		0.115	U	–		–		–		0.144	U	**0.876**		–		0.131	U	–		0.132	U	**0.328**		0.142	U	**0.232**		–		–		–		–		–	
Nickel	48	**13**		–		–		**28.5**		–		–		–		**22.5**		**27**		–		**14.4**		–		**21.3**		**24.7**	J	**36**		**31**		–		–		–		–		–	
Selenium	5.2	0.592	U	–		–		0.542	U	–		–		–		0.542	U	0.577	U	–		0.549	U	–		0.576	U	0.55	U	0.723	U	0.613	U	–		–		–		–		–	
Silver	0.32	0.592	U	–		–		0.542	U	–		–		–		0.542	U	0.577	U	–		0.549	U	–		0.576	U	0.55	U	0.723	U	0.613	U	–		–		–		–		–	
Thallium	0.088	0.592	U	–		–		0.542	U	–		–		–		0.542	U	0.577	U	–		0.549	U	–		0.576	U	0.55	U	0.723	U	0.613	U	–		–		–		–		–	
Zinc	101	**49.3**		–		–		**44.3**		–		–		–		**24.9**		**36.9**		–		**46.1**		–		**140**		**70.8**	J	**341**		**134**		–		–		–		–		–	
Total Petroleum Hydrocarbons (mg/kg)																																									
Gasoline-range hydrocarbons - HCID	30	–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–	
Diesel-range hydrocarbons - HCID	2,000	–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–	
Lube oil-range hydrocarbons - HCID	2,000	–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–	
Total TPH - HCID	2,000	–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–	
Gasoline-range hydrocarbons	30	–		–		–		–		–		–		–		–		–		–		–		–		**11.4**		6.57	U	8.2	U	4.79	U	–		–		–		–		–	
Diesel-range hydrocarbons	2,000	**198**		11.2	U	–		11.1	U	–		**36.4**		–		10.8	U	**80.4**		**14.9**		**145**		11.3	U	**210**		**37.6**		**636**		**73.8**		–		–		–		–		–	
Lube oil-range hydrocarbons	2,000	**301**		28	U	–		27.8	U	–		**121**		–		27	U	**249**		**90.5**		**1300**		28.3	U	**1170**		**182**		**3170**		**409**		–		–		–		–		–	
Total TPH	2,000	**499**		ND		–		ND		–		**157.4**		–		ND		**329.4**		**105.4**		**1445**		ND		**1380**		**219.6**		**3806**		**482.8**		–		–		–		–	
Diesel-range hydrocarbons w/SGC	2,000	–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–	
Lube oil-range hydrocarbons w/SGC	2,000	–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–	
Total TPH w/SGC	2,000	–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons (EPH) (mg/kg)																																									
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons, C8-C10 Aromatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons, C10-C12 Aliphatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons, C10-C12 Aromatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons, C12-C16 Aliphatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons, C12-C16 Aromatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons, C16-C21 Aliphatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons, C16-C21 Aromatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons, C21-C34 Aliphatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Extractable Petroleum Hydrocarbons, C21-C34 Aromatics	NE	–		–		–		–		–		–		–		–		–		–		–		–		–		–		8.9	U	–		–		–		–		–		–	
Volatile Organic Compounds (VOCs) (mg/kg)																																									
1,1,1,2-Tetrachloroethane	0.0098	–		–		–		–		–		–		–		–		–		–		–		–		0.00573	U	0.00691	U	0.0073	U	0.00461	U	–		–		–		–		–	
1,1,1-Trichloroethane	1.5	–		–		–		–		–		–		–		–		–		–		–		–		0.00287	U	0.00346	U	0.00365	U	0.0023	U	–		–		–		–		–	
1,1,2,2-Tetrachloroethane	0.0012	–		–		–		–		–		–		–		–		–		–		–		–		0.00573	U	0.00691	U	0.0073	U	0.00461	U	–		–		–		–		–	
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	7600	–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–		–	
1,1,2-Trichloroethane	0.005	–		–		–		–		–		–		–		–		–		–		–		–		0.00143	U	0.00173	U	0.00183	U	0.00115	U	–		–		–		–		–	
1,1-Dichloroethane	0.041	–		–		–		–		–		–		–		–		–		–		–		–		0.00229	U	0.00277	U	0.00292	U	0.00184	U	–		–		–		–		–	
1,1-Dichloroethylene	0.046	–		–		–		–		–		–		–		–		–		–		–		–		0.00344	U	0.00415	U	0.00438	U	0.00277	U	–		–		–		–		–	
1,1-Dichloropropene	NE	–		–		–		–		–		–		–		–		–		–		–		–		0.00573	U	0.00691	U	0.0073	U	0.00461	U	–		–		–		–		–	
1,2,3-Trichlorobenzene	0.20	–		–		–		–		–		–		–		–		–		–		–		–		0.00573	U	0.00691	U	0.0073	U	0.00461	U	–		–		–		–		–	
1,2,3-Trichloropropane	0.0000024	–		–		–		–		–		–		–		–		–		–		–		–		0.00573	U	0.00691	U	0.0073	U	0.00461	U	–		–		–		–		–	
1,2,4-Trichlorobenzene	0.031	–		–		–		–		–		–		–		–		–		–		–		–		0.00573	U	0.00691	U	0.0073	U	0.00461	U	–		–		–		–		–	
1,2,4-Trimethylbenzene	1.3	–		–		–		–		–		–		–		–		–		–		–		–		0.00573	U	0.00691	U	0.0073	U	0.00461	U	–		–		–		–		–	
1,2-Dibromo-3-Chloropropane	0.00089	–		–		–		–		–		–		–		–		–		–		–		–		0.0115	U	0.0138	U	0.0146	U	0.00922	U	–		–		–		–		–	
1,2-Dibromoethane	0.00027	–		–		–		–		–		–		–		–		–		–		–		–		0.00573	U	0.00691	U	0.0073	U	0.00461	U	–		–		–		–		–	
1,2-Dichlorobenzene	0.035	–		–		–		–		–		–		–		–		–		–		–		–		0.00573	U	0.00691	U	0.0073	U	0.00461	U	–		–		–		–		–	
1,2-Dichloroethane	0.023	–		–		–		–		–		–		–		–		–		–		–		–		0.00143	U	0.00173	U	0.00183	U	0.00115	U	–		–		–		–		–	

Location ID		GP20	GP21	GP22	GP24	GP25	GP26	GP27	GP28	GP29	GP30	GP31	GP32	HA1	HA1	HA2	HA2	HA6	HA7	HA8	HA9	HA10
Sample ID		GP20-S-1.0	GP21-S-1.0	GP22-S-1.0	GP24-S-3.0	GP25-S-1.0	GP26-S-1.0	GP27-S-1.0	GP28-S-1.0	GP29-S-1.0	GP30-S-1.0	GP31-S-1.0	GP32-S-1.0	HA1-0.5	HA1-1.5	HA2-0.5	HA2-1.5	HA6-0.5	HA7-0.5	HA8-0.5	HA9-0.5	HA10-0.5
Sample Date		12/14/05	12/14/05	12/13/05	12/14/05	12/12/05	12/12/05	12/12/05	12/12/05	12/12/05	12/12/05	12/12/05	12/14/05	12/15/05	12/15/05	12/15/05	12/15/05	4/18/06	4/18/06	4/18/06	4/19/06	4/19/06
Start Depth (feet)		1	1	1	3	1	1	1	1	1	1	1	1	0.5	1.5	0.5	1.5	0.5	0.5	0.5	0.5	0.5
End Depth (feet)		1	1	1	3	1	1	1	1	1	1	1	1	0.5	1.5	0.5	1.5	0.5	0.5	0.5	0.5	0.5
Analyte	**Soil PCUL - Vadose**																					
1,2-Dichloropropane	0.016	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
1,3,5-Trichlorobenzene	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,3,5-Trimethylbenzene	1.3	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
1,3-Dichlorobenzene	0.023	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
1,3-Dichloropropane	0.88	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
1,4-Dichlorobenzene	0.11	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
2,2-Dichloropropane	NE	–	–	–	–	–	–	–	–	–	–	–	–	0.0115 U	0.0138 U	0.0146 U	0.00922 U	–	–	–	–	–
2-Chloroethyl vinyl ether	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2-Chlorotoluene	1.9	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
2-Hexanone	0.17	–	–	–	–	–	–	–	–	–	–	–	–	0.0229 U	0.0277 U	0.0292 U	0.0184 U	–	–	–	–	–
4-Chlorotoluene	NE	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
4-Isopropyltoluene	NE	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Acetone	29	–	–	–	–	–	–	–	–	–	–	–	–	0.0344 U	0.0415 U	0.0438 U	0.0277 U	–	–	–	–	–
Acrolein	0.0044	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Acrylonitrile	0.00012	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Benzene	0.0088	–	–	–	–	–	–	–	–	–	–	–	–	0.00172 U	0.00207 U	0.00219 U	0.00138 U	–	–	–	–	–
Bromobenzene	0.56	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Bromochloromethane	NE	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Bromoform	0.078	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Bromomethane	0.051	–	–	–	–	–	–	–	–	–	–	–	–	0.0115 U	0.0138 U	0.0146 U	0.00922 U	–	–	–	–	–
Carbon Disulfide	4.1	–	–	–	–	–	–	–	–	–	–	–	–	0.00344 U	0.00415 U	0.00438 U	0.00277 U	–	–	–	–	–
Carbon Tetrachloride	0.0029	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Chlorobenzene	0.86	–	–	–	–	–	–	–	–	–	–	–	–	0.00229 U	0.00277 U	0.00292 U	0.00184 U	–	–	–	–	–
Chloroethane	NE	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Chloroform	0.074	–	–	–	–	–	–	–	–	–	–	–	–	0.00287 U	0.00346 U	0.00365 U	0.0023 U	–	–	–	–	–
Chloromethane	NE	–	–	–	–	–	–	–	–	–	–	–	–	0.0115 U	0.0138 U	0.0146 U	0.00922 U	–	–	–	–	–
cis-1,2-Dichloroethylene	0.079	0.00315 U	0.00261 U	0.00272 U	0.00309 U	0.00256 U	0.00241 U	0.00263 U	0.00224 U	**0.00494**	0.00287 U	0.00242 U	0.00284 U	0.00344 U	0.00415 U	0.00438 U	0.00277 U	–	–	–	–	–
cis-1,3-Dichloropropene	0.0023	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Dibromochloromethane	0.01	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Dibromomethane	0.42	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Dichlorobromomethane	0.013	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Dichlorodifluoromethane	38	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Ethylbenzene	0.18	–	–	–	–	–	–	–	–	–	–	–	–	0.00458 U	0.00553 U	0.00584 U	0.00369 U	–	–	–	–	–
Hexachlorobutadiene	0.00021	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Isopropylbenzene	15	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Methyl ethyl ketone (MEK)	20	**0.0217**	0.0131 U	0.0136 U	0.0155 U	0.0128 U	0.0121 U	0.0132 U	0.0112 U	0.0148 U	**0.0169**	0.0121 U	0.0142 U	0.0172 U	0.0207 U	0.0219 U	0.0138 U	–	–	–	–	–
Methyl Iodide	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Methyl isobutyl ketone	2.7	–	–	–	–	–	–	–	–	–	–	–	–	0.0229 U	0.0277 U	0.0292 U	0.0184 U	–	–	–	–	–
Methyl tert-butyl ether	0.1	–	–	–	–	–	–	–	–	–	–	–	–	0.00115 U	0.00138 U	0.00146 U	0.000922 U	–	–	–	–	–
Methylene Chloride	0.022	–	–	–	–	–	–	–	–	–	–	–	–	0.00401 U	0.00484 U	0.00511 U	0.00323 U	–	–	–	–	–
Naphthalene	0.039	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
n-Butylbenzene	14	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
n-Propylbenzene	16	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Sec-Butylbenzene	25	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Styrene	2.2	–	–	–	–	–	–	–	–	–	–	–	–	0.00115 U	0.00138 U	0.00146 U	0.000922 U	–	–	–	–	–
Tert-Butylbenzene	19	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Tetrachloroethylene	0.029	–	–	–	–	–	–	–	–	–	–	–	–	0.00229 U	0.00277 U	0.00292 U	0.00184 U	–	–	–	–	–
Toluene	0.72	–	–	–	–	–	–	–	–	–	–	–	–	0.00172 U	0.00207 U	0.00219 U	0.00138 U	–	–	–	–	–
trans-1,2-Dichloroethylene	0.52	0.00262 U	0.00218 U	0.00226 U	0.00258 U	0.00213 U	0.00201 U	0.00219 U	0.00187 U	0.00247 U	0.00239 U	0.00202 U	0.00237 U	0.00287 U	0.00346 U	0.00365 U	0.0023 U	–	–	–	–	–
trans-1,3-Dichloropropene	0.0023	–	–	–	–	–	–	–	–	–	–	–	–	0.00143 U	0.00173 U	0.00183 U	0.00115 U	–	–	–	–	–
trans-1,4-Dichloro-2-butene	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Trichloroethylene	0.0044	0.00262 U	0.00218 U	0.00226 U	0.00258 U	0.00213 U	0.00201 U	0.00219 U	0.00187 U	0.00247 U	0.00239 U	0.00202 U	0.00237 U	0.00287 U	0.00346 U	0.00365 U	0.0023 U	–	–	–	–	–
Trichlorofluoromethane	23	–	–	–	–	–	–	–	–	–	–	–	–	0.00573 U	0.00691 U	0.0073 U	0.00461 U	–	–	–	–	–
Vinyl Acetate	33	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Vinyl Chloride	0.0011	0.00262 U	0.00218 U	0.00226 U	0.00258 U	0.00213 U	0.00201 U	0.00219 U	0.00187 U	0.00247 U	0.00239 U	0.00202 U	0.00237 U	0.00287 U	0.00346 U	0.00365 U	0.0023 U	–	–	–	–	–
Xylene, m-,p-	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Xylene, o-	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total Xylenes	0.94	–	–	–	–	–	–	–	–	–	–	–	–	0.0115 U	0.0138 U	0.0146 U	0.00922 U	–	–	–	–	–
Semivolatile Compounds (SVOCs) (mg/kg)																						
1,2,4-Trichlorobenzene	0.031	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2-Dichlorobenzene	0.035	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

	Location ID	GP20	GP21	GP22	GP24	GP25	GP26	GP27	GP28	GP29	GP30	GP31	GP32	HA1	HA1	HA2	HA2	HA6	HA7	HA8	HA9	HA10
	Sample ID	GP20-S-1.0	GP21-S-1.0	GP22-S-1.0	GP24-S-3.0	GP25-S-1.0	GP26-S-1.0	GP27-S-1.0	GP28-S-1.0	GP29-S-1.0	GP30-S-1.0	GP31-S-1.0	GP32-S-1.0	HA1-0.5	HA1-1.5	HA2-0.5	HA2-1.5	HA6-0.5	HA7-0.5	HA8-0.5	HA9-0.5	HA10-0.5
	Sample Date	12/14/05	12/14/05	12/13/05	12/14/05	12/12/05	12/12/05	12/12/05	12/12/05	12/12/05	12/12/05	12/12/05	12/14/05	12/15/05	12/15/05	12/15/05	12/15/05	4/18/06	4/18/06	4/18/06	4/19/06	4/19/06
	Start Depth (feet)	1	1	1	3	1	1	1	1	1	1	1	1	0.5	1.5	0.5	1.5	0.5	0.5	0.5	0.5	0.5
	End Depth (feet)	1	1	1	3	1	1	1	1	1	1	1	1	0.5	1.5	0.5	1.5	0.5	0.5	0.5	0.5	0.5
Analyte	**Soil PCUL - Vadose**																					
1,3-Dichlorobenzene	0.023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	0.0018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-Oxybis[1-chloropropane]	1.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	0.092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	0.069	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	0.029	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.0028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.0009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	5.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol	0.069	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.000034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	0.0027	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	0.018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	0.057	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.00022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.0036	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	0.071	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	6.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.000008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.00021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	0.00016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	0.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.00012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	0.000032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	0.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																						
1-Methylnaphthalene	0.082	0.012 U	--	--	--	--	--	--	--	0.0119 U	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
2-Methylnaphthalene	0.67	0.012 U	--	--	--	--	--	--	--	0.0119 U	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Acenaphthene	0.5	0.012 U	--	--	--	--	--	--	--	0.0119 U	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Acenaphthylene	1.3	0.012 U	--	--	--	--	--	--	--	0.0119 U	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Anthracene	0.96	0.012 U	--	--	--	--	--	--	--	**0.0137**	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Benzo(a)anthracene	NE	0.012 U	--	--	--	--	--	--	--	**0.075**	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Benzo(a)pyrene	0.00031	0.012 U	--	--	--	--	--	--	--	**0.0571**	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Benzo(b)fluoranthene	NE	0.012 U	--	--	--	--	--	--	--	**0.0611**	--	0.0117 U	--	0.0151 U	0.0129 U	**0.0222**	**0.0204**	--	--	--	--	--
Benzo(g,h,i)perylene	0.67	0.012 U	--	--	--	--	--	--	--	**0.0249**	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Benzo(j,k)fluoranthene	NE	--	--	--	--	--	--	--	--	**0.123**	--	0.0233 U	--	--	--	--	--	--	--	--	--	--
Benzo(j)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	0.012 U	--	--	--	--	--	--	--	**0.0703**	--	0.0117 U	--	0.0151 U	0.0129 U	**0.0205**	**0.0151**	--	--	--	--	--
Benzofluoranthenes (Total)	3.2	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--

Location ID		GP20	GP21	GP22	GP24	GP25	GP26	GP27	GP28	GP29	GP30	GP31	GP32	HA1	HA1	HA2	HA2	HA6	HA7	HA8	HA9	HA10
Sample ID		GP20-S-1.0	GP21-S-1.0	GP22-S-1.0	GP24-S-3.0	GP25-S-1.0	GP26-S-1.0	GP27-S-1.0	GP28-S-1.0	GP29-S-1.0	GP30-S-1.0	GP31-S-1.0	GP32-S-1.0	HA1-0.5	HA1-1.5	HA2-0.5	HA2-1.5	HA6-0.5	HA7-0.5	HA8-0.5	HA9-0.5	HA10-0.5
Sample Date		12/14/05	12/14/05	12/13/05	12/14/05	12/12/05	12/12/05	12/12/05	12/12/05	12/12/05	12/12/05	12/12/05	12/14/05	12/15/05	12/15/05	12/15/05	12/15/05	4/18/06	4/18/06	4/18/06	4/19/06	4/19/06
Start Depth (feet)		1	1	1	3	1	1	1	1	1	1	1	1	0.5	1.5	0.5	1.5	0.5	0.5	0.5	0.5	0.5
End Depth (feet)		1	1	1	3	1	1	1	1	1	1	1	1	0.5	1.5	0.5	1.5	0.5	0.5	0.5	0.5	0.5
Analyte	**Soil PCUL - Vadose**																					
Chrysene	NE	0.012 U	--	--	--	--	--	--	--	**0.122**	--	**0.034**	--	0.0151 U	0.0129 U	**0.0276**	**0.0179**	--	--	--	--	--
Dibenzo(a,h)anthracene	NE	0.012 U	--	--	--	--	--	--	--	**0.0162**	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Dibenzofuran	0.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	1.7	0.012 U	--	--	--	--	--	--	--	**0.149**	--	**0.0253**	--	**0.0196**	0.0129 U	**0.0455**	**0.0329**	--	--	--	--	--
Fluorene	0.54	0.012 U	--	--	--	--	--	--	--	0.0119 U	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	0.012 U	--	--	--	--	--	--	--	**0.026**	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Naphthalene	0.039	0.012 U	--	--	--	--	--	--	--	0.0119 U	--	0.0117 U	--	0.0151 U	0.0129 U	0.0176 U	0.0125 U	--	--	--	--	--
Phenanthrene	1.5	0.012 U	--	--	--	--	--	--	--	**0.0382**	--	**0.0153**	--	0.0151 U	0.0129 U	**0.018**	0.0125 U	--	--	--	--	--
Pyrene	2.6	0.012 U	--	--	--	--	--	--	--	**0.156**	--	**0.0254**	--	0.0151 U	0.0129 U	**0.0334**	**0.024**	--	--	--	--	--
Total cPAH TEQ (ND=0.5RL)	0.00031	0.00906 U	--	--	--	--	--	--	--	**0.09548**	--	**0.01028**	--	0.0114 U	0.00974 U	**0.01599**	**0.01185**	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																						
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																						
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NEtFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NMeFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	0.0018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	0.00041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic acid (PFHxA)	0.0035	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic acid (PFNA)	0.00008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.00017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location ID		HA11	HA12	HA26	HA27	HA28	HA29	SB3	SB-20	SB-21	SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-29	SB-30	SB-31	SB-33	SB-34
Sample ID		HA11-0.5	HA12-0.5	HA26-1	HA27-1	HA28-1	HA29-1	SB3-2	SB-20-2-3	SB-21-3-4	SB-22-0.5-1.5	SB-23-1.5-2.5	SB-24-3-4	SB-25-3.5-4.5	SB-26-3-4	SB-27-3-4	SB-28-2.5-3	SB-29-0-2	SB-30-3-4	SB-31-2-3	SB-33-2-3	SB34-2-3
Sample Date		4/19/06	4/19/06	9/22/23	9/22/23	9/22/23	9/22/23	8/8/14	3/8/22	3/7/22	3/10/22	3/9/22	3/8/22	3/8/22	3/7/22	3/7/22	3/7/22	3/10/22	3/9/22	3/9/22	3/9/22	6/2/23
Start Depth (feet)		0.5	0.5	1	0.5	0.5	1	2	2	3	0.5	1.5	3	3.5	3	3	2.5	0	3	2	2	2
End Depth (feet)		0.5	0.5	1.5	1	1	1.5	2	3	4	1.5	2.5	4	4.5	4	4	3	2	4	3	3	3
Analyte	**Soil PCUL - Vadose**																					
Metals (mg/kg)																						
Antimony	5.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Arsenic	7.3	–	**9**	**9.38**	**7.27**	**9.87**	**3.93**	–	**2.59**	**2.9**	**3.04**	**9.93**	**2.88**	**3.64**	**2.91**	**3.35**	**8.5**	**1.86**	**8.08**	**9.51**	**5.96**	**2.5**
Beryllium	63	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cadmium	0.77	–	**0.48 JB**	**0.29**	**0.38**	**0.36**	**0.17**	–	**0.07 J**	**0.12**	**0.07 J**	**0.54**	**0.06 J**	**0.07 J**	**0.07 J**	**0.1 J**	**0.39**	**0.05 J**	**0.54**	**0.13**	**0.16**	**0.08 J**
Chromium	260	–	**46 B**	**24.6**	**24.5**	**30.2**	**20.4**	–	**21**	**39.2**	**23.5**	**20.3**	**23.4**	**20.2**	**22.6**	**23**	**23.8**	**22.3**	**18.5**	**20.7**	**465**	**21.2**
Chromium, Hexavalent	0.018	**0.45**	–	0.564 UJ	0.529 U	0.574 U	0.53 U	–	0.538 UJ	0.575 UJ	0.576 U	0.624 UJ	0.54 UJ	0.574 UJ	0.524 U	0.569 U	0.627 U	0.557 U	0.575 U	0.591 U	**83.6**	0.527 U
Chromium, Trivalent	548	–	–	**24.6**	**24.5**	**30.2**	**20.4**	–	**21**	**39.2**	**23.5**	**20.3**	**23.4**	**20.2**	**22.6**	**23**	**23.8**	**22.3**	**18.5**	**20.7**	**381.4**	**21.2**
Copper	36	–	**39 B**	**31.8**	**49.2**	**45.3**	**14.8**	–	**12.5**	**23.8**	**14.4**	**29.5**	**11.8**	**12.6**	**12.2**	**14**	**30**	**11.1**	**31.1**	**29.4**	**18.2**	**11.8**
Lead	250	–	**220 B**	**78.5**	**71.6**	**82.7**	**12**	–	**2.13**	**3.92**	**2.7**	**16.9**	**2.09**	**2.68**	**2.34**	**2.85**	**16.6**	**2.1**	**130**	**17.8**	**3.24**	**2.18**
Mercury	0.07	–	–	**0.222**	**0.0493**	**0.195**	**0.0855**	–	**0.0163 J**	**0.0292**	**0.0253**	**0.0781**	**0.0118 J**	**0.012 J**	**0.00649 J**	**0.0178 J**	**0.095**	**0.022**	**0.0848**	**0.114**	**0.047**	**0.0126 J**
Nickel	48	–	–	**27.5**	**25.3**	**35.3**	**26.1**	–	**26.7**	**46.8**	**32.1**	**18.2**	**31.9**	**32**	**29.5**	**28.3**	**20.4**	**26.2**	**19.6**	**17.6**	**37.7**	**27.3**
Selenium	5.2	–	–	**0.8**	**0.58**	**0.72**	**0.55**	–	**0.69**	**1.06**	**0.62**	**0.89**	**0.64**	**0.61**	**0.82**	**0.72**	**0.95**	**0.5 J**	**0.62**	**0.95**	**0.71**	**0.95**
Silver	0.32	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Thallium	0.088	–	–	–	–	–	–	–	**0.05 J**	**0.1 J**	**0.07 J**	**0.1 J**	**0.05 J**	**0.07 J**	**0.06 J**	**0.08 J**	**0.1 J**	**0.05 J**	**0.07 J**	**0.08 J**	**0.08 J**	–
Zinc	101	–	–	**105**	**109**	**111**	**58.3**	–	**32.3**	**60.6**	**37.9**	**60.7**	**33.2**	**37.3**	**34.8**	**43.1**	**61**	**32.4**	**83.8**	**53.7**	**41.2**	**31.2**
Total Petroleum Hydrocarbons (mg/kg)																						
Gasoline-range hydrocarbons - HCID	30	–	–	11 U	11 U	12 U	11 U	–	11 U	12 U	12 U	13 U	11 U	12 U	11 U	11 U	13 U	11 U	–	–	11 U	11 U
Diesel-range hydrocarbons - HCID	2,000	–	–	28 U	27 U	30 U	27 U	–	27 U	29 U	29 U	32 U	28 U	29 U	27 U	28 U	32 U	28 U	–	–	28 U	27 U
Lube oil-range hydrocarbons - HCID	2,000	–	–	56 U	54 U	61 U	54 U	–	54 U	58 U	58 U	63 U	56 U	58 U	54 U	57 U	**64**	56 U	–	–	55 U	54 U
Total TPH - HCID	2,000	–	–	ND	ND	ND	ND	–	ND	ND	ND	ND	ND	ND	ND	ND	**64**	ND	–	–	ND	ND
Gasoline-range hydrocarbons	30	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5.44 U	5.58 U	–	–
Diesel-range hydrocarbons	2,000	–	–	–	–	–	–	**10000**	–	–	–	–	–	–	–	–	**26**	–	**28.1**	**36.2**	–	–
Lube oil-range hydrocarbons	2,000	–	–	–	–	–	–	**12000**	–	–	–	–	–	–	–	–	**129**	–	**186**	**161**	–	–
Total TPH	2,000	–	–	–	–	–	–	**22000**	–	–	–	–	–	–	–	–	**155**	–	**214.1**	**197.2**	–	–
Diesel-range hydrocarbons w/SGC	2,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lube oil-range hydrocarbons w/SGC	2,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total TPH w/SGC	2,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons (EPH) (mg/kg)																						
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C8-C10 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C10-C12 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C10-C12 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C12-C16 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C12-C16 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C16-C21 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C16-C21 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C21-C34 Aliphatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Extractable Petroleum Hydrocarbons, C21-C34 Aromatics	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Volatile Organic Compounds (VOCs) (mg/kg)																						
1,1,1,2-Tetrachloroethane	0.0098	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,1,1-Trichloroethane	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,1,2,2-Tetrachloroethane	0.0012	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	7600	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00112 U	–	–	0.00126 U	–
1,1,2-Trichloroethane	0.005	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,1-Dichloroethane	0.041	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,1-Dichloroethylene	0.046	–	–	0.00102 U	0.0008 U	0.00095 U	0.00074 U	–	0.00061 U	0.00095 U	0.001 U	0.00089 U	0.00092 U	0.00072 U	0.00066 U	0.00068 U	0.00092 U	0.00056 U	0.00079 U	0.00077 U	0.00063 U	0.00094 U
1,1-Dichloropropene	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,2,3-Trichlorobenzene	0.20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
1,2,3-Trichloropropane	0.0000024	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00112 U	–	–	0.00126 U	–
1,2,4-Trichlorobenzene	0.031	–	–	–	–	–	–	–	0.00305 U	0.00474 U	0.00499 U	0.00446 U	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
1,2,4-Trimethylbenzene	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,2-Dibromo-3-Chloropropane	0.00089	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
1,2-Dibromoethane	0.00027	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,2-Dichlorobenzene	0.035	–	–	–	–	–	–	–	0.00061 U	0.00095 U	0.001 U	0.00089 U	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,2-Dichloroethane	0.023	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–

	Location ID	HA11	HA12	HA26	HA27	HA28	HA29	SB3	SB-20	SB-21	SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-29	SB-30	SB-31	SB-33	SB-34
	Sample ID	HA11-0.5	HA12-0.5	HA26-1	HA27-1	HA28-1	HA29-1	SB3-2	SB-20-2-3	SB-21-3-4	SB-22-0.5-1.5	SB-23-1.5-2.5	SB-24-3-4	SB-25-3.5-4.5	SB-26-3-4	SB-27-3-4	SB-28-2.5-3	SB-29-0-2	SB-30-3-4	SB-31-2-3	SB-33-2-3	SB34-2-3
	Sample Date	4/19/06	4/19/06	9/22/23	9/22/23	9/22/23	9/22/23	8/8/14	3/8/22	3/7/22	3/10/22	3/9/22	3/8/22	3/8/22	3/7/22	3/7/22	3/7/22	3/10/22	3/9/22	3/9/22	3/9/22	6/2/23
	Start Depth (feet)	0.5	0.5	1	0.5	0.5	1	2	2	3	0.5	1.5	3	3.5	3	3	2.5	0	3	2	2	2
	End Depth (feet)	0.5	0.5	1.5	1	1	1.5	2	3	4	1.5	2.5	4	4.5	4	4	3	2	4	3	3	3
Analyte	**Soil PCUL - Vadose**																					
1,2-Dichloropropane	0.016	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,3,5-Trichlorobenzene	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,3,5-Trimethylbenzene	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,3-Dichlorobenzene	0.023	–	–	–	–	–	–	–	0.00061 U	0.00095 U	**0.0004 J**	0.00089 U	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,3-Dichloropropane	0.88	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
1,4-Dichlorobenzene	0.11	–	–	–	–	–	–	–	0.00061 U	0.00095 U	**0.00182**	0.00089 U	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
2,2-Dichloropropane	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
2-Chloroethyl vinyl ether	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
2-Chlorotoluene	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
2-Hexanone	0.17	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
4-Chlorotoluene	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
4-Isopropyltoluene	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Acetone	29	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**0.044**	–	–	**0.363**	–
Acrolein	0.0044	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
Acrylonitrile	0.00012	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
Benzene	0.0088	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	**0.00032 J**	–
Bromobenzene	0.56	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Bromochloromethane	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Bromoform	0.078	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Bromomethane	0.051	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Carbon Disulfide	4.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**0.00113**	–	–	**0.00029 J**	–
Carbon Tetrachloride	0.0029	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Chlorobenzene	0.86	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Chloroethane	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00112 U	–	–	0.00126 U	–
Chloroform	0.074	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Chloromethane	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
cis-1,2-Dichloroethylene	0.079	–	–	0.00102 U	0.0008 U	0.00095 U	0.00074 U	–	0.00061 U	0.00095 U	0.001 U	0.00089 U	**0.00478**	**0.0278**	0.00066 U	0.00068 U	**0.00036 J**	0.00056 U	0.00079 U	0.00077 U	**0.00087**	0.00094 U
cis-1,3-Dichloropropene	0.0023	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Dibromochloromethane	0.01	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Dibromomethane	0.42	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Dichlorobromomethane	0.013	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Dichlorodifluoromethane	38	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Ethylbenzene	0.18	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Hexachlorobutadiene	0.00021	–	–	–	–	–	–	–	0.00305 U	0.00474 U	0.00499 U	0.00446 U	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
Isopropylbenzene	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Methyl ethyl ketone (MEK)	20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	**0.00848**	–
Methyl Iodide	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Methyl isobutyl ketone	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
Methyl tert-butyl ether	0.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Methylene Chloride	0.022	–	–	**0.00624**	**0.0436**	**0.00479**	**0.0801**	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	0.00472 U
Naphthalene	0.039	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
n-Butylbenzene	14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
n-Propylbenzene	16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Sec-Butylbenzene	25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Styrene	2.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Tert-Butylbenzene	19	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Tetrachloroethylene	0.029	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	**0.00019 J**	–
Toluene	0.72	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
trans-1,2-Dichloroethylene	0.52	–	–	0.00102 U	0.0008 U	0.00095 U	0.00074 U	–	0.00061 U	0.00095 U	0.001 U	0.00089 U	0.00092 U	0.00072 U	0.00066 U	0.00068 U	0.00092 U	0.00056 U	0.00079 U	0.00077 U	0.00063 U	0.00094 U
trans-1,3-Dichloropropene	0.0023	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
trans-1,4-Dichloro-2-butene	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
Trichloroethylene	0.0044	–	–	0.00102 U	0.0008 U	0.00095 U	0.00074 U	–	0.00061 U	0.00095 U	0.001 U	0.00089 U	**0.00914**	**0.0172**	0.00066 U	0.00068 U	0.00092 U	0.00056 U	0.00079 U	0.00077 U	**0.00973**	0.00094 U
Trichlorofluoromethane	23	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00112 U	–	–	0.00126 U	–
Vinyl Acetate	33	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0028 U	–	–	0.00316 U	–
Vinyl Chloride	0.0011	–	–	0.00102 U	0.0008 U	0.00095 U	0.00074 U	–	0.00061 U	0.00095 U	0.001 U	0.00089 U	0.00092 U	0.00072 U	0.00066 U	0.00068 U	0.00092 U	0.00056 U	0.00079 U	0.00077 U	0.00063 U	0.00094 U
Xylene, m-,p-	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00112 U	–	–	0.00126 U	–
Xylene, o-	NE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00056 U	–	–	0.00063 U	–
Total Xylenes	0.94	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00112 U	–	–	0.00126 U	–
Semivolatile Compounds (SVOCs) (mg/kg)																						
1,2,4-Trichlorobenzene	0.031	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.02 U	–	–	0.0199 U	–
1,2-Dichlorobenzene	0.035	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.02 U	–	–	0.0199 U	–

	Location ID	HA11	HA12	HA26	HA27	HA28	HA29	SB3	SB-20	SB-21	SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-29	SB-30	SB-31	SB-33	SB-34
	Sample ID	HA11-0.5	HA12-0.5	HA26-1	HA27-1	HA28-1	HA29-1	SB3-2	SB-20-2-3	SB-21-3-4	SB-22-0.5-1.5	SB-23-1.5-2.5	SB-24-3-4	SB-25-3.5-4.5	SB-26-3-4	SB-27-3-4	SB-28-2.5-3	SB-29-0-2	SB-30-3-4	SB-31-2-3	SB-33-2-3	SB34-2-3
	Sample Date	4/19/06	4/19/06	9/22/23	9/22/23	9/22/23	9/22/23	8/8/14	3/8/22	3/7/22	3/10/22	3/9/22	3/8/22	3/8/22	3/7/22	3/7/22	3/7/22	3/10/22	3/9/22	3/9/22	3/9/22	6/2/23
	Start Depth (feet)	0.5	0.5	1	0.5	0.5	1	2	2	3	0.5	1.5	3	3.5	3	3	2.5	0	3	2	2	2
	End Depth (feet)	0.5	0.5	1.5	1	1	1.5	2	3	4	1.5	2.5	4	4.5	4	4	3	2	4	3	3	3
Analyte	**Soil PCUL - Vadose**																					
1,3-Dichlorobenzene	0.023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
1,4-Dichlorobenzene	0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
1,4-Dioxane	0.0018	--	--	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	--	--	0.334 U	--	--	0.0199 U	0.335 U
2,2'-Oxybis[1-chloropropane]	1.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
2,4,5-Trichlorophenol	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
2,4,6-Trichlorophenol	0.092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
2,4-Dichlorophenol	0.069	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
2,4-Dimethylphenol	0.029	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
2,4-Dinitrophenol	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	0.199 U	--
2,4-Dinitrotoluene	0.0028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
2,6-Dinitrotoluene	0.0009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
2-Chloronaphthalene	5.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
2-Chlorophenol	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
2-methylphenol	0.069	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
2-Nitroaniline	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
3,3'-Dichlorobenzidine	0.000034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
4,6-Dinitro-2-Methylphenol	0.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	0.199 U	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
4-Chloro-3-Methylphenol	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
4-Chloroaniline	0.0027	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0499 U	--	--	0.0499 U	--
4-methylphenol	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
4-Nitroaniline	0.018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
Benzoic Acid	0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	0.199 U	--
Benzyl Alcohol	0.057	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Bis(2-Chloroethyl)Ether	0.00022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0499 U	--	--	0.0499 U	--
Bis(2-Ethylhexyl) Phthalate	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0591**	--	--	0.0499 U	--
Butyl benzyl Phthalate	0.0036	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Dibutyl Phthalate	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Diethyl Phthalate	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0499 U	--	--	0.0499 U	--
Dimethyl Phthalate	0.071	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Di-N-Octyl Phthalate	6.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Hexachlorobenzene	0.000008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Hexachlorobutadiene	0.00021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Hexachlorocyclopentadiene	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
Hexachloroethane	0.00016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Isophorone	0.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Nitrobenzene	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
N-Nitrosodi-n-propylamine	0.00012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
N-Nitrosodiphenylamine	0.028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Pentachlorophenol	0.000032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0998 U	--	--	0.0997 U	--
Phenol	0.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.013 J**	--	--	0.0199 U	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																						
1-Methylnaphthalene	0.082	--	--	**0.00915**	**0.0197**	**0.00809**	**0.00107 J**	--	--	--	--	**0.0205**	--	--	**0.0091**	--	--	**0.0012 J**	--	--	**0.00054 J**	**0.00052 J**
2-Methylnaphthalene	0.67	--	--	**0.00876**	**0.0186**	**0.00781**	0.005 U	--	--	--	--	**0.0258**	--	--	**0.0136**	--	--	**0.00166 J**	--	--	0.00499 U	0.00497 U
Acenaphthene	0.5	--	--	**0.00298 J**	**0.0041 J**	**0.00259 J**	0.005 U	--	--	--	--	**0.00881**	--	--	0.00499 U	--	--	**0.00119 J**	--	--	0.00499 U	0.00497 U
Acenaphthylene	1.3	--	--	**0.00335 J**	**0.00317 J**	**0.00289 J**	0.005 U	--	--	--	--	**0.00366 J**	--	--	0.00499 U	--	--	0.00499 U	--	--	0.00499 U	0.00497 U
Anthracene	0.96	--	--	**0.00491 J**	**0.00595**	**0.00348 J**	**0.00093 J**	--	--	--	--	**0.00994**	--	--	0.00499 U	--	--	**0.00175 J**	--	--	**0.00105 J**	0.00497 U
Benzo(a)anthracene	NE	--	--	**0.0185**	**0.0275**	**0.0195**	**0.00296 J**	--	--	--	--	**0.0147**	--	--	0.00499 U	--	--	**0.00244 J**	--	--	**0.00379 J**	0.00497 U
Benzo(a)pyrene	0.00031	--	--	**0.0273**	**0.0333**	**0.0224**	**0.00455 J**	--	--	--	--	**0.0109**	--	--	**0.00085 J**	--	--	**0.00245 J**	--	--	**0.00257 J**	0.00497 U
Benzo(b)fluoranthene	NE	--	--	**0.0298**	**0.0352**	**0.0282**	**0.00662**	--	--	--	--	**0.0141**	--	--	0.00499 U	--	--	**0.00349 J**	--	--	**0.00692**	0.00497 U
Benzo(g,h,i)perylene	0.67	--	--	**0.0338**	**0.0349**	**0.0293**	**0.0067**	--	--	--	--	**0.0126**	--	--	**0.00177 J**	--	--	**0.0028 J**	--	--	**0.0039 J**	0.00497 U
Benzo(j,k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(j)fluoranthene	NE	--	--	**0.017**	**0.0214**	**0.0143**	**0.00326 J**	--	--	--	--	**0.00649**	--	--	0.00499 U	--	--	**0.00161 J**	--	--	**0.00315 J**	0.00497 U
Benzo(k)fluoranthene	NE	--	--	**0.0141**	**0.0182**	**0.0147**	**0.00302 J**	--	--	--	--	**0.00715**	--	--	0.00499 U	--	--	**0.00176 J**	--	--	**0.00391 J**	0.00497 U
Benzofluoranthenes (Total)	3.2	--	--	**0.0638**	**0.0753**	**0.0627**	**0.0131**	--	--	--	--	**0.0278**	--	--	0.00998 U	--	--	**0.0069 J**	--	--	**0.0144**	0.00994 U

Location ID		HA11	HA12	HA26	HA27	HA28	HA29	SB3	SB-20	SB-21	SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-29	SB-30	SB-31	SB-33	SB-34
Sample ID		HA11-0.5	HA12-0.5	HA26-1	HA27-1	HA28-1	HA29-1	SB3-2	SB-20-2-3	SB-21-3-4	SB-22-0.5-1.5	SB-23-1.5-2.5	SB-24-3-4	SB-25-3.5-4.5	SB-26-3-4	SB-27-3-4	SB-28-2.5-3	SB-29-0-2	SB-30-3-4	SB-31-2-3	SB-33-2-3	SB34-2-3
Sample Date		4/19/06	4/19/06	9/22/23	9/22/23	9/22/23	9/22/23	8/8/14	3/8/22	3/7/22	3/10/22	3/9/22	3/8/22	3/8/22	3/7/22	3/7/22	3/7/22	3/10/22	3/9/22	3/9/22	3/9/22	6/2/23
Start Depth (feet)		0.5	0.5	1	0.5	0.5	1	2	2	3	0.5	1.5	3	3.5	3	3	2.5	0	3	2	2	2
End Depth (feet)		0.5	0.5	1.5	1	1	1.5	2	3	4	1.5	2.5	4	4.5	4	4	3	2	4	3	3	3
Analyte	**Soil PCUL - Vadose**																					
Chrysene	NE	--	--	**0.0333**	**0.045**	**0.0298**	**0.0057**	--	--	--	--	**0.0231**	--	--	**0.0015 J**	--	--	**0.00476 J**	--	--	**0.00821**	0.00497 U
Dibenzo(a,h)anthracene	NE	--	--	**0.00753**	**0.00897**	**0.0074**	**0.00133 J**	--	--	--	--	**0.00251 J**	--	--	**0.0009 J**	--	--	**0.00112 J**	--	--	**0.00168 J**	0.00497 U
Dibenzofuran	0.54	--	--	**0.00332 J**	**0.00811**	**0.0026 J**	0.005 U	--	--	--	--	**0.0116**	--	--	0.00499 U	--	--	**0.00166 J**	--	--	0.00499 U	0.00497 U
Fluoranthene	1.7	--	--	**0.0446**	**0.051**	**0.0402**	**0.00759**	--	--	--	--	**0.0393**	--	--	0.00499 U	--	--	**0.00549**	--	--	**0.00725**	**0.00074 J**
Fluorene	0.54	--	--	**0.00106 J**	**0.00239 J**	**0.00096 J**	0.005 U	--	--	--	--	**0.00517**	--	--	0.00499 U	--	--	**0.00148 J**	--	--	0.00499 U	0.00497 U
Indeno(1,2,3-c,d)pyrene	NE	--	--	**0.0234**	**0.0267**	**0.0198**	**0.00427 J**	--	--	--	--	**0.0103**	--	--	0.00499 U	--	--	**0.00243 J**	--	--	**0.00439 J**	0.00497 U
Naphthalene	0.039	--	--	**0.00876**	**0.012**	**0.00567**	0.005 U	--	--	--	--	**0.0347**	--	--	**0.00503**	--	--	**0.00179 J**	--	--	0.00499 U	0.00497 U
Phenanthrene	1.5	--	--	**0.0224**	**0.0415**	**0.0199**	**0.00387 J**	--	--	--	--	**0.0439**	--	--	0.00499 U	--	--	**0.00564**	--	--	**0.00454 J**	**0.00115 J**
Pyrene	2.6	--	--	**0.0551**	**0.072**	**0.0511**	**0.00796**	--	--	--	--	**0.0474**	--	--	0.00499 U	--	--	**0.00576**	--	--	**0.00611**	0.00497 U
Total cPAH TEQ (ND=0.5RL)	0.00031	--	--	**0.04335**	**0.05294**	**0.03793**	**0.00774 J**	--	--	--	--	**0.01879**	--	--	**0.00245**	--	--	**0.00431**	--	--	**0.00616**	0.00425 U
Polychlorinated Biphenyls (PCBs) (mg/kg)																						
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0148 J**	--	--	0.0199 U	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 U	--	--	0.0199 U	--
Total PCB Aroclors	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0148 J**	--	--	0.0199 U	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																						
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
6:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
8:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
NEtFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.00019 J**	--	--	**0.00015 J**	--
NMeFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
N-methylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	**0.000083 J**	--
Perfluorobutanesulfonic acid (PFBS)	0.0018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorodecanoic acid (PFDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorododecanoic acid (PFDoA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluoroheptanoic acid (PFHpA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorohexanesulfonic acid (PFHxS)	0.00041	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorohexanoic acid (PFHxA)	0.0035	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorononanoic acid (PFNA)	0.00008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorooctanesulfonic acid (PFOS)	0.00017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorooctanoic acid (PFOA)	0.000063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluoropentanoic acid (PFPeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--
Perfluoroundecanoic acid (PFUnA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.001 U	--

Location ID		SB-35	SB-36	SB-37	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-23
Sample ID		SB35-3-4	SB36-2-3.5	SB37-2-3	MW-13-3-4	MW-14-2-3	MW-15-3-4	MW-16-3-4	MW-17-3-4	MW-18-3-4	MW19-6-7.5	MW20-2.5-4	MW21-2.5-4	MW22-2.5-4	MW23-2.5-4
Sample Date		6/2/23	6/2/23	6/2/23	3/29/22	3/24/22	3/23/22	3/22/22	3/21/22	3/28/22	5/26/23	5/25/23	5/31/23	5/30/23	5/24/23
Start Depth (feet)		3	2	2	3	2	3	3	3	3	6	2.5	2.5	2.5	2.5
End Depth (feet)		4	3.5	3	4	3	4	4	4	4	7.5	4	4	4	4
Analyte	**Soil PCUL - Vadose**														
Metals (mg/kg)															
Antimony	5.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	7.3	**2.71**	**2.19**	**5.08**	**7.32**	**6.66**	**3.92**	**9.01 J**	**7.27**	**5.72**	**5.96**	**3.84**	**6.31**	**6.1**	**7.34**
Beryllium	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	0.77	**0.08 J**	**0.07 J**	**0.16**	0.309 U	**0.24**	**0.23**	**2.51 J**	**1.04**	0.251 U	**0.04 J**	**0.25**	**0.29**	**0.23**	**0.47**
Chromium	260	**20.4**	**20.9**	**30**	**40**	**36.1 J**	**27.2**	**18.1**	**28.7**	**31.8**	**18.2**	**27.2**	**25.4**	**31.9**	**23.5**
Chromium, Hexavalent	0.018	0.541 U	0.518 U	0.579 U	0.618 U	0.618 U	0.612 U	0.641 U	0.6 UJ	0.543 U	0.646 U	0.608 U	0.561 U	0.547 U	0.545 U
Chromium, Trivalent	548	**20.4**	**20.9**	**30**	**40**	**36.1 J**	**27.2**	**18.1**	**28.7**	**31.8**	**18.2**	**27.2**	**25.4**	**31.9**	**23.5**
Copper	36	**10.4**	**12.8**	**20.2**	**23.4**	**20.2**	**13.2**	**22.7 J**	**27**	**17.8**	**23.7**	**27.2**	**26.6**	**39.6**	**58.9**
Lead	250	**1.92**	**2.13**	**9.43**	**5.06**	**13.1**	**8.07**	**11.1 J**	**11**	**8.55**	**4.62**	**91.1**	**84.6**	**72**	**104**
Mercury	0.07	**0.0132 J**	**0.018 J**	**0.042**	**0.0336**	**0.0469**	**0.0263**	**0.0314**	**0.0974 J**	**0.0423**	**0.0308 J**	**0.0738**	**0.0501**	**0.0293**	**0.106**
Nickel	48	**26.8**	**31**	**35.3**	**36.5**	**38.8**	**39.8**	**18.9 J**	**30.1**	**28.7**	**12.3**	**35.1**	**26.6**	**30.3**	**22.6**
Selenium	5.2	**1.1**	**0.48 J**	**0.68**	**2.21**	**0.75**	**0.25 J**	**0.35 J**	**0.87**	**1.14**	**0.94**	**0.93**	**1.2**	**0.75**	**0.97**
Silver	0.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	0.088	--	--	--	**0.129**	**0.12 J**	**0.07 J**	**0.12 J**	**0.09 J**	**0.0589**	--	--	--	--	--
Zinc	101	**30.5**	**33.9**	**49.4**	**67**	**72**	**54**	**88 J**	**64.4**	**41**	**33.8**	**68**	**236**	**102**	**201**
Total Petroleum Hydrocarbons (mg/kg)															
Gasoline-range hydrocarbons - HCID	30	11 U	11 U	12 U	13 U	11 U	12 U	13 U	12 U	11 U	13 U	12 U	11 U	11 U	11 U
Diesel-range hydrocarbons - HCID	2,000	27 U	27 U	30 U	33 U	28 U	31 U	32 U	30 U	28 U	32 U	31 U	28 U	28 U	**27**
Lube oil-range hydrocarbons - HCID	2,000	54 U	54 U	59 U	65 U	57 U	61 U	64 U	59 U	55 U	65 U	61 U	**57**	55 U	**55**
Total TPH - HCID	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**57**	ND	**82**
Gasoline-range hydrocarbons	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range hydrocarbons	2,000	--	--	--	--	--	--	--	--	--	--	--	**15.4**	--	**83.3**
Lube oil-range hydrocarbons	2,000	--	--	--	--	--	--	--	--	--	--	--	**88.7**	--	**491**
Total TPH	2,000	--	--	--	--	--	--	--	--	--	--	--	**104.1**	--	**574.3**
Diesel-range hydrocarbons w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	**6.82**	--	**32.3**
Lube oil-range hydrocarbons w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	**70.4**	--	**170**
Total TPH w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	**77.22**	--	**202.3**
Extractable Petroleum Hydrocarbons (EPH) (mg/kg)															
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C12-C16 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C12-C16 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C16-C21 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C16-C21 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C21-C34 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C21-C34 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (VOCs) (mg/kg)															
1,1,1,2-Tetrachloroethane	0.0098	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	1.5	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	0.0012	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	7600	--	--	--	--	0.00144 U	0.00148 U	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	0.005	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
1,1-Dichloroethane	0.041	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	0.046	0.00098 U	0.00112 U	0.00107 U	0.00072 U	0.00072 U	0.00074 U	0.00075 U	0.00073 U	0.00069 U	0.00114 U	0.00118 U	0.00111 U	0.00093 U	0.00128 U
1,1-Dichloropropene	NE	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	0.20	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	0.0000024	--	--	--	--	0.00144 U	0.00148 U	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.031	--	--	--	--	0.0036 U	0.00371 U	0.00375 U	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1.3	--	--	--	--	0.00072 U	**0.00036 J**	--	--	--	--	--	--	--	--
1,2-Dibromo-3-Chloropropane	0.00089	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
1,2-Dibromoethane	0.00027	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	0.035	--	--	--	--	0.00072 U	0.00074 U	0.00075 U	--	--	--	--	--	--	--
1,2-Dichloroethane	0.023	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--

Location ID		SB-35	SB-36	SB-37	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-23
Sample ID		SB35-3-4	SB36-2-3.5	SB37-2-3	MW-13-3-4	MW-14-2-3	MW-15-3-4	MW-16-3-4	MW-17-3-4	MW-18-3-4	MW19-6-7.5	MW20-2.5-4	MW21-2.5-4	MW22-2.5-4	MW23-2.5-4
Sample Date		6/2/23	6/2/23	6/2/23	3/29/22	3/24/22	3/23/22	3/22/22	3/21/22	3/28/22	5/26/23	5/25/23	5/31/23	5/30/23	5/24/23
Start Depth (feet)		3	2	2	3	2	3	3	3	3	6	2.5	2.5	2.5	2.5
End Depth (feet)		4	3.5	3	4	3	4	4	4	4	7.5	4	4	4	4
Analyte	**Soil PCUL - Vadose**														
1,2-Dichloropropane	0.016	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
1,3,5-Trichlorobenzene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	1.3	--	--	--	--	0.00072 U	**0.00051 J**	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	0.023	--	--	--	--	0.00072 U	0.00074 U	0.00075 U	--	--	--	--	--	--	--
1,3-Dichloropropane	0.88	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	0.11	--	--	--	--	0.00072 U	0.00074 U	0.00075 U	--	--	--	--	--	--	--
2,2-Dichloropropane	NE	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	NE	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
2-Chlorotoluene	1.9	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
2-Hexanone	0.17	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
4-Chlorotoluene	NE	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
4-Isopropyltoluene	NE	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Acetone	29	--	--	--	--	**0.0917 J**	**0.0666 J**	--	--	--	--	--	--	--	--
Acrolein	0.0044	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
Acrylonitrile	0.00012	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
Benzene	0.0088	--	--	--	--	0.00072 U	**0.00024 J**	--	--	--	--	--	--	--	--
Bromobenzene	0.56	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Bromochloromethane	NE	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Bromoform	0.078	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Bromomethane	0.051	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Carbon Disulfide	4.1	--	--	--	--	**0.00036 J**	**0.00062 J**	--	--	--	--	--	--	--	--
Carbon Tetrachloride	0.0029	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Chlorobenzene	0.86	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Chloroethane	NE	--	--	--	--	0.00144 U	0.00148 U	--	--	--	--	--	--	--	--
Chloroform	0.074	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Chloromethane	NE	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethylene	0.079	0.00098 U	0.00112 U	0.00107 U	0.00072 U	0.00072 U	**0.00051 J**	0.00075 U	0.00073 U	**0.00195**	0.00114 U	0.00118 U	0.00111 U	0.00093 U	0.00128 U
cis-1,3-Dichloropropene	0.0023	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Dibromochloromethane	0.01	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Dibromomethane	0.42	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Dichlorobromomethane	0.013	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	38	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Ethylbenzene	0.18	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.00021	--	--	--	--	0.0036 U	0.00371 U	0.00375 U	--	--	--	--	--	--	--
Isopropylbenzene	15	--	--	--	--	0.00072 U	**0.00022 J**	--	--	--	--	--	--	--	--
Methyl ethyl ketone (MEK)	20	--	--	--	--	**0.00217 J**	**0.0037 J**	--	--	--	--	--	--	--	--
Methyl Iodide	NE	--	--	--	--	**0.0009**	0.00074 U	--	--	--	--	--	--	--	--
Methyl isobutyl ketone	2.7	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	0.1	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Methylene Chloride	0.022	0.00491 U	0.00561 U	0.00535 U	--	0.0036 U	0.00371 U	--	--	--	0.00571 U	0.00588 U	0.00557 U	0.00466 U	0.00642 U
Naphthalene	0.039	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
n-Butylbenzene	14	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
n-Propylbenzene	16	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Sec-Butylbenzene	25	--	--	--	--	0.00072 U	**0.0003 J**	--	--	--	--	--	--	--	--
Styrene	2.2	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Tert-Butylbenzene	19	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Tetrachloroethylene	0.029	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
Toluene	0.72	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethylene	0.52	0.00098 U	0.00112 U	0.00107 U	0.00072 U	0.00072 U	0.00074 U	0.00075 U	0.00073 U	0.00069 U	0.00114 U	0.00118 U	0.00111 U	0.00093 U	0.00128 U
trans-1,3-Dichloropropene	0.0023	--	--	--	--	0.00072 U	0.00074 U	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NE	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
Trichloroethylene	0.0044	0.00098 U	0.00112 U	0.00107 U	0.00072 U	0.00072 U	0.00074 U	0.00075 U	0.00073 U	**0.00111**	0.00114 U	0.00118 U	0.00111 U	0.00093 U	0.00128 U
Trichlorofluoromethane	23	--	--	--	--	0.00144 U	0.00148 U	--	--	--	--	--	--	--	--
Vinyl Acetate	33	--	--	--	--	0.0036 U	0.00371 U	--	--	--	--	--	--	--	--
Vinyl Chloride	0.0011	0.00098 U	0.00112 U	0.00107 U	0.00072 U	0.00072 U	0.00074 U	0.00075 U	0.00073 U	0.00069 U	0.00114 U	0.00118 U	0.00111 U	0.00093 U	0.00128 U
Xylene, m-,p-	NE	--	--	--	--	**0.00041 J**	**0.00042 J**	--	--	--	--	--	--	--	--
Xylene, o-	NE	--	--	--	--	**0.00065 J**	**0.00057 J**	--	--	--	--	--	--	--	--
Total Xylenes	0.94	--	--	--	--	**0.00105 J**	**0.00099 J**	--	--	--	--	--	--	--	--
Semivolatile Compounds (SVOCs) (mg/kg)															
1,2,4-Trichlorobenzene	0.031	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	0.035	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--

	Location ID	SB-35	SB-36	SB-37	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-23
	Sample ID	SB35-3-4	SB36-2-3.5	SB37-2-3	MW-13-3-4	MW-14-2-3	MW-15-3-4	MW-16-3-4	MW-17-3-4	MW-18-3-4	MW19-6-7.5	MW20-2.5-4	MW21-2.5-4	MW22-2.5-4	MW23-2.5-4
	Sample Date	6/2/23	6/2/23	6/2/23	3/29/22	3/24/22	3/23/22	3/22/22	3/21/22	3/28/22	5/26/23	5/25/23	5/31/23	5/30/23	5/24/23
	Start Depth (feet)	3	2	2	3	2	3	3	3	3	6	2.5	2.5	2.5	2.5
	End Depth (feet)	4	3.5	3	4	3	4	4	4	4	7.5	4	4	4	4
Analyte	**Soil PCUL - Vadose**														
1,3-Dichlorobenzene	0.023	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	0.11	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
1,4-Dioxane	0.0018	0.335 U	0.335 U	1 U	--	0.335 U	0.334 U	--	--	--	0.335 U	1.67 U	1.67 U	1 U	10 U
2,2'-Oxybis[1-chloropropane]	1.8	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.0013	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	0.092	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	0.069	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	0.029	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	0.13	--	--	--	--	0.199 U	0.2 U	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.0028	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.0009	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
2-Chloronaphthalene	5.4	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
2-Chlorophenol	0.2	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
2-methylphenol	0.069	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
2-Nitroaniline	1	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.000034	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	0.13	--	--	--	--	0.199 U	0.2 U	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	0.5	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
4-Chloroaniline	0.0027	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	0.0499 U	0.0499 U	--	--	--	--	--	--	--	--
4-methylphenol	0.67	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
4-Nitroaniline	0.018	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
Benzoic Acid	0.65	--	--	--	--	0.199 U	0.2 U	--	--	--	--	--	--	--	--
Benzyl Alcohol	0.057	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.00022	--	--	--	--	0.0499 U	0.0499 U	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.1	--	--	--	--	0.0499 U	0.0499 U	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.0036	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Carbazole	NE	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Dibutyl Phthalate	0.28	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.2	--	--	--	--	0.0499 U	0.0499 U	--	--	--	--	--	--	--	--
Dimethyl Phthalate	0.071	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	6.2	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.000008	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.00021	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.032	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
Hexachloroethane	0.00016	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Isophorone	0.49	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Nitrobenzene	0.1	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.00012	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.028	--	--	--	--	0.0199 UJ	0.02 UJ	--	--	--	--	--	--	--	--
Pentachlorophenol	0.000032	--	--	--	--	0.0997 U	0.0998 U	--	--	--	--	--	--	--	--
Phenol	0.42	--	--	--	--	0.0199 U	0.02 U	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)															
1-Methylnaphthalene	0.082	0.00498 U	0.00497 U	**0.0128**	--	0.005 U	0.005 U	--	--	--	**0.00142 J**	0.015 U	**0.00649**	**0.00173**	0.0748 U
2-Methylnaphthalene	0.67	0.00498 U	0.00497 U	**0.0229**	--	**0.0032 J**	**0.00651**	--	--	--	**0.00194 J**	0.015 U	**0.0119**	0.015 U	0.0748 U
Acenaphthene	0.5	0.00498 U	0.00497 U	**0.00369 J**	--	**0.0008 J**	**0.00137 J**	--	--	--	**0.00076 J**	0.015 U	**0.00487**	**0.00494**	0.0748 U
Acenaphthylene	1.3	0.00498 U	0.00497 U	**0.00164 J**	--	0.005 U	0.005 U	--	--	--	0.00497 U	0.015 U	0.015 U	0.015 U	0.0748 U
Anthracene	0.96	0.00498 U	0.00497 U	**0.0021 J**	--	**0.0009 J**	0.005 U	--	--	--	**0.00219 J**	**0.00823**	**0.0104**	**0.0167**	**0.0253**
Benzo(a)anthracene	NE	0.00498 U	0.00497 U	**0.00614**	--	**0.00184 J**	**0.00174 J**	--	--	--	**0.00173 J**	**0.0289**	**0.0387**	**0.104**	**0.107**
Benzo(a)pyrene	0.00031	0.00498 U	0.00497 U	**0.00451 J**	--	**0.00221 J**	**0.00176 J**	--	--	--	0.00497 U	**0.0431**	**0.0469**	**0.125**	**0.139**
Benzo(b)fluoranthene	NE	0.00498 U	0.00497 U	**0.00682**	--	**0.00433 J**	**0.0033 J**	--	--	--	**0.00258 J**	**0.0511**	**0.0542**	**0.138**	**0.157**
Benzo(g,h,i)perylene	0.67	0.00498 U	0.00497 U	**0.00658**	--	**0.00476 J**	**0.00407 J**	--	--	--	**0.0025 J**	**0.0631**	**0.0657**	**0.135**	**0.173**
Benzo(j,k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(j)fluoranthene	NE	0.00498 U	0.00497 U	**0.00375 J**	--	**0.00232 J**	**0.00198 J**	--	--	--	**0.00098 J**	**0.0275**	**0.0328**	**0.0815**	**0.0808**
Benzo(k)fluoranthene	NE	0.00498 U	0.00497 U	**0.00416 J**	--	**0.00172 J**	**0.00147 J**	--	--	--	**0.00096 J**	**0.0289**	**0.0307**	**0.0796**	**0.0781**
Benzofluoranthenes (Total)	3.2	0.00996 U	0.00993 U	**0.0148**	--	**0.00845 J**	**0.00688 J**	--	--	--	**0.00462 J**	**0.106**	**0.117**	**0.296**	**0.322**

	Location ID	SB-35	SB-36	SB-37	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-23
	Sample ID	SB35-3-4	SB36-2-3.5	SB37-2-3	MW-13-3-4	MW-14-2-3	MW-15-3-4	MW-16-3-4	MW-17-3-4	MW-18-3-4	MW19-6-7.5	MW20-2.5-4	MW21-2.5-4	MW22-2.5-4	MW23-2.5-4
	Sample Date	6/2/23	6/2/23	6/2/23	3/29/22	3/24/22	3/23/22	3/22/22	3/21/22	3/28/22	5/26/23	5/25/23	5/31/23	5/30/23	5/24/23
	Start Depth (feet)	3	2	2	3	2	3	3	3	3	6	2.5	2.5	2.5	2.5
	End Depth (feet)	4	3.5	3	4	3	4	4	4	4	7.5	4	4	4	4
Analyte	**Soil PCUL - Vadose**														
Chrysene	NE	0.00498 U	0.00497 U	**0.0102**	--	**0.00564**	**0.00513**	--	--	--	**0.00336 J**	**0.0484**	**0.0643**	**0.154**	**0.171**
Dibenzo(a,h)anthracene	NE	0.00498 U	0.00497 U	**0.00113 J**	--	**0.00091 J**	0.005 U	--	--	--	0.00497 U	**0.0129**	**0.0112**	**0.0271**	**0.0311**
Dibenzofuran	0.54	0.00498 U	0.00497 U	**0.00453 J**	--	**0.00364 J**	**0.0035 J**	--	--	--	0.00497 U	0.015 U	**0.00459**	0.015 U	0.0748 U
Fluoranthene	1.7	**0.00056 J**	**0.0005 J**	**0.0258**	--	**0.0084**	**0.00723**	--	--	--	**0.00607**	**0.0619**	**0.0923**	**0.264**	**0.236**
Fluorene	0.54	0.00498 U	0.00497 U	**0.004 J**	--	**0.00064 J**	**0.00427 J**	--	--	--	**0.00122 J**	0.015 U	**0.00505**	**0.00529**	0.0748 U
Indeno(1,2,3-c,d)pyrene	NE	0.00498 U	0.00497 U	**0.00487 J**	--	**0.0039 J**	**0.00317 J**	--	--	--	**0.00142 J**	**0.0441**	**0.0459**	**0.112**	**0.121**
Naphthalene	0.039	0.00498 U	0.00497 U	**0.0118**	--	**0.0135**	**0.0159**	--	--	--	**0.0955**	0.015 U	**0.0343**	0.015 U	0.0748 U
Phenanthrene	1.5	**0.0012 J**	0.00497 U	**0.0209**	--	**0.00855**	**0.00914**	--	--	--	**0.0122**	**0.032**	**0.0555**	**0.119**	**0.115**
Pyrene	2.6	0.00498 U	0.00497 U	**0.0269**	--	**0.00729**	**0.00652**	--	--	--	**0.00888**	**0.0793**	**0.128**	**0.295**	**0.273**
Total cPAH TEQ (ND=0.5RL)	0.00031	0.00426 U	0.00425 U	**0.0084 J**	--	**0.00438**	**0.00372**	--	--	--	**0.0039 J**	**0.07077**	**0.07731**	**0.20221**	**0.22233**
Polychlorinated Biphenyls (PCBs) (mg/kg)															
PCB-Aroclor 1016	NE	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000011	--	--	--	--	0.02 U	0.02 U	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)															
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	0.0012 U	**0.00022 J**	--	--	--	--	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
6:2 FTS	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
8:2 FTS	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
NEtFOSAA	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
NMeFOSAA	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE	--	--	--	--	**0.000094 J**	0.0012 U	--	--	--	--	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	0.0018	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	0.00041	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorohexanoic acid (PFHxA)	0.0035	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorononanoic acid (PFNA)	0.00008	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.00017	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000063	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE	--	--	--	--	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--

Table K-2

Saturated Soil Data

Former Precision Engineering Property
Seattle, Washington

	Location ID	GP1	GP1	GP2	GP3	GP3	GP5	GP5	GP6	GP7	GP10	GP11	GP13	GP14	GP15	GP17	GP19	GP20	GP21
	Sample ID	GP1-S-6.0	GP1-S-10.0	GP2-S-10.0	GP3-S-6.0	GP3-S-14	GP5-S-8.0	GP5-S-14.0	GP6-S-14.5	GP7-S-8.0	GP10-S-13.5	GP11-S-6.5	GP13-S-6.0	GP14-S-6.0	GP15-S-6.0	GP17-S-6.0	GP19-S-7.0	GP20-S-6.0	GP21-S-6.5
	Sample Date	6/7/2005	6/9/2005	6/9/2005	6/9/2005	6/9/2005	6/16/2005	6/16/2005	6/16/2005	6/16/2005	6/17/2005	6/17/2005	12/14/2005	12/13/2005	12/13/2005	12/13/2005	12/13/2005	12/14/2005	12/14/2005
	Start Depth (feet)	6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7	6	6.5
	End Depth (feet)	6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7	6	6.5
Analyte	**Soil PCUL - Saturated**																		
Metals (mg/kg)																			
Arsenic	7.3	4.99 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	0.77	0.499 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	260	**147**	**73.5**	**24.9**	**1100**	**941**	--	**20.1**	**259**	**21**	**24.1**	**17.3**	**46.6**	**31.4**	**20.2**	**1660**	**27.1**	**24.5**	**23**
Chromium, Hexavalent	0.00089	**31.8**	**14.4**	0.109 U	**49.8**	**34.4**	--	0.115 U	**0.181**	0.113 U	0.106 U	**0.37**	1.3 U	**1.2 J**	1.2 U	**60 J**	2.7 U	1.5 U	1.3 U
Chromium, Trivalent	27.4	**115.2**	**59.1**	**24.9**	**1050.2**	**906.6**	--	**20.1**	**258.819**	**21**	**24.1**	**16.93**	**46.6**	**30.2 J**	**20.2**	**1600 J**	**27.1**	**24.5**	**23**
Copper	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	56	2 U	--	2.11 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	0.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	0.0044	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)																			
Gasoline-range hydrocarbons - HCID	30	**20.5**	**19.3**	**21**	**21.9**	**21**	--	**20.1**	**19.6**	**22.8**	**21.3**	**19.5**	--	--	--	--	--	--	--
Diesel-range hydrocarbons - HCID	2,000	**51.2**	**48.3**	**52.4**	**54.7**	**52.6**	--	**50.3**	**49**	**57**	**53.4**	**48.7**	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - HCID	2,000	**102**	**96.6**	**105**	**109**	**105**	--	**101**	**98**	**114**	**107**	**97.4**	--	--	--	--	--	--	--
Total TPH - HCID	2,000	**153.2**	**144.9**	**157.4**	**163.7**	**157.6**	--	**151.3**	**147**	**171**	**160.4**	**146.1**	--	--	--	--	--	--	--
Gasoline-range hydrocarbons	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range hydrocarbons	2,000	--	--	--	--	--	--	--	--	--	--	--	12.8 U	10.8 U	--	--	14.5 U	**75.9**	**5270**
Lube oil-range hydrocarbons	2,000	--	--	--	--	--	--	--	--	--	--	--	**56.1**	26.9 U	--	--	**56.7**	**294**	**19900**
Total TPH	2,000	--	--	--	--	--	--	--	--	--	--	--	**56.1**	ND	--	--	**56.7**	**369.9**	**25170**
Diesel-range hydrocarbons - w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TPH - w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (EPH) (mg/kg)																			
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatic	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	260 U
Extractable Petroleum Hydrocarbons, C8-C10 Aromatic	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13 U
Extractable Petroleum Hydrocarbons, C10-C12 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	260 U
Extractable Petroleum Hydrocarbons, C10-C12 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13 U
Extractable Petroleum Hydrocarbons, C12-C16 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	260 U
Extractable Petroleum Hydrocarbons, C12-C16 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13 U
Extractable Petroleum Hydrocarbons, C16-C21 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**411**
Extractable Petroleum Hydrocarbons, C16-C21 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**102**
Extractable Petroleum Hydrocarbons, C21-C34 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**6460**
Extractable Petroleum Hydrocarbons, C21-C34 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**576**
Volatile Organic Compounds (VOCs) (mg/kg)																			
1,1,1,2-Tetrachloroethane	0.00063	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,1,1-Trichloroethane	0.084	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	0.00008	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	120	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	0.00033	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,1-Dichloroethane	0.0026	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,1-Dichloroethylene	0.0025	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
1,1-Dichloropropene	NE	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	0.011	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,2,3-Trichloropropane	0.00000015	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.0019	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	0.072	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,2-Dibromo-3-Chloropropane	0.000056	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,2-Dibromoethane	0.000018	0.00112 U	0.0014 U	0.00161 U	0.00164 U	0.00141 U	0.00129 U	0.00148 U	0.00151 U	0.00162 U	0.00146 U	0.00158 U	--	--	--	--	--	--	--
1,2-Dichlorobenzene	0.003	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,2-Dichloroethane	0.0016	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
1,2-Dichloropropane	0.001	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
1,3,5-Trichlorobenzene	NE	0.00112 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	Location ID	GP1	GP1	GP2	GP3	GP3	GP5	GP5	GP6	GP7	GP10	GP11	GP13	GP14	GP15	GP17	GP19	GP20	GP21
	Sample ID	GP1-S-6.0	GP1-S-10.0	GP2-S-10.0	GP3-S-6.0	GP3-S-14	GP5-S-8.0	GP5-S-14.0	GP6-S-14.5	GP7-S-8.0	GP10-S-13.5	GP11-S-6.5	GP13-S-6.0	GP14-S-6.0	GP15-S-6.0	GP17-S-6.0	GP19-S-7.0	GP20-S-6.0	GP21-S-6.5
	Sample Date	6/7/2005	6/9/2005	6/9/2005	6/9/2005	6/9/2005	6/16/2005	6/16/2005	6/16/2005	6/16/2005	6/17/2005	6/17/2005	12/14/2005	12/13/2005	12/13/2005	12/13/2005	12/13/2005	12/14/2005	12/14/2005
	Start Depth (feet)	6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7	6	6.5
	End Depth (feet)	6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7	6	6.5
Analyte	**Soil PCUL - Saturated**																		
1,3,5-Trimethylbenzene	0.071	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,3-Dichlorobenzene	0.0013	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
1,3-Dichloropropane	0.057	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
1,4-Dichlorobenzene	0.0081	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
2,2-Dichloropropane	NE	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	0.11	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
2-Hexanone	0.012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	NE	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
4-Isopropyltoluene	NE	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Acetone	2.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	0.00032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	0.0000083	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	0.00056	**0.00255**	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
Bromobenzene	0.033	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Bromochloromethane	NE	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Bromoethane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	0.005	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Bromomethane	0.0033	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Carbon Disulfide	0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	0.00015	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
Chlorobenzene	0.051	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Chloroethane	NE	0.00112 U	0.0765 U	0.0881 U	0.0896 U	0.0771 U	0.0703 U	0.081 U	0.0828 U	0.0884 U	0.0796 U	0.0861 U	--	--	--	--	--	--	--
Chloroform	0.0048	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Chloromethane	NE	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
cis-1,2-Dichloroethylene	0.0052	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	**0.149**	0.0442 U	0.0398 U	**0.0788**	0.00347 U	0.00315 U	0.0126 U	0.00272 U	0.00326 U	0.00542 U	0.00335 U
cis-1,3-Dichloropropene	0.00014	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Dibromochloromethane	0.0007	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Dibromomethane	0.028	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Dichlorobromomethane	0.00089	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Dichlorodifluoromethane	0.53	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Ethylbenzene	0.01	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Hexachlorobutadiene	0.000011	0.00112 U	--	--	--	--	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Isopropylbenzene	0.79	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Methyl ethyl ketone (MEK)	1.4	--	--	--	--	--	--	--	--	--	--	--	**0.0476**	0.0157 U	0.063 U	**0.0223**	0.0163 U	**0.0663**	**0.0667**
Methyl Iodide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl isobutyl ketone	0.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	0.0072	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	0.0015	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
Naphthalene	0.0021	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
n-Butylbenzene	0.71	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
n-Propylbenzene	0.88	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Sec-Butylbenzene	1.3	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Styrene	0.12	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Tert-Butylbenzene	1	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Tetrachloroethylene	0.0016	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	--	--	--	--	--	--	--
Toluene	0.044	**0.00162**	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
trans-1,2-Dichloroethylene	0.032	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	0.00289 U	0.00262 U	0.0105 U	0.00227 U	0.00272 U	0.00452 U	0.00279 U
trans-1,3-Dichloropropene	0.00014	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethylene	0.00027	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	**1.16**	0.00884 U	0.00796 U	**0.281**	0.00289 U	0.00262 U	0.0105 U	0.00227 U	0.00272 U	0.00452 U	0.00279 U
Trichlorofluoromethane	0.79	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Vinyl Acetate	2.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	0.000056	0.00112 U	0.00765 U	0.00881 U	0.00896 U	0.00771 U	0.00703 U	0.0081 U	0.00828 U	0.00884 U	0.00796 U	0.00861 U	0.00289 U	0.00262 U	0.0105 U	0.00227 U	0.00272 U	0.00452 U	0.00279 U
Xylene, m-,p-	NE	0.00224 U	0.0765 U	0.0881 U	0.0896 U	0.0771 U	0.0703 U	0.081 U	0.0828 U	0.0884 U	0.0796 U	0.0861 U	--	--	--	--	--	--	--
Xylene, o-	NE	0.00112 U	0.0382 U	0.044 U	0.0448 U	0.0385 U	0.0351 U	0.0405 U	0.0414 U	0.0442 U	0.0398 U	0.043 U	--	--	--	--	--	--	--
Total Xylenes	0.055	0.00224 U	0.0765 U	0.0881 U	0.0896 U	0.0771 U	0.0703 U	0.081 U	0.0828 U	0.0884 U	0.0796 U	0.0861 U	--	--	--	--	--	--	--
Semivolatile Compounds (SVOCs) (mg/kg)																			
1,2,4-Trichlorobenzene	0.0019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	Location ID	GP1	GP1	GP2	GP3	GP3	GP5	GP5	GP6	GP7	GP10	GP11	GP13	GP14	GP15	GP17	GP19	GP20	GP21
	Sample ID	GP1-S-6.0	GP1-S-10.0	GP2-S-10.0	GP3-S-6.0	GP3-S-14	GP5-S-8.0	GP5-S-14.0	GP6-S-14.5	GP7-S-8.0	GP10-S-13.5	GP11-S-6.5	GP13-S-6.0	GP14-S-6.0	GP15-S-6.0	GP17-S-6.0	GP19-S-7.0	GP20-S-6.0	GP21-S-6.5
	Sample Date	6/7/2005	6/9/2005	6/9/2005	6/9/2005	6/9/2005	6/16/2005	6/16/2005	6/16/2005	6/16/2005	6/17/2005	6/17/2005	12/14/2005	12/13/2005	12/13/2005	12/13/2005	12/13/2005	12/14/2005	12/14/2005
	Start Depth (feet)	6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7	6	6.5
	End Depth (feet)	6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7	6	6.5
Analyte	**Soil PCUL - Saturated**																		
1,4-Dichlorobenzene	0.0081	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	0.00013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-Oxybis[1-chloropropane]	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.00007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	0.0053	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	0.0043	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	0.0023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	0.0092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.00016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.000051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	0.011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol	0.0064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	0.064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.000002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	0.0073	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	0.028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	0.00017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol	0.062	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	0.017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.000014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.00018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	0.019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.0000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.0017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	0.0000097	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	0.0065	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.000007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.0016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	0.0000018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	0.048	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																			
1-Methylnaphthalene	0.0042	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
2-Methylnaphthalene	0.039	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Acenaphthene	0.028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Acenaphthylene	1.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Anthracene	0.051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Benzo(a)pyrene	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Benzo(g,h,i)perylene	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Benzo(j,k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(j)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Benzofluoranthenes (Total)	3.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	Location ID	GP1	GP1	GP2	GP3	GP3	GP5	GP5	GP6	GP7	GP10	GP11	GP13	GP14	GP15	GP17	GP19	GP20	GP21
	Sample ID	GP1-S-6.0	GP1-S-10.0	GP2-S-10.0	GP3-S-6.0	GP3-S-14	GP5-S-8.0	GP5-S-14.0	GP6-S-14.5	GP7-S-8.0	GP10-S-13.5	GP11-S-6.5	GP13-S-6.0	GP14-S-6.0	GP15-S-6.0	GP17-S-6.0	GP19-S-7.0	GP20-S-6.0	GP21-S-6.5
	Sample Date	6/7/2005	6/9/2005	6/9/2005	6/9/2005	6/9/2005	6/16/2005	6/16/2005	6/16/2005	6/16/2005	6/17/2005	6/17/2005	12/14/2005	12/13/2005	12/13/2005	12/13/2005	12/13/2005	12/14/2005	12/14/2005
	Start Depth (feet)	6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7	6	6.5
	End Depth (feet)	6	10	10	6	14	8	14	14.5	8	13.5	6.5	6	6	6	6	7	6	6.5
Analyte	**Soil PCUL - Saturated**																		
Chrysene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Dibenzo(a,h)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Dibenzofuran	0.029	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Fluorene	0.029	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Indeno(1,2,3-c,d)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Naphthalene	0.0021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Phenanthrene	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Pyrene	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0139 U	0.0129 U
Total cPAH TEQ (ND=0.5RL)	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01049 U	0.00974 U
Polychlorinated Biphenyls (PCBs) (mg/kg)																			
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.00000055	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																			
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NEtFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NMeFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	0.00012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic acid (PFHxA)	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic acid (PFNA)	0.0000048	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Soil PCUL - Saturated	Location ID	Sample ID	Sample Date	Start Depth (feet)	End Depth (feet)																
		GP22	GP23	GP23	GP24	GP25	GP26	GP27	GP28	GP29	GP30	GP31	MW9	MW9	MW9	MW11	MW11	MW-13	MW-13	MW-13
		GP22-S-10.0	GP23-S-7.0	GP23-S-10.5	GP24-S-6.5	GP25-S-7.0	GP26-S-9.5	GP27-S-13.0	GP28-S-7.0	GP29-S-6.0	GP30-S-6.0	GP31-S-6.0	MW9-18-19	MW9-32.5-33.5	MW9-38-39	MW11-18-19	MW100	MW-13-11-12	DUP-2-220329	MW-13-28-29
		12/13/2005	12/14/2005	12/14/2005	12/14/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	8/16/2014	8/16/2014	8/16/2014	8/16/2014	8/16/2014	3/29/2022	3/29/2022	3/29/2022
		10	7	10.5	6.5	7	9.5	13	7	6	6	6	18	32.5	38	18	18	11	11	28
		10	7	10.5	6.5	7	9.5	13	7	6	6	6	19	33.5	39	19	19	12	12	29
Metals (mg/kg)																				
Arsenic	7.3	--	--	--	--	--	--	--	--	--	--	--	**10**	5 U	5 U	6 U	5 U	**3.69**	**3.93**	**3.24**
Cadmium	0.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.250 U	0.240 U	0.300 U
Chromium	260	**32.1**	**23.3**	**979**	**29.3**	**19.8**	**24**	**18.6**	**22.4**	**31.9**	**32.7**	**23.6**	**19**	**17.8**	**32.3**	**38**	**37.8**	**19.4**	**25.9**	**40.1**
Chromium, Hexavalent	0.00089	1.3 U	1.1 U	1.2 U	2.4 U	1.7 U	2.1 U	2.1 U	1.8 U	2.6 U	2.4 U	3 U	0.492 U	0.448 U	0.471 U	0.455 U	0.448 U	0.532 U	0.521 U	0.612 U
Chromium, Trivalent	27.4	**32.1**	**23.3**	**979**	**29.3**	**19.8**	**24**	**18.6**	**22.4**	**31.9**	**32.7**	**23.6**	**19**	**17.8**	**32.3**	**38**	**37.8**	**19.4**	**25.9**	**40.1**
Copper	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**12.7**	**12.1**	**16.8**
Lead	56	--	--	--	--	--	--	--	--	--	--	--	6 U	2 U	2 U	**2**	2 U	**2.24**	**2.93**	**2.86**
Mercury	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0148 J**	**0.0202 J**	**0.0237 J**
Nickel	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**24.2**	**26.8**	**47.0**
Selenium	0.26	--	--	--	--	--	--	--	--	--	--	--	10 U	5 U	5 U	6 U	5 U	**1.46**	**1.20**	**1.16**
Thallium	0.0044	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0545**	**0.0670**	**0.0600**
Zinc	85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**40.1**	**38.3**	**38.5**
Total Petroleum Hydrocarbons (mg/kg)																				
Gasoline-range hydrocarbons - HCID	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11 U	11 U	13 U
Diesel-range hydrocarbons - HCID	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27 U	27 U	32 U
Lube oil-range hydrocarbons - HCID	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	54 U	54 U	63 U
Total TPH - HCID	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND
Gasoline-range hydrocarbons	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range hydrocarbons	2,000	11.3 U	10.8 U	--	--	10.6 U	10.8 U	10.9 U	10.4 U	12.8 U	**39.6**	58.9	6.2 U	5.7 U	**9.3**	**6.2**	--	--	--	--
Lube oil-range hydrocarbons	2,000	28.2 U	26.9 U	--	--	26.6 U	27.1 U	27.2 U	26 U	32 U	**165**	157	**14**	11 U	**14**	11 U	--	--	--	--
Total TPH	2,000	ND	ND	--	--	ND	ND	ND	ND	ND	**204.6**	215.9	**14**	ND	**23.3**	**6.2**	--	--	--	--
Diesel-range hydrocarbons - w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TPH - w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (EPH) (mg/kg)																				
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatic	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C8-C10 Aromatic	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C10-C12 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C10-C12 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C12-C16 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C12-C16 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C16-C21 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C16-C21 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C21-C34 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C21-C34 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (VOCs) (mg/kg)																				
1,1,1,2-Tetrachloroethane	0.00063	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,1,1-Trichloroethane	0.084	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,1,2,2-Tetrachloroethane	0.00008	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	120	--	--	--	--	--	--	--	--	--	--	--	0.0021 U	0.0019 U	0.0019 U	0.0018 U	0.0021 U	--	--	--
1,1,2-Trichloroethane	0.00033	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,1-Dichloroethane	0.0026	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,1-Dichloroethylene	0.0025	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	0.00065 U	0.00085 U	0.00090 U
1,1-Dichloropropene	NE	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,2,3-Trichlorobenzene	0.011	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
1,2,3-Trichloropropane	0.00000015	--	--	--	--	--	--	--	--	--	--	--	0.0021 U	0.0019 U	0.0019 U	0.0018 U	0.0021 U	--	--	--
1,2,4-Trichlorobenzene	0.0019	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
1,2,4-Trimethylbenzene	0.072	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,2-Dibromo-3-Chloropropane	0.000056	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
1,2-Dibromoethane	0.000018	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,2-Dichlorobenzene	0.003	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,2-Dichloroethane	0.0016	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,2-Dichloropropane	0.001	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,3,5-Trichlorobenzene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Soil PCUL - Saturated	Location ID	GP22	GP23	GP23	GP24	GP25	GP26	GP27	GP28	GP29	GP30	GP31	MW9	MW9	MW9	MW11	MW11	MW-13	MW-13	MW-13
		Sample ID	GP22-S-10.0	GP23-S-7.0	GP23-S-10.5	GP24-S-6.5	GP25-S-7.0	GP26-S-9.5	GP27-S-13.0	GP28-S-7.0	GP29-S-6.0	GP30-S-6.0	GP31-S-6.0	MW9-18-19	MW9-32.5-33.5	MW9-38-39	MW11-18-19	MW100	MW-13-11-12	DUP-2-220329	MW-13-28-29
		Sample Date	12/13/2005	12/14/2005	12/14/2005	12/14/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	8/16/2014	8/16/2014	8/16/2014	8/16/2014	8/16/2014	3/29/2022	3/29/2022	3/29/2022
		Start Depth (feet)	10	7	10.5	6.5	7	9.5	13	7	6	6	6	18	32.5	38	18	18	11	11	28
		End Depth (feet)	10	7	10.5	6.5	7	9.5	13	7	6	6	6	19	33.5	39	19	19	12	12	29
1,3,5-Trimethylbenzene	0.071	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,3-Dichlorobenzene	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,3-Dichloropropane	0.057	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
1,4-Dichlorobenzene	0.0081	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
2,2-Dichloropropane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
2-Chloroethyl vinyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
2-Chlorotoluene	0.11	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
2-Hexanone	0.012	--	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
4-Chlorotoluene	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
4-Isopropyltoluene	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Acetone	2.1	--	--	--	--	--	--	--	--	--	--	--	--	**0.028**	**0.0086**	**0.016**	**0.013**	**0.016**	--	--	--
Acrolein	0.00032	--	--	--	--	--	--	--	--	--	--	--	--	0.051 U	0.047 U	0.048 U	0.044 U	0.053 U	--	--	--
Acrylonitrile	0.0000083	--	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
Benzene	0.00056	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Bromobenzene	0.033	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Bromochloromethane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Bromoethane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0021 U	0.0019 U	0.0019 U	0.0018 U	0.0021 U	--	--	--
Bromoform	0.005	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Bromomethane	0.0033	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Carbon Disulfide	0.25	--	--	--	--	--	--	--	--	--	--	--	--	**0.0018 J**	0.0009 U	**0.0016 J**	**0.001 J**	0.0011 U	--	--	--
Carbon Tetrachloride	0.00015	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Chlorobenzene	0.051	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Chloroethane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Chloroform	0.0048	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Chloromethane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	**0.0015**	0.0009 U	**0.0018**	--	--	--
cis-1,2-Dichloroethylene	0.0052	0.00227 U	0.00216 U	0.00272 U	0.0034 U	0.00297 U	0.00318 U	0.00245 U	0.00261 U	**0.00996**	0.00399 U	0.00409 U	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	0.00065 U	0.00085 U	0.00090 U	
cis-1,3-Dichloropropene	0.00014	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Dibromochloromethane	0.0007	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Dibromomethane	0.028	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Dichlorobromomethane	0.00089	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Dichlorodifluoromethane	0.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	0.01	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Hexachlorobutadiene	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
Isopropylbenzene	0.79	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Methyl ethyl ketone (MEK)	1.4	**0.0128**	0.0108 U	0.0136 U	0.017 U	0.0148 U	0.0159 U	0.0123 U	0.013 U	0.0146 U	**0.0526**	**0.0568**	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--	
Methyl Iodide	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Methyl isobutyl ketone	0.19	--	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
Methyl tert-butyl ether	0.0072	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	0.0015	--	--	--	--	--	--	--	--	--	--	--	--	**0.0051**	**0.0055**	**0.0055**	**0.005**	**0.0041**	--	--	--
Naphthalene	0.0021	--	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
n-Butylbenzene	0.71	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
n-Propylbenzene	0.88	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Sec-Butylbenzene	1.3	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Styrene	0.12	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Tert-Butylbenzene	1	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Tetrachloroethylene	0.0016	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Toluene	0.044	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
trans-1,2-Dichloroethylene	0.032	0.00189 U	0.0018 U	0.00227 U	0.00283 U	0.00247 U	0.00265 U	0.00205 U	0.00217 U	0.00243 U	0.00332 U	0.00341 U	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	0.00065 U	0.00085 U	0.00090 U	
trans-1,3-Dichloropropene	0.00014	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
trans-1,4-Dichloro-2-butene	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
Trichloroethylene	0.00027	0.00189 U	0.0018 U	0.00227 U	0.00283 U	0.00247 U	0.00265 U	0.00205 U	0.00217 U	0.00243 U	0.00332 U	0.00341 U	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	0.00065 U	0.00085 U	0.00090 U	
Trichlorofluoromethane	0.79	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Vinyl Acetate	2.3	--	--	--	--	--	--	--	--	--	--	--	--	0.0051 U	0.0047 U	0.0048 U	0.0044 U	0.0053 U	--	--	--
Vinyl Chloride	0.000056	0.00189 U	0.0018 U	0.00227 U	0.00283 U	0.00247 U	0.00265 U	0.00205 U	0.00217 U	0.00243 U	0.00332 U	0.00341 U	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	0.00065 U	0.00085 U	0.00090 U	
Xylene, m-,p-	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Xylene, o-	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Total Xylenes	0.055	--	--	--	--	--	--	--	--	--	--	--	--	0.001 U	0.0009 U	0.001 U	0.0009 U	0.0011 U	--	--	--
Semivolatile Compounds (SVOCs) (mg/kg)																					
1,2,4-Trichlorobenzene	0.0019	--	--	--	--	--	--	--													
1,2-Dichlorobenzene	0.003	--	--	--	--	--	--	--													
1,3-Dichlorobenzene	0.0013	--	--	--	--	--	--	--													

	Location ID	GP22	GP23	GP23	GP24	GP25	GP26	GP27	GP28	GP29	GP30	GP31	MW9	MW9	MW9	MW11	MW11	MW-13	MW-13	MW-13
	Sample ID	GP22-S-10.0	GP23-S-7.0	GP23-S-10.5	GP24-S-6.5	GP25-S-7.0	GP26-S-9.5	GP27-S-13.0	GP28-S-7.0	GP29-S-6.0	GP30-S-6.0	GP31-S-6.0	MW9-18-19	MW9-32.5-33.5	MW9-38-39	MW11-18-19	MW100	MW-13-11-12	DUP-2-220329	MW-13-28-29
	Sample Date	12/13/2005	12/14/2005	12/14/2005	12/14/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	8/16/2014	8/16/2014	8/16/2014	8/16/2014	8/16/2014	3/29/2022	3/29/2022	3/29/2022
	Start Depth (feet)	10	7	10.5	6.5	7	9.5	13	7	6	6	6	18	32.5	38	18	18	11	11	28
	End Depth (feet)	10	7	10.5	6.5	7	9.5	13	7	6	6	6	19	33.5	39	19	19	12	12	29
Analyte	**Soil PCUL - Saturated**																			
1,4-Dichlorobenzene	0.0081	--	--	--	--	--	--	--												
1,4-Dioxane	0.00013	--	--	--	--	--	--	--												
2,2'-Oxybis[1-chloropropane]	0.12	--	--	--	--	--	--	--												
2,4,5-Trichlorophenol	0.00007	--	--	--	--	--	--	--												
2,4,6-Trichlorophenol	0.0053	--	--	--	--	--	--	--												
2,4-Dichlorophenol	0.0043	--	--	--	--	--	--	--												
2,4-Dimethylphenol	0.0023	--	--	--	--	--	--	--												
2,4-Dinitrophenol	0.0092	--	--	--	--	--	--	--												
2,4-Dinitrotoluene	0.00016	--	--	--	--	--	--	--												
2,6-Dinitrotoluene	0.000051	--	--	--	--	--	--	--												
2-Chloronaphthalene	0.28	--	--	--	--	--	--	--												
2-Chlorophenol	0.011	--	--	--	--	--	--	--												
2-methylphenol	0.0064	--	--	--	--	--	--	--												
2-Nitroaniline	0.064	--	--	--	--	--	--	--												
2-Nitrophenol	NE	--	--	--	--	--	--	--												
3,3'-Dichlorobenzidine	0.000002	--	--	--	--	--	--	--												
3-Nitroaniline	NE	--	--	--	--	--	--	--												
4,6-Dinitro-2-Methylphenol	0.0073	--	--	--	--	--	--	--												
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--												
4-Chloro-3-Methylphenol	0.028	--	--	--	--	--	--	--												
4-Chloroaniline	0.00017	--	--	--	--	--	--	--												
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--												
4-methylphenol	0.062	--	--	--	--	--	--	--												
4-Nitroaniline	0.0013	--	--	--	--	--	--	--												
4-Nitrophenol	NE	--	--	--	--	--	--	--												
Benzoic Acid	0.17	--	--	--	--	--	--	--												
Benzyl Alcohol	0.017	--	--	--	--	--	--	--												
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--												
Bis(2-Chloroethyl)Ether	0.000014	--	--	--	--	--	--	--												
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--												
Butyl benzyl Phthalate	0.00018	--	--	--	--	--	--	--												
Carbazole	NE	--	--	--	--	--	--	--												
Dibutyl Phthalate	0.015	--	--	--	--	--	--	--												
Diethyl Phthalate	0.034	--	--	--	--	--	--	--												
Dimethyl Phthalate	0.019	--	--	--	--	--	--	--												
Di-N-Octyl Phthalate	0.33	--	--	--	--	--	--	--												
Hexachlorobenzene	0.0000004	--	--	--	--	--	--	--												
Hexachlorobutadiene	0.000011	--	--	--	--	--	--	--												
Hexachlorocyclopentadiene	0.0017	--	--	--	--	--	--	--												
Hexachloroethane	0.0000097	--	--	--	--	--	--	--												
Isophorone	0.032	--	--	--	--	--	--	--												
Nitrobenzene	0.0065	--	--	--	--	--	--	--												
N-Nitrosodi-n-propylamine	0.000007	--	--	--	--	--	--	--												
N-Nitrosodiphenylamine	0.0016	--	--	--	--	--	--	--												
Pentachlorophenol	0.0000018	--	--	--	--	--	--	--												
Phenol	0.048	--	--	--	--	--	--	--												
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																				
1-Methylnaphthalene	0.0042	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--	--	--	--	--	--
2-Methylnaphthalene	0.039	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U								
Acenaphthene	0.028	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--	--	--	--	--	--
Acenaphthylene	1.3	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--	--	--	--	--	--
Anthracene	0.051	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--	--	--	--	--	--
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	**0.0154**	**0.0211**	--	--	--	--	--	--	--	--
Benzo(a)pyrene	0.000016	--	--	--	--	--	--	--	--	--	0.0146 U	**0.0176**	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	0.0146 U	**0.0261**	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	0.67	--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--	--	--	--	--	--
Benzo(j,k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	0.0291 U	**0.0432**	--	--	--	--	--	--	--	--
Benzo(j)fluoranthene	NE	--	--	--	--	--	--	--	--	--			--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	0.0146 U	**0.0178**	--	--	--	--	--	--	--	--
Benzofluoranthenes (Total)	3.2	--	--	--	--	--	--	--	--	--			--	--	--	--	--	--	--	--

Analyte	Soil PCUL - Saturated	Location ID	GP22	GP23	GP23	GP24	GP25	GP26	GP27	GP28	GP29	GP30	GP31	MW9	MW9	MW9	MW11	MW11	MW-13	MW-13	MW-13
		Sample ID	GP22-S-10.0	GP23-S-7.0	GP23-S-10.5	GP24-S-6.5	GP25-S-7.0	GP26-S-9.5	GP27-S-13.0	GP28-S-7.0	GP29-S-6.0	GP30-S-6.0	GP31-S-6.0	MW9-18-19	MW9-32.5-33.5	MW9-38-39	MW11-18-19	MW100	MW-13-11-12	DUP-2-220329	MW-13-28-29
		Sample Date	12/13/2005	12/14/2005	12/14/2005	12/14/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	12/12/2005	8/16/2014	8/16/2014	8/16/2014	8/16/2014	8/16/2014	3/29/2022	3/29/2022	3/29/2022
		Start Depth (feet)	10	7	10.5	6.5	7	9.5	13	7	6	6	6	18	32.5	38	18	18	11	11	28
		End Depth (feet)	10	7	10.5	6.5	7	9.5	13	7	6	6	6	19	33.5	39	19	19	12	12	29
Chrysene	NE		--	--	--	--	--	--	--	--	--	**0.0334**	**0.0449**	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NE		--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--	--	--	--	--	--
Dibenzofuran	0.029		--	--	--	--	--	--	--	--	--			--	--	--	--	--	--	--	--
Fluoranthene	0.09		--	--	--	--	--	--	--	--	--	**0.0467**	**0.0517**	--	--	--	--	--	--	--	--
Fluorene	0.029		--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	NE		--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--	--	--	--	--	--
Naphthalene	0.0021		--	--	--	--	--	--	--	--	--	0.0146 U	0.0134 U	--	--	--	--	--	--	--	--
Phenanthrene	1.5		--	--	--	--	--	--	--	--	--	**0.0258**	**0.0287**	--	--	--	--	--	--	--	--
Pyrene	0.14		--	--	--	--	--	--	--	--	--	**0.0531**	**0.05**	--	--	--	--	--	--	--	--
Total cPAH TEQ (ND=0.5RL)	0.000016		--	--	--	--	--	--	--	--	--	**0.01355**	**0.03021**	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																					
PCB-Aroclor 1016	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.00000055		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																					
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
6:2 FTS	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
8:2 FTS	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
NEtFOSAA	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
N-ethylperfluoro-1-octanesulfonamide	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
NMeFOSAA	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
N-methylperfluoro-1-octanesulfonamide	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorobutanesulfonic acid (PFBS)	0.00012		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorodecanesulfonic acid (PFDS)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorodecanoic acid (PFDA)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorododecanoic acid (PFDoA)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluoroheptanoic acid (PFHpA)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorohexanesulfonic acid (PFHxS)	0.000026		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorohexanoic acid (PFHxA)	0.0025		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorononanoic acid (PFNA)	0.0000048		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorooctanesulfonamide (PFOSA)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorooctanoic acid (PFOA)	0.000004		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluoropentanoic acid (PFPeA)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorotetradecanoic acid (PFTeA)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluorotridecanoic acid (PFTrDA)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--
Perfluoroundecanoic acid (PFUnA)	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00082 U	0.00099 U	--

Location ID		MW-14	MW-14	MW-14	MW-14	MW-15	MW-15	MW-15	MW-16	MW-16	MW-16	MW-17	MW-17	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-22
Sample ID		MW-14-10.5-11.5	MW-14-17-18	MW-14-34-35	MW-14-44-45	MW-15-6-7	MW-15-28-29	MW-15-35-36	MW-16-12-13	MW-16-17.5-18.5	MW-16-48-49	MW-17-7-8	MW-17-25-26	MW-17-48-49	MW-18-5.5-6.5	MW19-9-10.5	MW20-23-24.5	MW21-15-16.5	MW22-10-11	MW22-30-31
Sample Date		3/24/2022	3/24/2022	3/24/2022	3/24/2022	3/23/2022	3/23/2022	3/23/2022	3/22/2022	3/22/2022	3/22/2022	3/21/2022	3/21/2022	3/21/2022	3/28/2022	5/26/2023	5/25/2023	5/31/2023	5/30/2023	5/30/2023
Start Depth (feet)		10.5	17	34	44	6	28	35	12	17.5	48	7	25	48	5.5	9	23	15	10	30
End Depth (feet)		11.5	18	35	45	7	29	36	13	18.5	49	8	26	49	6.5	10.5	24.5	16.5	11	31
Analyte	**Soil PCUL - Saturated**																			
Metals (mg/kg)																				
Arsenic	7.3	**3.20**	--	--	**3.54**	**1.54**	**1.95**	--	**4.13**	**2.59**	**3.11**	**4.09**	**1.71**	**3.16**	**8.36**	**3.85**	**6.64**	**3.27**	**3.18**	**5.71**
Cadmium	0.77	**0.05 J**	--	--	**0.11**	**0.05 J**	**0.08 J**	--	**0.08 J**	**0.07 J**	**0.08 J**	**0.07 J**	**0.07 J**	**0.08 J**	0.330 U	**0.07 J**	**0.52**	**0.11 J**	**0.04 J**	**0.25**
Chromium	260	**25.3 J**	--	--	**27.6 J**	**1870**	**27.2**	--	**15.8**	**20.3**	**22.2**	**15.5**	**19.9**	**22.5**	**27.2**	**17.2**	**17.2**	**11.2**	**13.7**	**36.1**
Chromium, Hexavalent	0.00089	0.517 U	--	--	0.537 U	**175**	0.532 U	--	0.664 U	0.534 U	0.539 U	0.709 UJ	0.551 UJ	0.523 UJ	0.791 U	0.660 U	0.798 U	0.667 U	0.631 U	0.612 U
Chromium, Trivalent	27.4	**25.3 J**	--	--	**27.6 J**	**1695**	**27.2**	--	**15.8**	**20.3**	**22.2**	**15.5**	**19.9**	**22.5**	**27.2**	**17.2**	**17.2**	**11.2**	**13.7**	**36.1**
Copper	36	**11.2**	--	--	**19.7**	**8.03**	**14.0**	--	**25.0**	**9.99**	**14.1**	**32.1**	**12.6**	**12.5**	**19.7**	**25.9**	**33.9**	**22.6**	**13.3**	**33.4**
Lead	56	**1.52**	--	--	**3.16**	**2.06**	**1.50**	--	**3.04**	**2.25**	**2.43**	**3.99**	**1.86**	**2.37**	**11.7**	**3.41**	**4.64**	**2.48**	**2.97**	**3.80**
Mercury	0.07	**0.00777 J**	--	--	**0.0317**	0.0289 U	0.0214 U	--	**0.0373**	**0.00879 J**	**0.0167 J**	**0.0529 J**	**0.0207 J**	**0.0318 J**	**0.0639**	**0.0359**	**0.0420**	**0.0396**	**0.0175 J**	**0.0553**
Nickel	48	**34.9**	--	--	**36.8**	**24.8**	**37.1**	--	**13.2**	**24.7**	**31.3**	**13.2**	**32.0**	**27.0**	**20.3**	**11.2**	**17.7**	**9.49**	**10.8**	**54.2**
Selenium	0.26	**0.37 J**	--	--	**0.70**	**0.25 J**	**0.51**	--	**0.62 J**	**0.35 J**	**0.32 J**	**0.97**	**0.42 J**	**0.57**	**1.31**	**0.86**	**1.70**	**0.83**	**0.42 J**	**0.66**
Thallium	0.0044	**0.04 J**	--	--	**0.07 J**	**0.05 J**	**0.03 J**	--	**0.08 J**	**0.04 J**	**0.08 J**	**0.09 J**	**0.04 J**	**0.06 J**	**0.0830**					
Zinc	85	**27.8**	--	--	**49.7**	**28.1**	**27.2**	--	**31.8 J**	**28.8 J**	**36.4 J**	**40.3**	**30.6**	**35.8**	**34.9**	**31.7**	**38.3**	**27.8**	**19.2**	**54.0**
Total Petroleum Hydrocarbons (mg/kg)																				
Gasoline-range hydrocarbons - HCID	30	11 U	--	--	11 U	12 U	11 U	--	14 U	10 U	11 U	14 U	11 U	11 U	14 U	14 U	16 U	14 U	13 U	12 U
Diesel-range hydrocarbons - HCID	2,000	27 U	--	--	28 U	29 U	27 U	--	34 U	25 U	27 U	34 U	28 U	27 U	34 U	34 U	40 U	34 U	32 U	31 U
Lube oil-range hydrocarbons - HCID	2,000	54 U	--	--	55 U	58 U	53 U	--	68 U	50 U	54 U	68 U	56 U	53 U	68 U	68 U	80 U	68 U	64 U	62 U
Total TPH - HCID	2,000	ND	--	--	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gasoline-range hydrocarbons	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range hydrocarbons	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TPH	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range hydrocarbons - w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TPH - w/SGC	2,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (EPH) (mg/kg)																				
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatic	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C8-C10 Aromatic	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C10-C12 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C10-C12 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C12-C16 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C12-C16 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C16-C21 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C16-C21 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C21-C34 Aliphati	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons, C21-C34 Aromat	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (VOCs) (mg/kg)																				
1,1,1,2-Tetrachloroethane	0.00063	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	0.084	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	0.00008	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	120	0.00099 U	--	--	0.00109 U	0.00123 U	0.00108 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	0.00033	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	0.0026	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	0.0025	0.00050 U	0.00050 U	0.00121 U	0.00055 U	**0.00023 J**	0.00054 U	0.00063 U	0.00071 U	0.00065 U	0.00056 U	0.00091 U	0.00053 U	0.00084 U	0.00092 U	0.00130 U	0.00146 U	0.00122 U	0.00119 U	0.00123 U
1,1-Dichloropropene	NE	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	0.011	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	0.00000015	0.00099 U	--	--	0.00109 U	0.00123 U	0.00108 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.0019	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	0.00356 U	0.00325 U	0.00278 U	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	0.072	0.00050 U	--	--	0.00055 U	**0.0347**	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-Chloropropane	0.000056	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	0.000018	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	0.003	0.00050 U	--	--	0.00055 U	**0.00125**	0.00054 U	--	0.00071 U	0.00065 U	0.00056 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	0.0016	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	0.001	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trichlorobenzene	NE	--	--	--	--			--	--	--	--	--	--	--	--	--	--	--	--	--

	Location ID	MW-14	MW-14	MW-14	MW-14	MW-15	MW-15	MW-15	MW-16	MW-16	MW-16	MW-17	MW-17	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-22
	Sample ID	MW-14-10.5-11.5	MW-14-17-18	MW-14-34-35	MW-14-44-45	MW-15-6-7	MW-15-28-29	MW-15-35-36	MW-16-12-13	MW-16-17.5-18.5	MW-16-48-49	MW-17-7-8	MW-17-25-26	MW-17-48-49	MW-18-5.5-6.5	MW19-9-10.5	MW20-23-24.5	MW21-15-16.5	MW22-10-11	MW22-30-31
	Sample Date	3/24/2022	3/24/2022	3/24/2022	3/24/2022	3/23/2022	3/23/2022	3/23/2022	3/22/2022	3/22/2022	3/22/2022	3/21/2022	3/21/2022	3/21/2022	3/28/2022	5/26/2023	5/25/2023	5/31/2023	5/30/2023	5/30/2023
	Start Depth (feet)	10.5	17	34	44	6	28	35	12	17.5	48	7	25	48	5.5	9	23	15	10	30
	End Depth (feet)	11.5	18	35	45	7	29	36	13	18.5	49	8	26	49	6.5	10.5	24.5	16.5	11	31
Analyte	**Soil PCUL - Saturated**																			
1,3,5-Trimethylbenzene	0.071	0.00050 U	--	--	0.00055 U	**0.00868**	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	0.0013	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	0.00071 U	0.00065 U	0.00056 U	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	0.057	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	0.0081	0.00050 U	--	--	0.00055 U	**0.00073**	0.00054 U	--	0.00071 U	0.00065 U	0.00056 U	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	NE	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	NE	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	0.11	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	0.012	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	NE	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	NE	0.00050 U	--	--	0.00055 U	**0.00266**	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	2.1	**0.0296 J**	--	--	**0.0347 J**	**0.0846 J**	**0.0286 J**	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	0.00032	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	0.0000083	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	0.00056	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromobenzene	0.033	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	NE	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	0.005	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	0.0033	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	0.25	0.00050 U	--	--	**0.00082**	**0.0209**	**0.00031 J**	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	0.00015	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	0.051	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	NE	0.00099 U	--	--	0.00109 U	0.00123 U	0.00108 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	0.0048	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	NE	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethylene	0.0052	**0.00855**	**0.00170**	0.00121 U	0.00055 U	**0.00456**	0.00054 U	0.00063 U	0.00071 U	0.00065 U	0.00056 U	0.00091 U	0.00053 U	0.00084 U	0.00092 U	0.00130 U	0.00146 U	0.00122 U	0.00119 U	0.00123 U
cis-1,3-Dichloropropene	0.00014	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	0.0007	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	0.028	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorobromomethane	0.00089	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	0.53	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	0.01	**0.00025 J**	--	--	0.00055 U	**0.00023 J**	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.000011	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	0.00356 U	0.00325 U	0.00278 U	--	--	--	--	--	--	--	--	--
Isopropylbenzene	0.79	0.00050 U	--	--	0.00055 U	**0.00078**	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl ethyl ketone (MEK)	1.4	0.00249 U	--	--	0.00273 U	**0.00283 J**	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Iodide	NE	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl isobutyl ketone	0.19	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	0.0072	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	0.0015	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	0.00648 U	0.00730 U	0.00609 U	0.00595 U	0.00614 U
Naphthalene	0.0021	0.00249 U	--	--	0.00273 U	**0.00277 J**	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	0.71	0.00050 U	--	--	0.00055 U	**0.00508**	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	0.88	0.00050 U	--	--	0.00055 U	**0.00273**	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Sec-Butylbenzene	1.3	0.00050 U	--	--	0.00055 U	**0.00295**	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	0.12	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Tert-Butylbenzene	1	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	0.0016	0.00050 U	--	--	0.00055 U	**0.00034 J**	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	0.044	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethylene	0.032	0.00050 U	0.00050 U	0.00121 U	0.00055 U	0.00062 U	0.00054 U	0.00063 U	0.00071 U	0.00065 U	0.00056 U	0.00091 U	0.00053 U	0.00084 U	0.00092 U	0.00130 U	0.00146 U	0.00122 U	0.00119 U	0.00123 U
trans-1,3-Dichloropropene	0.00014	0.00050 U	--	--	0.00055 U	0.00062 U	0.00054 U	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NE	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethylene	0.00027	**0.0180**	**0.00398**	0.00121 U	0.00055 U	**0.0691**	0.00054 U	0.00063 U	0.00071 U	0.00065 U	0.00056 U	0.00091 U	0.00053 U	0.00084 U	0.00092 U	0.00130 U	0.00146 U	0.00122 U	0.00119 U	0.00123 U
Trichlorofluoromethane	0.79	0.00099 U	--	--	0.00109 U	0.00123 U	0.00108 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Acetate	2.3	0.00249 U	--	--	0.00273 U	0.00308 U	0.00270 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	0.000056	0.00050 U	0.00050 U	0.00121 U	0.00055 U	0.00062 U	0.00054 U	0.00063 U	0.00071 U	0.00065 U	0.00056 U	0.00091 U	0.00053 U	0.00084 U	0.00092 U	0.00130 U	0.00146 U	0.00122 U	0.00119 U	0.00123 U
Xylene, m-,p-	NE	**0.00098 J**	--	--	**0.00041 J**	**0.00076 J**	**0.00044 J**	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, o-	NE	**0.00113**	--	--	**0.00055 J**	**0.00124**	**0.00051 J**	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes	0.055	**0.00210**	--	--	**0.00095 J**	**0.00200**	**0.00095 J**	--	--	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Compounds (SVOCs) (mg/kg)																				
1,2,4-Trichlorobenzene	0.0019	0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	0.003	0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	0.0013	0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Soil PCUL - Saturated	Location ID	MW-14	MW-14	MW-14	MW-14	MW-15	MW-15	MW-15	MW-16	MW-16	MW-16	MW-17	MW-17	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-22
		Sample ID	MW-14-10.5-11.5	MW-14-17-18	MW-14-34-35	MW-14-44-45	MW-15-6-7	MW-15-28-29	MW-15-35-36	MW-16-12-13	MW-16-17.5-18.5	MW-16-48-49	MW-17-7-8	MW-17-25-26	MW-17-48-49	MW-18-5.5-6.5	MW19-9-10.5	MW20-23-24.5	MW21-15-16.5	MW22-10-11	MW22-30-31
		Sample Date	3/24/2022	3/24/2022	3/24/2022	3/24/2022	3/23/2022	3/23/2022	3/23/2022	3/22/2022	3/22/2022	3/22/2022	3/21/2022	3/21/2022	3/21/2022	3/28/2022	5/26/2023	5/25/2023	5/31/2023	5/30/2023	5/30/2023
		Start Depth (feet)	10.5	17	34	44	6	28	35	12	17.5	48	7	25	48	5.5	9	23	15	10	30
		End Depth (feet)	11.5	18	35	45	7	29	36	13	18.5	49	8	26	49	6.5	10.5	24.5	16.5	11	31
1,4-Dichlorobenzene	0.0081		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	0.00013		0.335 U			0.335 U	0.335 U	0.335 U	--	--	--	--	--	--	--	--	0.334 U	1.01 U	0.334 U	**0.601**	0.334 U
2,2'-Oxybis[1-chloropropane]	0.12		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.00007		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	0.0053		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	0.0043		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	0.0023		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	0.0092		0.2 U			0.2 U	0.2 U	0.199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.00016		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.000051		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	0.28		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	0.011		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol	0.0064		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	0.064		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NE		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.000002		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NE		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	0.0073		0.2 U			0.2 U	0.2 U	0.199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	0.028		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	0.00017		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE		0.0499 U			0.0499 U	0.0499 U	0.0498 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol	0.062		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	0.0013		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	NE		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	0.17		0.2 U			0.2 U	0.2 U	0.199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	0.017		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.000014		0.0499 U			0.0499 U	0.0499 U	0.0498 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051		0.0499 U			0.0499 U	0.0499 U	0.0498 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.00018		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NE		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	0.015		**0.0064 J**			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.034		0.0499 U			**0.345**	0.0499 U	0.0498 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	0.019		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	0.33		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.0000004		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.000011		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.0017		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	0.0000097		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	0.032		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	0.0065		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.000007		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.0016		0.0200 UJ			0.0200 UJ	0.0200 UJ	0.0199 UJ	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	0.0000018		0.0998 U			0.0999 U	0.0999 U	0.0997 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	0.048		0.0200 U			0.0200 U	0.0200 U	0.0199 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																					
1-Methylnaphthalene	0.0042		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	**0.00200 J**	**0.00137 J**	**0.00097 J**	**0.0166**	**0.00067 J**
2-Methylnaphthalene	0.039		0.00500 U			**0.00294 J**	**0.00298 J**	0.00499 U	--	--	--	--	--	--	--	--	**0.00285 J**	**0.00161 J**	**0.00128 J**	**0.00307 J**	0.00500 U
Acenaphthene	0.028		0.00500 U	--	--	**0.00113 J**	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	**0.00326 J**	**0.00103 J**	**0.00064 J**	**0.00142 J**	0.00500 U
Acenaphthylene	1.3		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	0.00498 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Anthracene	0.051		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	**0.00370 J**	0.00500 U	**0.00137 J**	**0.00343 J**	**0.00103 J**
Benzo(a)anthracene	NE		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	**0.00107 J**	0.00500 U	**0.00261 J**	**0.00672**	**0.00291 J**
Benzo(a)pyrene	0.000016		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	0.00498 U	0.00500 U	**0.00568**	**0.00721**	**0.00547**
Benzo(b)fluoranthene	NE		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	0.00498 U	**0.00148 J**	**0.00423 J**	**0.00874**	**0.00433 J**
Benzo(g,h,i)perylene	0.67		0.00500 U	--	--	**0.00211 J**	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	0.00498 U	**0.00175 J**	**0.00925**	**0.00812**	**0.00842**
Benzo(j,k)fluoranthene	NE			--	--				--	--	--	--	--	--	--	--					
Benzo(j)fluoranthene	NE		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	0.00498 U	0.00500 U	**0.00237 J**	**0.00493 J**	**0.00269 J**
Benzo(k)fluoranthene	NE		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	0.00498 U	0.00500 U	**0.00253 J**	**0.00434 J**	**0.00259 J**
Benzofluoranthenes (Total)	3.2		0.0100 U	--	--	0.0100 U	0.00996 U	0.00997 U	--	--	--	--	--	--	--	--	0.00996 U	0.00999 U	**0.00926 J**	**0.0182**	**0.00980 J**

Analyte	Soil PCUL - Saturated	Location ID	MW-14	MW-14	MW-14	MW-14	MW-15	MW-15	MW-15	MW-16	MW-16	MW-16	MW-17	MW-17	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-22
		Sample ID	MW-14-10.5-11.5	MW-14-17-18	MW-14-34-35	MW-14-44-45	MW-15-6-7	MW-15-28-29	MW-15-35-36	MW-16-12-13	MW-16-17.5-18.5	MW-16-48-49	MW-17-7-8	MW-17-25-26	MW-17-48-49	MW-18-5.5-6.5	MW-19-9-10.5	MW-20-23-24.5	MW-21-15-16.5	MW-22-10-11	MW-22-30-31
		Sample Date	3/24/2022	3/24/2022	3/24/2022	3/24/2022	3/23/2022	3/23/2022	3/23/2022	3/22/2022	3/22/2022	3/22/2022	3/21/2022	3/21/2022	3/21/2022	3/28/2022	5/26/2023	5/25/2023	5/31/2023	5/30/2023	5/30/2023
		Start Depth (feet)	10.5	17	34	44	6	28	35	12	17.5	48	7	25	48	5.5	9	23	15	10	30
		End Depth (feet)	11.5	18	35	45	7	29	36	13	18.5	49	8	26	49	6.5	10.5	24.5	16.5	11	31
Chrysene	NE		0.00500 U	--	--	**0.00173 J**	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	**0.00221 J**	**0.00144 J**	**0.00513**	**0.0109**	**0.00530**
Dibenzo(a,h)anthracene	NE		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	0.00498 U	0.00500 U	0.00500 U	**0.00095 J**	0.00500 U
Dibenzofuran	0.029		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	0.00498 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Fluoranthene	0.09		0.00500 U	--	--	**0.00181 J**	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	**0.00796**	**0.00222 J**	**0.00457 J**	**0.0205**	**0.00425 J**
Fluorene	0.029		0.00500 U	--	--	**0.00101 J**	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	**0.00246 J**	0.00500 U	**0.00064 J**	**0.00188 J**	0.00500 U
Indeno(1,2,3-c,d)pyrene	NE		0.00500 U	--	--	0.00500 U	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	0.00498 U	0.00500 U	**0.00527**	**0.00596**	**0.00531**
Naphthalene	0.0021		0.00500 U	--	--	**0.00128 J**	**0.00598**	0.00499 U	--	--	--	--	--	--	--	--	**0.00462 J**	**0.00232 J**	0.00500 U	**0.00405 J**	0.00500 U
Phenanthrene	1.5		0.00500 U	--	--	**0.00331 J**	**0.00110 J**	**0.00073 J**	--	--	--	--	--	--	--	--	**0.0205**	**0.00401 J**	**0.00579**	**0.0128**	**0.00450 J**
Pyrene	0.14		0.00500 U	--	--	**0.00219 J**	0.00498 U	0.00499 U	--	--	--	--	--	--	--	--	**0.00885**	**0.00268 J**	**0.00580**	**0.0206**	**0.00555**
Total cPAH TEQ (ND=0.5RL)	0.000016		0.00428 U	--	--	**0.00427**	0.00426 U	0.00427 U	--	--	--	--	--	--	--	--	**0.00411 J**	**0.00416 J**	**0.00837 J**	**0.01181 J**	**0.00827 J**
Polychlorinated Biphenyls (PCBs) (mg/kg)																					
PCB-Aroclor 1016	NE		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.00000055		0.0200 U	--	--	0.0199 U	0.0199 U	0.0198 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																					
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 FTS	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 FTS	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
NEtFOSAA	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
NMeFOSAA	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE		**0.00014 J**	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	0.00012		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	0.000026		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic acid (PFHxA)	0.0025		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic acid (PFNA)	0.0000048		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE		0.0011 U	--	--	--	--	**0.000069 J**	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE		0.0011 U	--	--	--	--	0.0010 U	--	--	--	--	--	--	--	--	--	--	--	--	--

Location ID		MW-22	MW-23	MW-23	SB1	SB3	SB4	SB4	SB5	SB6	SB7	SB7	SB8	SB10	SB11	SB11	SB12	SB13	SB14	SB15
Sample ID		MW22-45-45.5	MW23-5-6.5	MW23-15-16.5	SB1-5	SB3-8	SB4-5	SB4-20	SB5-11	SB6-16	SB7-11	SB7-19	SB8-16	SB10-7	SB11-10	SB11-30	SB12-12	SB13-9	SB14-6	SB15-26
Sample Date		5/30/2023	5/24/2023	5/24/2023	8/8/2014	8/8/2014	8/7/2014	8/7/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	4/15/2015
Start Depth (feet)		45	5	15	5	8	5	20	11	16	11	19	16	7	10	30	12	9	6	26
End Depth (feet)		45.5	6.5	16.5	5	8	5	20	11	16	11	19	16	7	10	30	12	9	6	26
Analyte	**Soil PCUL - Saturated**																			
Metals (mg/kg)																				
Arsenic	7.3	**2.49**	**5.48**	**3.03**	5 U	6 U	**7**	**6**	7 U	7 U	7 U	6 U	7 U	5 U	6 U	**6**	7 U	8 U	5 U	**5.6**
Cadmium	0.77	**0.10 J**	**0.28**	**0.04 J**																
Chromium	260	**40.0**	**14.9**	**9.78**	**48.7**	**67.3**	**22.7**	**14.9**	**15.7**	**10**	**17.7**	**24.8**	**23.7**	**30.3**	**11.7**	**20.9**	**17**	**16.8**	**27.6**	**17.9**
Chromium, Hexavalent	0.00089	0.553 U	0.657 U	0.632 U	0.44 U	0.452 U	0.572 U	0.482 U	0.552 U	0.571 U	0.554 U	0.462 U	0.544 U	0.445 U	0.472 U	0.484 U	0.516 U	0.534 U	0.425 U	0.519 U
Chromium, Trivalent	27.4	**40.0**	**14.9**	**9.78**	**48.7**	**67.3**	**22.7**	**14.9**	**15.7**	**10**	**17.7**	**24.8**	**23.7**	**30.3**	**11.7**	**20.9**	**17**	**16.8**	**27.6**	**17.9**
Copper	36	**14.9**	**27.8**	**18.8**																
Lead	56	**2.25**	**45.6**	**2.15**	2 U	2 U	**11**	2 U	3 U	3 U	**4**	2 U	**7**	**2**	**6**	2 U	3 U	3 U	**56**	**2.9**
Mercury	0.07	**0.0150 J**	**0.0382**	**0.0223 J**																
Nickel	48	**32.2**	**13.6**	**8.34**																
Selenium	0.26	**0.59**	**0.81**	**1.10**	5 U	6 U	6 U	6 U	7 U	7 U	7 U	6 U	7 U	5 U	6 U	6 U	7 U	8 U	5 U	**0.9**
Thallium	0.0044																			
Zinc	85	**32.8**	**63.1**	**23.0**																
Total Petroleum Hydrocarbons (mg/kg)																				
Gasoline-range hydrocarbons - HCID	30	11 U	13 U	13 U																
Diesel-range hydrocarbons - HCID	2,000	28 U	33 U	32 U																
Lube oil-range hydrocarbons - HCID	2,000	56 U	**67**	65 U																
Total TPH - HCID	2,000	ND	**67**	ND																
Gasoline-range hydrocarbons	30	--																		9.5 U
Diesel-range hydrocarbons	2,000	--	**14.7**		**7.5**	5.8 U	**65**	6.2 U	**420**	**15**	**38**	5.9 U	**74**	5.6 U	**9.7**		6.5 U	6.7 U	**74**	6.7 U
Lube oil-range hydrocarbons	2,000	--	**89.7**		**62**	**14**	**220**	12 U	**1900**	**49**	**440**	12 U	**560**	11 U	**30**		**19**	**18**	**730**	13 U
Total TPH	2,000	--	**104.4**		**69.5**	**14**	**285**	ND	**2320**	**64**	**478**	ND	**634**	ND	**39.7**		**19**	**18**	**804**	ND
Diesel-range hydrocarbons - w/SGC	2,000	--	6.37 U																	
Lube oil-range hydrocarbons - w/SGC	2,000	--	**49.4**																	
Total TPH - w/SGC	2,000	--	**49.4**																	
Extractable Petroleum Hydrocarbons (EPH) (mg/kg)																				
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatic	NE	--																		
Extractable Petroleum Hydrocarbons, C8-C10 Aromatic	NE	--																		
Extractable Petroleum Hydrocarbons, C10-C12 Aliphati	NE	--																		
Extractable Petroleum Hydrocarbons, C10-C12 Aromat	NE	--																		
Extractable Petroleum Hydrocarbons, C12-C16 Aliphati	NE	--																		
Extractable Petroleum Hydrocarbons, C12-C16 Aromat	NE	--																		
Extractable Petroleum Hydrocarbons, C16-C21 Aliphati	NE	--																		
Extractable Petroleum Hydrocarbons, C16-C21 Aromat	NE	--																		
Extractable Petroleum Hydrocarbons, C21-C34 Aliphati	NE	--																		
Extractable Petroleum Hydrocarbons, C21-C34 Aromat	NE	--																		
Volatile Organic Compounds (VOCs) (mg/kg)																				
1,1,1,2-Tetrachloroethane	0.00063	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U		0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,1,1-Trichloroethane	0.084	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U		0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,1,2,2-Tetrachloroethane	0.00008	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U		0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	120	--	--	--	0.002 U	0.0015 U	0.0035 U	0.0022 U	0.0027 U	0.0028 U	0.0031 U	0.0013 U	0.003 U	0.0022 U	0.0025 U	--	0.0024 U	0.0029 U	0.0041 U	0.0027 U
1,1,2-Trichloroethane	0.00033	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,1-Dichloroethane	0.0026	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,1-Dichloroethylene	0.0025	0.00079 U	0.00124 U	0.00141 U	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,1-Dichloropropene	NE	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,2,3-Trichlorobenzene	0.011	--	--	--	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	--	0.006 U	0.0072 U	0.01 U	0.0067 U
1,2,3-Trichloropropane	0.00000015	--	--	--	0.002 U	0.0015 U	0.0035 U	0.0022 U	0.0027 U	0.0028 U	0.0031 U	0.0013 U	0.003 U	0.0022 U	0.0025 U	--	0.0024 U	0.0029 U	0.0041 U	0.0027 U
1,2,4-Trichlorobenzene	0.0019	--	--	--	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	--	0.006 U	0.0072 U	0.01 U	0.0067 U
1,2,4-Trimethylbenzene	0.072	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	**0.008**	0.0013 U
1,2-Dibromo-3-Chloropropane	0.000056	--	--	--	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	--	0.006 U	0.0072 U	0.01 U	0.0067 U
1,2-Dibromoethane	0.000018	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,2-Dichlorobenzene	0.003	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,2-Dichloroethane	0.0016	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,2-Dichloropropane	0.001	--	--	--	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	--	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,3,5-Trichlorobenzene	NE	--	--	--					--	--	--	--	--	--	--	--	--	--	--	--

	Location ID	MW-22	MW-23	MW-23	SB1	SB3	SB4	SB4	SB5	SB6	SB7	SB7	SB8	SB10	SB11	SB11	SB12	SB13	SB14	SB15
	Sample ID	MW22-45-45.5	MW23-5-6.5	MW23-15-16.5	SB1-5	SB3-8	SB4-5	SB4-20	SB5-11	SB6-16	SB7-11	SB7-19	SB8-16	SB10-7	SB11-10	SB11-30	SB12-12	SB13-9	SB14-6	SB15-26
	Sample Date	5/30/2023	5/24/2023	5/24/2023	8/8/2014	8/8/2014	8/7/2014	8/7/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	4/15/2015
	Start Depth (feet)	45	5	15	5	8	5	20	11	16	11	19	16	7	10	30	12	9	6	26
	End Depth (feet)	45.5	6.5	16.5	5	8	5	20	11	16	11	19	16	7	10	30	12	9	6	26
Analyte	**Soil PCUL - Saturated**																			
1,3,5-Trimethylbenzene	0.071	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	**0.016**	0.0013 U
1,3-Dichlorobenzene	0.0013	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,3-Dichloropropane	0.057	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
1,4-Dichlorobenzene	0.0081	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
2,2-Dichloropropane	NE	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
2-Chloroethyl vinyl ether	NE	–	–	–	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	–	0.006 U	0.0072 U	0.01 U	0.0067 U
2-Chlorotoluene	0.11	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
2-Hexanone	0.012	–	–	–	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	–	0.006 U	0.0072 U	0.01 U	0.0067 U
4-Chlorotoluene	NE	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
4-Isopropyltoluene	NE	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	**0.004**	0.0013 U
Acetone	2.1	–	–	–	**0.015 J**	**0.025 J**	**0.032 J**	**0.036 J**	**0.058 J**	**0.027 J**	**0.061 J**	**0.016 J**	**0.07 J**	**0.017 J**	**0.035 J**	–	**0.055 J**	**0.037 J**	0.01 U	0.0067 U
Acrolein	0.00032	–	–	–	0.049 U	0.037 U	0.088 U	0.055 U	0.068 U	0.07 U	0.077 U	0.032 U	0.076 U	0.055 U	0.064 U	–	0.06 U	0.072 U	0.1 U	0.067 U
Acrylonitrile	0.0000083	–	–	–	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	–	0.006 U	0.0072 U	0.01 U	0.0067 U
Benzene	0.00056	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	**0.0021**	0.0013 U
Bromobenzene	0.033	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Bromochloromethane	NE	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Bromoethane	NE	–	–	–	0.002 U	0.0015 U	0.0035 U	0.0022 U	0.0027 U	0.0028 U	0.0031 U	0.0013 U	0.003 U	0.0022 U	0.0025 U	–	0.0024 U	0.0029 U	0.0041 U	0.0027 U
Bromoform	0.005	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Bromomethane	0.0033	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Carbon Disulfide	0.25	–	–	–	0.001 U	**0.012 J**	**0.0045 J**	**0.0063 J**	**0.0056 J**	**0.0028 J**	**0.0091 J**	**0.0043 J**	**0.011 J**	**0.0017 J**	**0.0048 J**	–	**0.021 J**	**0.003 J**	**0.0067 J**	**0.0028**
Carbon Tetrachloride	0.00015	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Chlorobenzene	0.051	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Chloroethane	NE	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Chloroform	0.0048	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Chloromethane	NE	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
cis-1,2-Dichloroethylene	0.0052	0.00079 U	0.00124 U	0.00141 U	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
cis-1,3-Dichloropropene	0.00014	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Dibromochloromethane	0.0007	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Dibromomethane	0.028	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Dichlorobromomethane	0.00089	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Dichlorodifluoromethane	0.53	–	–	–					–	–	–	–	–	–	–	–	–	–	–	–
Ethylbenzene	0.01	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	**0.056**	0.0013 U
Hexachlorobutadiene	0.000011	–	–	–	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	–	0.006 U	0.0072 U	0.01 U	0.0067 U
Isopropylbenzene	0.79	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	**0.015**	0.0013 U
Methyl ethyl ketone (MEK)	1.4	–	–	–	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	–	0.006 U	0.0072 U	0.01 U	0.0067 U
Methyl Iodide	NE	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Methyl isobutyl ketone	0.19	–	–	–	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	–	0.006 U	0.0072 U	0.01 U	0.0067 U
Methyl tert-butyl ether	0.0072	–	–	–					–	–	–	–	–	–	–	–	–	–	–	–
Methylene Chloride	0.0015	0.00397 U	0.00620 U	0.00703 U	0.002 U	**0.0024**	**0.0039**	**0.0028**	**0.0048**	**0.0048**	**0.0094**	**0.0024**	0.003 U	**0.0026**	**0.0083**	–	0.0024 U	**0.0035**	0.0041 U	0.0027 U
Naphthalene	0.0021	–	–	–	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	–	0.006 U	0.0072 U	**0.028**	0.0067 U
n-Butylbenzene	0.71	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	**0.0045 J**	**0.011 J**	0.0013 U
n-Propylbenzene	0.88	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	**0.046**	0.0013 U
Sec-Butylbenzene	1.3	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	**0.0081**	**0.0036**	0.0013 U
Styrene	0.12	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Tert-Butylbenzene	1	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Tetrachloroethylene	0.0016	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Toluene	0.044	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	**0.0071**	0.0013 U
trans-1,2-Dichloroethylene	0.032	0.00079 U	0.00124 U	0.00141 U	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
trans-1,3-Dichloropropene	0.00014	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
trans-1,4-Dichloro-2-butene	NE	–	–	–	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	–	0.006 U	0.0072 U	0.01 U	0.0067 U
Trichloroethylene	0.00027	0.00079 U	0.00124 U	0.00141 U	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Trichlorofluoromethane	0.79	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Vinyl Acetate	2.3	–	–	–	0.0049 U	0.0037 U	0.0088 U	0.0055 U	0.0068 U	0.007 U	0.0077 U	0.0032 U	0.0076 U	0.0055 U	0.0064 U	–	0.006 U	0.0072 U	0.01 U	0.0067 U
Vinyl Chloride	0.000056	0.00079 U	0.00124 U	0.00141 U	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Xylene, m-,p-	NE	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	**0.029**	0.0013 U
Xylene, o-	NE	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	0.0021 U	0.0013 U
Total Xylenes	0.055	–	–	–	0.001 U	0.0007 U	0.0018 U	0.0011 U	0.0014 U	0.0014 U	0.0015 U	0.0006 U	0.0015 U	0.0011 U	0.0013 U	–	0.0012 U	0.0014 U	**0.029**	0.0013 U
Semivolatile Compounds (SVOCs) (mg/kg)																				
1,2,4-Trichlorobenzene	0.0019	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2-Dichlorobenzene	0.003	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,3-Dichlorobenzene	0.0013	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

	Location ID	MW-22	MW-23	MW-23	SB1	SB3	SB4	SB4	SB5	SB6	SB7	SB7	SB8	SB10	SB11	SB11	SB12	SB13	SB14	SB15
	Sample ID	MW22-45-45.5	MW23-5-6.5	MW23-15-16.5	SB1-5	SB3-8	SB4-5	SB4-20	SB5-11	SB6-16	SB7-11	SB7-19	SB8-16	SB10-7	SB11-10	SB11-30	SB12-12	SB13-9	SB14-6	SB15-26
	Sample Date	5/30/2023	5/24/2023	5/24/2023	8/8/2014	8/8/2014	8/7/2014	8/7/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	4/15/2015
	Start Depth (feet)	45	5	15	5	8	5	20	11	16	11	19	16	7	10	30	12	9	6	26
	End Depth (feet)	45.5	6.5	16.5	5	8	5	20	11	16	11	19	16	7	10	30	12	9	6	26
Analyte	**Soil PCUL - Saturated**																			
1,4-Dichlorobenzene	0.0081	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	0.00013	0.335 U	1 U	1 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-Oxybis[1-chloropropane]	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.00007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	0.0053	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	0.0043	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	0.0023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	0.0092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.00016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.000051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	0.011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol	0.0064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	0.064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.000002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	0.0073	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	0.028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	0.00017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol	0.062	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	0.017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.000014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.00018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	0.019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.0000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.0017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	0.0000097	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	0.0065	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.000007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.0016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	0.0000018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	0.048	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																				
1-Methylnaphthalene	0.0042	**0.00064 J**	0.0150 U	**0.00098 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	0.039	**0.00114 J**	0.0150 U	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	0.028	0.00500 U	0.0150 U	**0.00078 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	1.3	0.00500 U	0.0150 U	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	0.051	0.00500 U	**0.00322**	**0.00111 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	NE	0.00500 U	**0.00904**	**0.00159 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	0.000016	0.00500 U	**0.0113**	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	0.00500 U	**0.0209**	**0.00221 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	0.67	0.00500 U	**0.0130**	**0.00283 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(j,k)fluoranthene	NE				--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(j)fluoranthene	NE	**0.00098 J**	**0.0123**	**0.00134 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	0.00500 U	**0.0114**	**0.00135 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzofluoranthenes (Total)	3.2	0.00999 U	**0.0444**	**0.00488 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	Location ID	MW-22	MW-23	MW-23	SB1	SB3	SB4	SB4	SB5	SB6	SB7	SB7	SB8	SB10	SB11	SB11	SB12	SB13	SB14	SB15
	Sample ID	MW22-45-45.5	MW23-5-6.5	MW23-15-16.5	SB1-5	SB3-8	SB4-5	SB4-20	SB5-11	SB6-16	SB7-11	SB7-19	SB8-16	SB10-7	SB11-10	SB11-30	SB12-12	SB13-9	SB14-6	SB15-26
	Sample Date	5/30/2023	5/24/2023	5/24/2023	8/8/2014	8/8/2014	8/7/2014	8/7/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/8/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	8/7/2014	4/15/2015
	Start Depth (feet)	45	5	15	5	8	5	20	11	16	11	19	16	7	10	30	12	9	6	26
	End Depth (feet)	45.5	6.5	16.5	5	8	5	20	11	16	11	19	16	7	10	30	12	9	6	26
Analyte	**Soil PCUL - Saturated**																			
Chrysene	NE	**0.00123 J**	**0.0173**	**0.00228 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NE	0.00500 U	**0.00963**	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	0.029	0.00500 U	0.0150 U	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	0.09	**0.00192 J**	**0.0169**	**0.00351 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	0.029	0.00500 U	0.0150 U	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	0.00500 U	**0.00934**	**0.00119 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	0.0021	**0.00146 J**	0.0150 U	**0.00134 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	1.5	**0.00272 J**	**0.00967**	**0.00399 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	0.14	**0.00179 J**	**0.0231**	**0.00416 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total cPAH TEQ (ND=0.5RL)	0.000016	**0.00426 J**	**0.02194**	**0.00390 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																				
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.00000055	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																				
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NEtFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NMeFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	0.00012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic acid (PFHxA)	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic acid (PFNA)	0.0000048	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Location ID		SB15		SB16		SB16		SB16		SB17		SB17		SB17		SB18		SB18		SB18		SB19		SB19		SB19		SB20		SB20		SB21		SB21	
Sample ID		SB15-41		SB16-26		SB16-40		SB16-46		SB17-26		SB17-40		SB17-43.5		SB18-26		SB18-36.5		SB18-39.5		SB19-35		SB19-45		SB19-50		SB20-5-6		SB20-10-11		SB21-8-9		SB21-13-14	
Sample Date		4/15/2015		4/16/2015		4/16/2015		4/16/2015		4/16/2015		4/17/2015		4/17/2015		4/17/2015		4/17/2015		4/17/2015		4/20/2015		4/20/2015		4/20/2015		3/8/2022		3/8/2022		3/7/2022		3/7/2022	
Start Depth (feet)		41		26		40		46		26		40		43.5		26		36.5		39.5		35		45		50		5		10		8		13	
End Depth (feet)		41		26		40		46		26		40		43.5		26		36.5		39.5		35		45		50		6		11		9		14	
Analyte	**Soil PCUL - Saturated**																																		
Metals (mg/kg)																																			
Arsenic	7.3	**4.9**		**5.6**		**3.1**		**2.9**		**4.8**		**2.5**		**2.8**		**6.4**		**2.3**		**2.1**		**8.5**		**6.2**		**3.7**		**3.12**		**2.79**		**4.20**		**4.05**	
Cadmium	0.77																											**0.10**	**J**	**0.07**	**J**	**0.12**	**J**	**0.08**	**J**
Chromium	260	**43.4**		**18.6**		**26.1**		**24.5**		**18.4**		**21.2**		**25.3**		**19.5**		**18.1**		**21.9**		**20.4**		**46**		**43.8**		**24.7**		**24.4**		**25**		**19.6**	**J**
Chromium, Hexavalent	0.00089	0.502	U	0.525	U	0.476	U	0.441	U	0.499	U	0.426	U	**1.78**		0.51	U	0.459	U	0.426	U	0.5	U	0.469	U	0.508	U	0.538	UJ	0.545	UJ	0.593	UJ	0.546	UJ
Chromium, Trivalent	27.4	**43.4**		**18.6**		**26.1**		**24.5**		**18.4**		**21.2**		**25.3**		**19.5**		**18.1**		**21.9**		**20.4**		**46**		**43.8**		**24.7**		**24.4**		**25**		**19.6**	**J**
Copper	36																											**13.4**		**11.0**		**17.9**		**16.3**	
Lead	56	**4**		**2.6**		**2.3**		**2.4**		**2.1**		**1.7**		**1.9**		**2.9**		**1.8**		**1.7**		**2.5**		**4.6**		**3.9**		**2.62**		**2.05**		**3.59**		**3.05**	
Mercury	0.07																											**0.0218**	**J**	**0.0185**	**J**	**0.0302**		**0.0108**	**J**
Nickel	48																											**30.4**		**29.9**		**30.1**		**24.4**	
Selenium	0.26	0.6	U	0.6	U	0.5	U	0.5	U	0.6	U	0.5	U	0.6	U	0.6	U	0.5	U	0.5	U	0.6	U	1	U	0.6	U	**0.74**		**0.73**		**0.93**		**0.96**	
Thallium	0.0044																											**0.10**	**J**	**0.06**	**J**	**0.10**	**J**	**0.09**	**J**
Zinc	85																											**37.2**		**30.6**		**48.3**		**41.2**	
Total Petroleum Hydrocarbons (mg/kg)																																			
Gasoline-range hydrocarbons - HCID	30																											11	U	11	U	11	U	11	U
Diesel-range hydrocarbons - HCID	2,000																											27	U	27	U	29	U	28	U
Lube oil-range hydrocarbons - HCID	2,000																											55	U	54	U	57	U	56	U
Total TPH - HCID	2,000																											ND		ND		ND		ND	
Gasoline-range hydrocarbons	30			8.8	U					8.6	U					7.8	U					7.7	U												
Diesel-range hydrocarbons	2,000	5.8	U	7.3	U					6.5	U	6.2	U			6.7	U	5.5	U			6.4	U	6	U	6.3	U								
Lube oil-range hydrocarbons	2,000	12	U	15	U					13	U	12	U			13	U	11	U			13	U	12	U	13	U								
Total TPH	2,000	ND		ND						ND		ND				ND		ND				ND		ND		ND									
Diesel-range hydrocarbons - w/SGC	2,000																																		
Lube oil-range hydrocarbons - w/SGC	2,000																																		
Total TPH - w/SGC	2,000																																		
Extractable Petroleum Hydrocarbons (EPH) (mg/kg)																																			
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatic	NE																																		
Extractable Petroleum Hydrocarbons, C8-C10 Aromatic	NE																																		
Extractable Petroleum Hydrocarbons, C10-C12 Aliphati	NE																																		
Extractable Petroleum Hydrocarbons, C10-C12 Aromat	NE																																		
Extractable Petroleum Hydrocarbons, C12-C16 Aliphati	NE																																		
Extractable Petroleum Hydrocarbons, C12-C16 Aromat	NE																																		
Extractable Petroleum Hydrocarbons, C16-C21 Aliphati	NE																																		
Extractable Petroleum Hydrocarbons, C16-C21 Aromat	NE																																		
Extractable Petroleum Hydrocarbons, C21-C34 Aliphati	NE																																		
Extractable Petroleum Hydrocarbons, C21-C34 Aromat	NE																																		
Volatile Organic Compounds (VOCs) (mg/kg)																																			
1,1,1,2-Tetrachloroethane	0.00063	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,1,1-Trichloroethane	0.084	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,1,2,2-Tetrachloroethane	0.00008	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	120	0.0024	U	0.0029	U	--		--		0.003	U	0.002	U	0.0019	U	0.0028	U	0.0017	U	--		0.0031	U	0.0019	U	0.0022	U	--		--		--		--	
1,1,2-Trichloroethane	0.00033	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,1-Dichloroethane	0.0026	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,1-Dichloroethylene	0.0025	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	0.00090	U	0.00092	U	0.00068	U	0.00074	U
1,1-Dichloropropene	NE	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,2,3-Trichlorobenzene	0.011	0.006	U	0.0073	U	--		--		0.0075	U	0.0051	U	0.0047	U	0.0069	U	0.0041	U	--		0.0077	U	0.0048	U	0.0054	U	--		--		--		--	
1,2,3-Trichloropropane	0.00000015	0.0024	U	0.0029	U	--		--		0.003	U	0.002	U	0.0019	U	0.0028	U	0.0017	U	--		0.0031	U	0.0019	U	0.0022	U	--		--		--		--	
1,2,4-Trichlorobenzene	0.0019	0.006	U	0.0073	U	--		--		0.0075	U	0.0051	U	0.0047	U	0.0069	U	0.0041	U	--		0.0077	U	0.0048	U	0.0054	U	0.00450	U	0.00460	U	0.00338	U	0.00370	U
1,2,4-Trimethylbenzene	0.072	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,2-Dibromo-3-Chloropropane	0.000056	0.006	U	0.0073	U	--		--		0.0075	U	0.0051	U	0.0047	U	0.0069	U	0.0041	U	--		0.0077	U	0.0048	U	0.0054	U	--		--		--		--	
1,2-Dibromoethane	0.000018	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,2-Dichlorobenzene	0.003	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	0.00090	U	0.00092	U	0.00068	U	0.00074	U
1,2-Dichloroethane	0.0016	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,2-Dichloropropane	0.001	0.0012	U	0.0015	U	--		--		0.0015	U	0.001	U	0.0009	U	0.0014	U	0.0008	U	--		0.0015	U	0.001	U	0.0011	U	--		--		--		--	
1,3,5-Trichlorobenzene	NE	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	

Analyte	Soil PCUL - Saturated	Location ID	SB15	SB16	SB16	SB16	SB17	SB17	SB17	SB18	SB18	SB18	SB19	SB19	SB19	SB-20	SB-20	SB-21	SB-21
		Sample ID	SB15-41	SB16-26	SB16-40	SB16-46	SB17-26	SB17-40	SB17-43.5	SB18-26	SB18-36.5	SB18-39.5	SB19-35	SB19-45	SB19-50	SB-20-5-6	SB-20-10-11	SB-21-8-9	SB-21-13-14
		Sample Date	4/15/2015	4/16/2015	4/16/2015	4/16/2015	4/16/2015	4/17/2015	4/17/2015	4/17/2015	4/17/2015	4/17/2015	4/20/2015	4/20/2015	4/20/2015	3/8/2022	3/8/2022	3/7/2022	3/7/2022
		Start Depth (feet)	41	26	40	46	26	40	43.5	26	36.5	39.5	35	45	50	5	10	8	13
		End Depth (feet)	41	26	40	46	26	40	43.5	26	36.5	39.5	35	45	50	6	11	9	14
1,3,5-Trimethylbenzene	0.071	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–
1,3-Dichlorobenzene	0.0013	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	0.00090 U	0.00092 U	0.00068 U	0.00074 U
1,3-Dichloropropane	0.057	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
1,4-Dichlorobenzene	0.0081	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	0.00090 U	0.00092 U	0.00068 U	0.00074 U
2,2-Dichloropropane	NE	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
2-Chloroethyl vinyl ether	NE	0.006 U	0.0073 U	–	–	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	–	0.0077 U	0.0048 U	0.0054 U	–	–	–	–	–
2-Chlorotoluene	0.11	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
2-Hexanone	0.012	0.006 U	0.0073 U	–	–	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	–	0.0077 U	0.0048 U	0.0054 U	–	–	–	–	–
4-Chlorotoluene	NE	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
4-Isopropyltoluene	NE	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Acetone	2.1	0.006 U	**0.029**	–	–	**0.034**	0.0051 U	**0.0088**	**0.025**	0.0041 U	–	**0.034**	0.0048 U	0.0054 U	–	–	–	–	–
Acrolein	0.00032	0.06 U	0.073 U	–	–	0.075 U	0.051 U	0.047 U	0.069 U	0.041 U	–	0.077 U	0.048 U	0.054 U	–	–	–	–	–
Acrylonitrile	0.0000083	0.006 U	0.0073 U	–	–	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	–	0.0077 U	0.0048 U	0.0054 U	–	–	–	–	–
Benzene	0.00056	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Bromobenzene	0.033	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Bromochloromethane	NE	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Bromoethane	NE	0.0024 U	0.0029 U	–	–	0.003 U	0.002 U	0.0019 U	0.0028 U	0.0017 U	–	0.0031 U	0.0019 U	0.0022 U	–	–	–	–	–
Bromoform	0.005	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Bromomethane	0.0033	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Carbon Disulfide	0.25	0.0012 U	**0.0069 J**	–	–	**0.0032 J**	**0.0016**	0.0009 U	**0.0034**	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Carbon Tetrachloride	0.00015	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Chlorobenzene	0.051	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Chloroethane	NE	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Chloroform	0.0048	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Chloromethane	NE	0.0012 U	0.0015 U	–	–	0.0015 U	**0.0016 J**	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
cis-1,2-Dichloroethylene	0.0052	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	0.00090 U	0.00092 U	0.00068 U	0.00074 U
cis-1,3-Dichloropropene	0.00014	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Dibromochloromethane	0.0007	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Dibromomethane	0.028	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Dichlorobromomethane	0.00089	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Dichlorodifluoromethane	0.53	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ethylbenzene	0.01	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Hexachlorobutadiene	0.000011	0.006 U	0.0073 U	–	–	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	–	0.0077 U	0.0048 U	0.0054 U	0.00450 U	0.00460 U	0.00338 U	0.00370 U
Isopropylbenzene	0.79	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Methyl ethyl ketone (MEK)	1.4	0.006 U	0.0073 U	–	–	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	–	0.0077 U	0.0048 U	0.0054 U	–	–	–	–	–
Methyl Iodide	NE	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Methyl isobutyl ketone	0.19	0.006 U	0.0073 U	–	–	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	–	0.0077 U	0.0048 U	0.0054 U	–	–	–	–	–
Methyl tert-butyl ether	0.0072	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Methylene Chloride	0.0015	0.0024 U	**0.0049**	–	–	**0.003**	**0.0028**	**0.0024**	**0.0031**	**0.0019**	–	0.0031 U	**0.0024**	**0.0026**	–	–	–	–	–
Naphthalene	0.0021	0.006 U	0.0073 U	–	–	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	–	0.0077 U	0.0048 U	0.0054 U	–	–	–	–	–
n-Butylbenzene	0.71	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
n-Propylbenzene	0.88	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Sec-Butylbenzene	1.3	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Styrene	0.12	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Tert-Butylbenzene	1	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Tetrachloroethylene	0.0016	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Toluene	0.044	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
trans-1,2-Dichloroethylene	0.032	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	0.00090 U	0.00092 U	0.00068 U	0.00074 U
trans-1,3-Dichloropropene	0.00014	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
trans-1,4-Dichloro-2-butene	NE	0.006 U	0.0073 U	–	–	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	–	0.0077 U	0.0048 U	0.0054 U	–	–	–	–	–
Trichloroethylene	0.00027	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	0.00090 U	0.00092 U	0.00068 U	0.00074 U
Trichlorofluoromethane	0.79	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Vinyl Acetate	2.3	0.006 U	0.0073 U	–	–	0.0075 U	0.0051 U	0.0047 U	0.0069 U	0.0041 U	–	0.0077 U	0.0048 U	0.0054 U	–	–	–	–	–
Vinyl Chloride	0.000056	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	0.00090 U	0.00092 U	0.00068 U	0.00074 U
Xylene, m-,p-	NE	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Xylene, o-	NE	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Total Xylenes	0.055	0.0012 U	0.0015 U	–	–	0.0015 U	0.001 U	0.0009 U	0.0014 U	0.0008 U	–	0.0015 U	0.001 U	0.0011 U	–	–	–	–	–
Semivolatile Compounds (SVOCs) (mg/kg)																			
1,2,4-Trichlorobenzene	0.0019	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2-Dichlorobenzene	0.003	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1,3-Dichlorobenzene	0.0013	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

	Location ID	SB15	SB16	SB16	SB16	SB17	SB17	SB17	SB18	SB18	SB18	SB19	SB19	SB19	SB-20	SB-20	SB-21	SB-21
	Sample ID	SB15-41	SB16-26	SB16-40	SB16-46	SB17-26	SB17-40	SB17-43.5	SB18-26	SB18-36.5	SB18-39.5	SB19-35	SB19-45	SB19-50	SB-20-5-6	SB-20-10-11	SB-21-8-9	SB-21-13-14
	Sample Date	4/15/2015	4/16/2015	4/16/2015	4/16/2015	4/16/2015	4/17/2015	4/17/2015	4/17/2015	4/17/2015	4/17/2015	4/20/2015	4/20/2015	4/20/2015	3/8/2022	3/8/2022	3/7/2022	3/7/2022
	Start Depth (feet)	41	26	40	46	26	40	43.5	26	36.5	39.5	35	45	50	5	10	8	13
	End Depth (feet)	41	26	40	46	26	40	43.5	26	36.5	39.5	35	45	50	6	11	9	14
Analyte	**Soil PCUL - Saturated**																	
1,4-Dichlorobenzene	0.0081	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	0.00013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-Oxybis[1-chloropropane]	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.00007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	0.0053	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	0.0043	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	0.0023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	0.0092	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.00016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.000051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	0.28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	0.011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol	0.0064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	0.064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.000002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	0.0073	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	0.028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	0.00017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol	0.062	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	0.017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.000014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.00018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	0.034	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	0.019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.0000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.0017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	0.0000097	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	0.0065	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.000007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.0016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	0.0000018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	0.048	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																		
1-Methylnaphthalene	0.0042	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	0.039	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	0.028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	1.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	0.051	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(j,k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(j)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzofluoranthenes (Total)	3.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	Location ID	SB15	SB16	SB16	SB16	SB17	SB17	SB17	SB18	SB18	SB18	SB19	SB19	SB19	SB20	SB20	SB21	SB21
	Sample ID	SB15-41	SB16-26	SB16-40	SB16-46	SB17-26	SB17-40	SB17-43.5	SB18-26	SB18-36.5	SB18-39.5	SB19-35	SB19-45	SB19-50	SB-20-5-6	SB-20-10-11	SB-21-8-9	SB-21-13-14
	Sample Date	4/15/2015	4/16/2015	4/16/2015	4/16/2015	4/16/2015	4/17/2015	4/17/2015	4/17/2015	4/17/2015	4/17/2015	4/20/2015	4/20/2015	4/20/2015	3/8/2022	3/8/2022	3/7/2022	3/7/2022
	Start Depth (feet)	41	26	40	46	26	40	43.5	26	36.5	39.5	35	45	50	5	10	8	13
	End Depth (feet)	41	26	40	46	26	40	43.5	26	36.5	39.5	35	45	50	6	11	9	14
Analyte	**Soil PCUL - Saturated**																	
Chrysene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	0.029	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	0.029	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	0.0021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total cPAH TEQ (ND=0.5RL)	0.000016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (mg/kg)																		
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.00000055	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																		
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NEtFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NMeFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	0.00012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic acid (PFHxA)	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic acid (PFNA)	0.0000048	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

| Analyte | Soil PCUL - Saturated | | |

	Location ID	SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-30	SB-30	SB-31	SB-32	SB-32	SB-33	SB-34	SB-35	SB-36	SB-37
	Sample ID	SB-22-4-5	SB-23-10-11	SB-24-6.5-7.5	SB-25-6-7	SB-26-11-12	SB-27-10-11	SB-28-8.5-9	SB-30-7.5-8.5	SB-30-17-18	SB-31-8-9	SB-32-4-5	SB-32-13-14	SB-33-4-5	SB34-13-14	SB35-8-9	SB36-10-11.5	SB37-12.5-13.5
	Sample Date	3/10/2022	3/9/2022	3/8/2022	3/8/2022	3/7/2022	3/7/2022	3/7/2022	3/9/2022	3/9/2022	3/9/2022	3/9/2022	3/9/2022	3/9/2022	6/2/2023	6/2/2023	6/2/2023	6/2/2023
	Start Depth (feet)	4	10	6.5	6	11	10	8.5	7.5	17	8	4	13	4	13	8	10	12.5
	End Depth (feet)	5	11	7.5	7	12	11	9	8.5	18	9	5	14	5	14	9	11.5	13.5
Analyte	**Soil PCUL - Saturated**																	
1,3,5-Trimethylbenzene	0.071	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
1,3-Dichlorobenzene	0.0013	0.00055 U	0.00079 U	--	--	--	--	--	--	--	--	--	--	0.00066 U				
1,3-Dichloropropane	0.057	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
1,4-Dichlorobenzene	0.0081	0.00055 U	0.00079 U	--	--	--	--	--	--	--	--	--	--	0.00066 U				
2,2-Dichloropropane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
2-Chloroethyl vinyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00330 U				
2-Chlorotoluene	0.11	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
2-Hexanone	0.012	--	--	--	--	--	--	--	--	--	--	--	--	0.00330 U				
4-Chlorotoluene	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
4-Isopropyltoluene	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
Acetone	2.1	--	--	--	--	--	--	--	--	--	--	--	--	**0.0467**				
Acrolein	0.00032	--	--	--	--	--	--	--	--	--	--	--	--	0.00330 U				
Acrylonitrile	0.0000083	--	--	--	--	--	--	--	--	--	--	--	--	0.00330 U				
Benzene	0.00056	--	--	--	--	--	--	--	--	--	--	--	--	**0.00030 J**				
Bromobenzene	0.033	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
Bromochloromethane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
Bromoethane	NE	--	--	--	--	--	--	--	--	--	--	--	--					
Bromoform	0.005	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
Bromomethane	0.0033	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
Carbon Disulfide	0.25	--	--	--	--	--	--	--	--	--	--	--	--	**0.00625**				
Carbon Tetrachloride	0.00015	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U				
Chlorobenzene	0.051	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Chloroethane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00132 U	--	--	--	--
Chloroform	0.0048	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Chloromethane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
cis-1,2-Dichloroethylene	0.0052	0.00055 U	0.00079 U	**0.0547**	**0.00115**	0.00061 U	0.00062 U	0.00101 U	0.00130 U	0.00061 U	0.00089 U	**0.00032 J**	0.00090 U	**0.00240**	0.00096 U	0.00097 U	0.00111 U	0.00145 U
cis-1,3-Dichloropropene	0.00014	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Dibromochloromethane	0.0007	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Dibromomethane	0.028	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Dichlorobromomethane	0.00089	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Dichlorodifluoromethane	0.53	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Ethylbenzene	0.01	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Hexachlorobutadiene	0.000011	0.00273 U	0.00396 U	--	--	--	--	--	--	--	--	--	--	0.00330 U	--	--	--	--
Isopropylbenzene	0.79	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Methyl ethyl ketone (MEK)	1.4	--	--	--	--	--	--	--	--	--	--	--	--	**0.0207**	--	--	--	--
Methyl Iodide	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Methyl isobutyl ketone	0.19	--	--	--	--	--	--	--	--	--	--	--	--	0.00330 U	--	--	--	--
Methyl tert-butyl ether	0.0072	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Methylene Chloride	0.0015	--	--	--	--	--	--	--	--	--	--	--	--	0.00330 U	0.00479 U	0.00485 U	0.00553 U	0.00724 U
Naphthalene	0.0021	--	--	--	--	--	--	--	--	--	--	--	--	0.00330 U	--	--	--	--
n-Butylbenzene	0.71	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
n-Propylbenzene	0.88	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Sec-Butylbenzene	1.3	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Styrene	0.12	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Tert-Butylbenzene	1	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Tetrachloroethylene	0.0016	--	--	--	--	--	--	--	--	--	--	--	--	**0.00034 J**	--	--	--	--
Toluene	0.044	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
trans-1,2-Dichloroethylene	0.032	0.00055 U	0.00079 U	**0.00054 J**	0.00064 U	0.00061 U	0.00062 U	0.00101 U	0.00130 U	0.00061 U	0.00089 U	0.00085 U	0.00090 U	0.00066 U	0.00096 U	0.00097 U	0.00111 U	0.00145 U
trans-1,3-Dichloropropene	0.00014	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
trans-1,4-Dichloro-2-butene	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00330 U	--	--	--	--
Trichloroethylene	0.00027	0.00055 U	0.00079 U	**0.0284**	**0.00311**	0.00061 U	0.00062 U	0.00101 U	0.00130 U	0.00061 U	0.00089 U	0.00085 U	0.00090 U	**0.0993**	0.00096 U	0.00097 U	0.00111 U	0.00145 U
Trichlorofluoromethane	0.79	--	--	--	--	--	--	--	--	--	--	--	--	0.00132 U	--	--	--	--
Vinyl Acetate	2.3	--	--	--	--	--	--	--	--	--	--	--	--	0.00330 U	--	--	--	--
Vinyl Chloride	0.000056	0.00055 U	0.00079 U	0.00078 U	0.00064 U	0.00061 U	0.00062 U	0.00101 U	0.00130 U	0.00061 U	0.00089 U	0.00085 U	0.00090 U	0.00066 U	0.00096 U	0.00097 U	0.00111 U	0.00145 U
Xylene, m-,p-	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00132 U	--	--	--	--
Xylene, o-	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.00066 U	--	--	--	--
Total Xylenes	0.055	--	--	--	--	--	--	--	--	--	--	--	--	0.00132 U	--	--	--	--
Semivolatile Compounds (SVOCs) (mg/kg)																		
1,2,4-Trichlorobenzene	0.0019	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
1,2-Dichlorobenzene	0.003	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
1,3-Dichlorobenzene	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--

	Location ID	SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-30	SB-30	SB-31	SB-32	SB-32	SB-33	SB-34	SB-35	SB-36	SB-37
	Sample ID	SB-22-4-5	SB-23-10-11	SB-24-6.5-7.5	SB-25-6-7	SB-26-11-12	SB-27-10-11	SB-28-8.5-9	SB-30-7.5-8.5	SB-30-17-18	SB-31-8-9	SB-32-4-5	SB-32-13-14	SB-33-4-5	SB34-13-14	SB35-8-9	SB36-10-11.5	SB37-12.5-13.5
	Sample Date	3/10/2022	3/9/2022	3/8/2022	3/8/2022	3/7/2022	3/7/2022	3/7/2022	3/9/2022	3/9/2022	3/9/2022	3/9/2022	3/9/2022	3/9/2022	6/2/2023	6/2/2023	6/2/2023	6/2/2023
	Start Depth (feet)	4	10	6.5	6	11	10	8.5	7.5	17	8	4	13	4	13	8	10	12.5
	End Depth (feet)	5	11	7.5	7	12	11	9	8.5	18	9	5	14	5	14	9	11.5	13.5
Analyte	**Soil PCUL - Saturated**																	
1,4-Dichlorobenzene	0.0081	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
1,4-Dioxane	0.00013	--	--	--	--	--	--	--	--	--	--	--	--	--	0.335 U	0.335 U	0.335 U	1 U
2,2'-Oxybis[1-chloropropane]	0.12	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
2,4,5-Trichlorophenol	0.00007	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
2,4,6-Trichlorophenol	0.0053	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
2,4-Dichlorophenol	0.0043	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
2,4-Dimethylphenol	0.0023	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
2,4-Dinitrophenol	0.0092	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--
2,4-Dinitrotoluene	0.00016	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
2,6-Dinitrotoluene	0.000051	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
2-Chloronaphthalene	0.28	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
2-Chlorophenol	0.011	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
2-methylphenol	0.0064	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
2-Nitroaniline	0.064	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
3,3'-Dichlorobenzidine	0.000002	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
4,6-Dinitro-2-Methylphenol	0.0073	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
4-Chloro-3-Methylphenol	0.028	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
4-Chloroaniline	0.00017	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0499 U	--	--	--	--
4-methylphenol	0.062	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
4-Nitroaniline	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
Benzoic Acid	0.17	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--
Benzyl Alcohol	0.017	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Bis(2-Chloroethyl)Ether	0.000014	--	--	--	--	--	--	--	--	--	--	--	--	0.0499 U	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	**0.0122 J**	--	--	--	--
Butyl benzyl Phthalate	0.00018	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Dibutyl Phthalate	0.015	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Diethyl Phthalate	0.034	--	--	--	--	--	--	--	--	--	--	--	--	0.0499 U	--	--	--	--
Dimethyl Phthalate	0.019	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Di-N-Octyl Phthalate	0.33	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Hexachlorobenzene	0.0000004	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Hexachlorobutadiene	0.000011	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Hexachlorocyclopentadiene	0.0017	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
Hexachloroethane	0.0000097	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Isophorone	0.032	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Nitrobenzene	0.0065	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
N-Nitrosodi-n-propylamine	0.000007	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
N-Nitrosodiphenylamine	0.0016	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Pentachlorophenol	0.0000018	--	--	--	--	--	--	--	--	--	--	--	--	0.0999 U	--	--	--	--
Phenol	0.048	--	--	--	--	--	--	--	--	--	--	--	--	0.0200 U	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																		
1-Methylnaphthalene	0.0042	--	**0.00463 J**	--	--	0.00499 U	--	--	--	--	--	--	--	**0.00068 J**	0.00500 U	0.00497 U	0.00497 U	0.00500 U
2-Methylnaphthalene	0.039	--	**0.00561**	--	--	**0.00523**	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	**0.00124 J**	0.00500 U
Acenaphthene	0.028	--	**0.00179 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	**0.00060 J**	0.00500 U
Acenaphthylene	1.3	--	0.00499 U	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Anthracene	0.051	--	**0.00215 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Benzo(a)anthracene	NE	--	**0.00370 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Benzo(a)pyrene	0.000016	--	**0.00300 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Benzo(b)fluoranthene	NE	--	**0.00427 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Benzo(g,h,i)perylene	0.67	--	**0.00385 J**	--	--	**0.00142 J**	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	**0.00340 J**
Benzo(j,k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(j)fluoranthene	NE	--	**0.00200 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Benzo(k)fluoranthene	NE	--	**0.00188 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Benzofluoranthenes (Total)	3.2	--	**0.00800 J**	--	--	0.00997 U	--	--	--	--	--	--	--	0.00999 U	0.0100 U	0.00994 U	0.00994 U	0.0100 U

	Location ID	SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-30	SB-30	SB-31	SB-32	SB-32	SB-33	SB-34	SB-35	SB-36	SB-37
	Sample ID	SB-22-4-5	SB-23-10-11	SB-24-6.5-7.5	SB-25-6-7	SB-26-11-12	SB-27-10-11	SB-28-8.5-9	SB-30-7.5-8.5	SB-30-17-18	SB-31-8-9	SB-32-4-5	SB-32-13-14	SB-33-4-5	SB34-13-14	SB35-8-9	SB36-10-11.5	SB37-12.5-13.5
	Sample Date	3/10/2022	3/9/2022	3/8/2022	3/8/2022	3/7/2022	3/7/2022	3/7/2022	3/9/2022	3/9/2022	3/9/2022	3/9/2022	3/9/2022	3/9/2022	6/2/2023	6/2/2023	6/2/2023	6/2/2023
	Start Depth (feet)	4	10	6.5	6	11	10	8.5	7.5	17	8	4	13	4	13	8	10	12.5
	End Depth (feet)	5	11	7.5	7	12	11	9	8.5	18	9	5	14	5	14	9	11.5	13.5
Analyte	**Soil PCUL - Saturated**																	
Chrysene	NE	--	**0.00589**	--	--	**0.00174 J**	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	**0.00210 J**
Dibenzo(a,h)anthracene	NE	--	0.00499 U	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Dibenzofuran	0.029	--	**0.00320 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Fluoranthene	0.09	--	**0.00929**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	**0.00057 J**	**0.00072 J**	**0.00240 J**
Fluorene	0.029	--	**0.00148 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Indeno(1,2,3-c,d)pyrene	NE	--	**0.00319 J**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	0.00497 U	0.00500 U
Naphthalene	0.0021	--	**0.00844**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	0.00497 U	**0.00318 J**	0.00500 U
Phenanthrene	1.5	--	**0.00995**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	**0.00107 J**	**0.00120 J**	**0.00177 J**	**0.00346 J**
Pyrene	0.14	--	**0.0106**	--	--	0.00499 U	--	--	--	--	--	--	--	0.00499 U	0.00500 U	**0.00064 J**	**0.00068 J**	**0.00458 J**
Total cPAH TEQ (ND=0.5RL)	0.000016	--	**0.00541**	--	--	**0.00426**	--	--	--	--	--	--	--	0.00427 U	0.004275 U	0.00425 U	0.00425 U	**0.00427 J**
Polychlorinated Biphenyls (PCBs) (mg/kg)																		
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
Total PCB Aroclors	0.00000055	--	--	--	--	--	--	--	--	--	--	--	--	0.0198 U	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (mg/kg)																		
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
6:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
8:2 FTS	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
NEtFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
NMeFOSAA	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	--	--	--	--	--	--	**0.000089 J**	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	0.00012	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	0.000026	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorohexanoic acid (PFHxA)	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorononanoic acid (PFNA)	0.0000048	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	0.0000099	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorooctanoic acid (PFOA)	0.000004	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE	--	--	--	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	--	--

Table K-3

Groundwater Data

Former Precision Engineering Property

Seattle, Washington

Analyte	Groundwater PCUL	MW1-W-35.0-20190	MW1-W-32.0	MW1-W-35.0-20200129	MW1-W-35.0-20200428	MW-1-220427	MW1-230713	MW1-20231205	MW2-W-19.0	MW2-W-15.0-20191216	MW2-W-15.0-20200129	MW2-W-15.0-20200427	MW-2-220422	MW2-230714	MW2-20231206	MW3-W-15.0-20190722	MW3-W-15.0-20191216	MW3-W-15.0-20200129
Location ID		MW1	MW1	MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3
Sample ID		1-W-35.0-20190	MW1-W-32.0	MW1-W-35.0-20200129	MW1-W-35.0-20200428	MW-1-220427	MW1-230713	MW1-20231205	MW2-W-19.0	MW2-W-15.0-20191216	MW2-W-15.0-20200129	MW2-W-15.0-20200427	MW-2-220422	MW2-230714	MW2-20231206	MW3-W-15.0-20190722	MW3-W-15.0-20191216	MW3-W-15.0-20200129
Sample Date		7/23/2019	12/18/2019	1/29/2020	4/28/2020	4/27/2022	7/13/2023	12/5/2023	7/24/2019	12/16/2019	1/29/2020	4/27/2020	4/22/2022	7/14/2023	12/6/2023	7/22/2019	12/16/2019	1/29/2020
Total Metals (µg/L)																		
Arsenic	8.0	**33.3**	**29.7**	**30.8**	**27.7**	**33.7**	**30.6**	**30.6**	**7.54**	**9.05**	**6.46**	**5.9**	**5.45**	**6.60**	**8.14**	**13.6**	**8.81**	**10.7**
Cadmium	1.2	--	--	--	--	0.1 U	0.100 U	0.200 U	--	--	--	--	0.2 U	1.00 U	**0.0380 J**	--	--	--
Chromium	100	1 U	1 U	1 U	1 U	0.5 U	1.00 U	1.00 U	**9.19**	**8.42**	**7.82**	**8.18**	**9.51**	**11.3**	5.00 U	10 U	1 U	**1.03**
Copper	3.1	5 U	5 U	5 U	5 U	0.5 U	0.500 U	1.00 U	10 U	5 U	5 U	5 U	**0.674 J**	5.00 U	**0.553**	50 U	5 U	5 U
Lead	5.6	--	--	--	--	0.1 U	0.100 U	0.200 U	--	--	--	--	**0.158 J**	1.00 U	**0.103**	--	--	--
Mercury	0.025	--	--	--	--	0.00041 U	**0.00034 J**	**0.00175**	--	--	--	--	**0.00371**	**0.00174**	**0.00368**	--	--	--
Nickel	8.2	--	--	--	--	**0.38 J**	**0.172 J**	**0.166 J**	--	--	--	--	**2.82**	**1.93 J**	**1.75**	--	--	--
Selenium	50	1 U	1 U	1 U	1 U	0.5 U	1.00 U	1.00 U	**9.02**	**10.8**	5 U	**3.53**	**1.06**	5.00 U	**1.46**	1 U	2 U	1 U
Thallium	0.062	--	--	--	--	0.2 U	0.400 U	0.400 U	--	--	--	--	0.4 U	2.00 U	0.400 U	--	--	--
Zinc	81	--	--	--	--	6 U	6.00 U	12.0 U	--	--	--	--	12 U	60.0 U	6.00 U	--	--	--
Dissolved Metals (µg/L)																		
Arsenic	8.0	--	--	--	--	**31.4**	**30.7**	**30.2**	--	--	--	--	**4.72**	**7.15**	**3.61**	--	--	--
Cadmium	1.2	--	--	--	--	0.1 U	0.100 U	0.100 U	--	--	--	--	0.2 U	1.00 U	0.200 U	--	--	--
Chromium	100	--	--	--	--	0.5 U	1.00 U	2.50 U	--	--	--	--	**8.92**	**11.2**	**8.18**	--	--	--
Chromium, Hexavalent	0.046	45 U	45 U	45 U	45 U	13 U	13 U	13 UJ	45 U	135 U	90 U	45 U	13 U	13 U	13 U	45 U	90 U	45 U
Chromium, Trivalent	27	1 U	1 U	1 U	1 U	0.5 U	1.00 U	1.00 U	--	--	--	--	--	--	5.00 U	10 U	1 U	--
Copper	3.1	--	--	--	--	0.5 U	0.500 U	**0.468 J**	--	--	--	--	**0.556 J**	5.00 U	1.00 U	--	--	--
Lead	5.6	--	--	--	--	0.1 U	0.100 U	0.100 U	--	--	--	--	0.2 U	1.00 U	0.100 U	--	--	--
Mercury	0.025	--	--	--	--	0.00041 U	**0.00015 J**	0.00041 U	--	--	--	--	**0.00051**	**0.00071**	--	--	--	--
Nickel	8.2	--	--	--	--	**0.15 J**	**0.135 J**	**0.250 J**	--	--	--	--	**2.61**	**2.25 J**	**1.64**	--	--	--
Selenium	50	--	--	--	--	--	0.500 U	1.00 U	--	--	--	--	--	**4.71 J**	**1.55**	--	--	--
Thallium	0.062	--	--	--	--	--	0.200 U	0.200 U	--	--	--	--	--	2.00 U	0.400 U	--	--	--
Zinc	81	--	--	--	--	--	6.00 U	12.0 U	--	--	--	--	--	60.0 U	12.0 U	--	--	--
Total Petroleum Hydrocarbons (µg/L)																		
Gasoline-range hydrocarbons - HCID	800	--	--	--	--	250 U	250 U	250 U	--	--	--	--	250 U	250 U	250 U	--	--	--
Diesel-range hydrocarbons - HCID	500	--	--	--	--	500 U	500 U	500 U	--	--	--	--	500 U	500 U	500 U	--	--	--
Lube oil-range hydrocarbons - HCID	500	--	--	--	--	1000 U	1000 U	1000 U	--	--	--	--	1000 U	1000 U	1000 U	--	--	--
Total TPH - HCID	500	--	--	--	--	ND	ND	ND	--	--	--	--	ND	ND	ND	--	--	--
Diesel-range hydrocarbons	500	50 U	50 U	50 U	50 U	100 U	--	--	**250**	**450**	**240**	**470**	**241**	--	**119**	**82**	**65**	50 U
Lube oil-range hydrocarbons	500	250 U	250 U	250 U	250 U	200 U	--	--	250 U	**790**	**460**	**660**	200 U	--	200 U	250 U	250 U	250 U
Total TPH	500	ND	ND	ND	ND	ND	--	--	**250**	**1240**	**700**	**1130**	**241**	--	**119**	**82**	**65**	ND
Diesel-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TPH - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (VPH) (µg/L)																		
1-Methylnaphthalene	1.5	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Benzene	1.6	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Benzene, 1,2,3-Trimethyl-	80	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--
C12-C13 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--
C5-C6 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--
C6-C8 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--	--
Decane	NE	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Dodecane	NE	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Ethylbenzene	21	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Hexane	4.1	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Methyl tert-butyl ether	24	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Naphthalene	1.4	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Octane	NE	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Pentane	NE	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Toluene	102	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Xylene, m-,p-	NE	--	--	--	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--
Xylene, o-	NE	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Total Xylenes	106	--	--	--	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--

Location ID	MW1	MW1	MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3
Sample ID	1-W-35.0-20190	MW1-W-32.0	MW1-W-35.0-20200129	MW1-W-35.0-20200428	MW-1-220427	MW1-230713	MW1-20231205	MW2-W-19.0	MW2-W-15.0-20191216	MW2-W-15.0-20200129	MW2-W-15.0-20200427	MW-2-220422	MW2-230714	MW2-20231206	MW3-W-15.0-20190722	MW3-W-15.0-20191216	MW3-W-15.0-20200129
Sample Date	7/23/2019	12/18/2019	1/29/2020	4/28/2020	4/27/2022	7/13/2023	12/5/2023	7/24/2019	12/16/2019	1/29/2020	4/27/2020	4/22/2022	7/14/2023	12/6/2023	7/22/2019	12/16/2019	1/29/2020
Analyte	Groundwater PCUL																
Total Metals (µg/L)																	
Extractable Petroleum Hydrocarbons (EPH) (µg/L)																	
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	40 UJ	--	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	40 U	--	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	40 UJ	--	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	40 U	--	--	--	--	--
C12-C16 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	40 UJ	--	--	--	--	--
C12-C16 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	40 U	--	--	--	--	--
C16-C21 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	40 UJ	--	--	--	--	--
C16-C21 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	40 U	--	--	--	--	--
C21-C34 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	40 UJ	--	--	--	--	--
C21-C34 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	40 U	--	--	--	--	--
Volatile Organic Compounds (VOCs) (µg/L)																	
1,1,1,2-Tetrachloroethane	1.7	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,1,1-Trichloroethane	200	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.22	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	NE					0.2 U	--	--	--	--	--	--	0.4 U	--	--	--	--	--
1,1,2-Trichloroethane	0.90	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,1-Dichloroethane	7.7	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,1-Dichloroethylene	7.0	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	10 U	10 U	10 U	10 U	0.4 U	1.00 U	2.00 U	1 U	1 U	1 U
1,1-Dichloropropene	NE	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,2,3-Trichlorobenzene	6.4	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	10 U	10 U	10 U	1 U	--	--	1 U	1 U	1 U
1,2,3-Trichloropropane	0.00038	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	10 U	10 U	10 U	1 U	--	--	1 U	1 U	1 U
1,2,4-Trichlorobenzene	NE	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	10 U	10 U	10 U	1 U	--	--	1 U	1 U	1 U
1,2,4-Trimethylbenzene	80	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	0.042	10 U	10 U	10 U	10 U	0.5 U	--	--	100 U	100 U	100 U	100 U	1 U	--	--	10 U	10 U	10 U
1,2-Dibromoethane	NE	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,2-Dichlorobenzene	NE	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,2-Dichloroethane	3.5	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,2-Dichloropropane	3.1	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,3,5-Trimethylbenzene	80	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,3-Dichlorobenzene	NE	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,3-Dichloropropane	160	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
1,4-Dichlorobenzene	NE	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
2,2-Dichloropropane	NE	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
2-Chloroethyl vinyl ether	NE	--	--	--	--	1 U	--	--	--	--	--	--	2 U	--	--	--	--	--
2-Chlorotoluene	160	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
2-Hexanone	40	10 U	10 U	10 U	10 U	5 U	--	--	100 U	100 U	100 U	100 U	10 U	--	--	10 U	10 U	10 U
4-Chlorotoluene	NE	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
4-Isopropyltoluene	NE	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Acetone	7200	50 U	50 U	50 U	50 U	5 U	--	--	500 U	500 U	500 U	500 U	10 U	--	--	50 U	50 U	50 U
Acrolein	1.1	--	--	--	--	5 U	--	--	--	--	--	--	10 U	--	--	--	--	--
Acrylonitrile	7200	--	--	--	--	1 U	--	--	--	--	--	--	2 U	--	--	--	--	--
Benzene	1.1	0.35 U	0.35 U	0.35 U	0.35 U	0.2 U	--	--	3.5 U	3.5 U	3.5 U	3.5 U	0.4 U	--	--	0.35 U	0.35 U	0.35 U
Bromobenzene	64	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Bromochloromethane	NE	--	--	--	--	0.2 U	--	--					0.4 U	--	--	--	--	--
Bromoform	12	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Bromomethane	11	1 U	1 U	1 U	1 U	1 U	--	--	10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U
Carbon Disulfide	800	--	--	--	--	0.2 U	--	--					0.4 U	--	--	--	--	--
Carbon Tetrachloride	0.35	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Chlorobenzene	100	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Chloroethane	14667	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Chloroform	1.2	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Chloromethane	153	10 U	10 U	10 U	10 U	0.5 U	--	--	100 U	100 U	100 U	100 U	1 U	--	--	10 U	10 U	10 U
cis-1,2-Dichloroethylene	16	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	10 U	10 U	10 U	10 U	0.4 U	1.00 U	2.00 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	0.44	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Dibromochloromethane	2.2	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Dibromomethane	80	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Dichlorobromomethane	1.4	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Dichlorodifluoromethane	4.2	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Ethylbenzene	21	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Hexachlorobutadiene	NE	1 U	1 U	1 U	1 U	2 U	--	--	10 U	10 U	10 U	10 U	4 U	--	--	1 U	1 U	1 U
Hexane	NE	1 U	1 U	1 U	1 U		--	--	10 U	10 U	10 U	10 U	--	--	--	1 U	1 U	1 U
Isopropylbenzene	800	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Methyl ethyl ketone (MEK)	4800	10 U	10 U	10 U	10 U	5 U	--	--	100 U	100 U	100 U	100 U	10 U	--	--	10 U	10 U	10 U
Methyl Iodide	NE	--	--	--	--	1 U	--	--	--	--	--	--	2 U	--	--	--	--	--
Methyl isobutyl ketone	640	10 U	10 U	10 U	10 U	5 U	--	--	100 U	100 U	100 U	100 U	10 U	--	--	10 U	10 U	10 U
Methyl tert-butyl ether	24	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	10 U	10 U	10 U	1 U	--	--	1 U	1 U	1 U

Location ID		MW1	MW1	MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3
Sample ID		1-W-35.0-20190	MW1-W-32.0	MW1-W-35.0-20200129	MW1-W-35.0-20200428	MW1-1-220427	MW1-230713	MW1-20231205	MW2-W-19.0	MW2-W-15.0-20191216	MW2-W-15.0-20200129	MW2-W-15.0-20200427	MW2-2-220422	MW2-230714	MW2-20231206	MW3-W-15.0-20190722	MW3-W-15.0-20191216	MW3-W-15.0-20200129
Sample Date		7/23/2019	12/18/2019	1/29/2020	4/28/2020	4/27/2022	7/13/2023	12/5/2023	7/24/2019	12/16/2019	1/29/2020	4/27/2020	4/22/2022	7/14/2023	12/6/2023	7/22/2019	12/16/2019	1/29/2020
Analyte	Groundwater PCUL																	
Total Metals (µg/L)																		
Methylene Chloride	5.0	5 U	5 U	5 U	5 U	1 U	1.00 U	1.00 U	50 U	50 U	50 U	50 U	2 U	5.00 U	**5.80 J**	5 U	5 U	5 U
Naphthalene	1.4	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	10 U	10 U	10 U	1 U	--	--	1 U	1 U	1 U
n-Butylbenzene	400	--	--	--	--	0.2 U	--	--	--	--	--	--	0.4 U	--	--	--	--	--
n-Propylbenzene	800	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Sec-Butylbenzene	800	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Styrene	100	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Tert-Butylbenzene	800	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Tetrachloroethylene	2.9	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Toluene	102	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
trans-1,2-Dichloroethylene	77	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	10 U	10 U	10 U	10 U	0.4 U	1.00 U	2.00 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	0.44	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
trans-1,4-Dichloro-2-butene	NE	--	--	--	--	1 U	--	--	--	--	--	--	2 U	--	--	--	--	--
Trichloroethylene	0.70	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	10 U	10 U	10 U	10 U	0.4 U	1.00 U	2.00 U	1 U	1 U	1 U
Trichlorofluoromethane	120	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Vinyl Acetate	7809	--	--	--	--	0.2 U	--	--	--	--	--	--	0.4 U	--	--	--	--	--
Vinyl Chloride	0.18	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.20 U	2 U	2 U	2 U	2 U	0.4 U	1.00 U	2.00 U	0.2 U	0.2 U	0.2 U
Xylene, m-,p-	NE	2 U	2 U	2 U	2 U	0.4 U	--	--	20 U	20 U	20 U	20 U	0.8 U	--	--	2 U	2 U	2 U
Xylene, o-	NE	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	10 U	10 U	10 U	0.4 U	--	--	1 U	1 U	1 U
Total Xylenes	106	2 U	2 U	2 U	2 U	0.6 U	--	--	20 U	20 U	20 U	20 U	1.2 U	--	--	2 U	2 U	2 U
Semivolatile Compounds (SVOCs) (µg/L)																		
1,2,4-Trichlorobenzene	0.96	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
1,2-Dichlorobenzene	4.5	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
1,3-Dichlorobenzene	2.0	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
1,4-Dichlorobenzene	5.0	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
1,4-Dioxane	0.44	--	--	--	--	0.2 U	0.2 U	0.2 UJ	--	--	--	--	**0.9**	**0.3**	**0.3 J**	--	--	--
2,2'-Oxybis[1-chloropropane]	NE	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
2,4,5-Trichlorophenol	0.037	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2,4,6-Trichlorophenol	8.0	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2,4-Dichlorophenol	10	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2,4-Dimethylphenol	2.9	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2,4-Dinitrophenol	32	--	--	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--
2,4-Dinitrotoluene	0.18	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2,6-Dinitrotoluene	0.058	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2-Chloronaphthalene	100	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
2-Chlorophenol	17	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
2-methylphenol	11	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
2-Nitroaniline	160	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
3,3'-Dichlorobenzidine	0.0033	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	7.0	--	--	--	--	--	--	--	--	--	--	--	2 U	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
4-Chloro-3-Methylphenol	36	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
4-Chloroaniline	0.44	--	--	--	--	--	--	--	--	--	--	--	1 UJ	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
4-methylphenol	106	--	--	--	--	--	--	--	--	--	--	--	**0.04 J**	--	--	--	--	--
4-Nitroaniline	4.4	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Benzoic Acid	589	--	--	--	--	--	--	--	--	--	--	--	**0.4 J**	--	--	--	--	--
Benzyl Alcohol	56	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.040	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.046	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Butyl benzyl Phthalate	0.013	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Dibutyl Phthalate	8.0	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Diethyl Phthalate	93	--	--	--	--	--	--	--	--	--	--	--	**0.3**	--	--	--	--	--
Dimethyl Phthalate	59	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Di-N-Octyl Phthalate	2.3	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Hexachlorobenzene	0.000005	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Hexachlorobutadiene	0.010	--	--	--	--	--	--	--	--	--	--	--	0.2 UJ	--	--	--	--	--
Hexachlorocyclopentadiene	1.0	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Hexachloroethane	0.020	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Isophorone	92	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Nitrobenzene	16	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.013	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
N-Nitrosodiphenylamine	0.55	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--

Analyte	Location ID / Sample ID / Sample Date	Groundwater PCUL	MW1 / MW1-W-35.0-20190 / 7/23/2019	MW1 / MW1-W-32.0 / 12/18/2019	MW1 / MW1-W-35.0-20200129 / 1/29/2020	MW1 / MW1-W-35.0-20200428 / 4/28/2020	MW1 / MW-1-220427 / 4/27/2022	MW1 / MW1-230713 / 7/13/2023	MW1 / MW1-20231205 / 12/5/2023	MW2 / MW2-W-19.0 / 7/24/2019	MW2 / MW2-W-15.0-20191216 / 12/16/2019	MW2 / MW2-W-15.0-20200129 / 1/29/2020	MW2 / MW2-W-15.0-20200427 / 4/27/2020	MW2 / MW-2-220422 / 4/22/2022	MW2 / MW2-230714 / 7/14/2023	MW2 / MW2-20231206 / 12/6/2023	MW3 / MW3-W-15.0-20190722 / 7/22/2019	MW3 / MW3-W-15.0-20191216 / 12/16/2019	MW3 / MW3-W-15.0-20200129 / 1/29/2020
Total Metals (µg/L)																			
Pentachlorophenol		0.0020	--	--	--	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Phenol		101	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)																			
1-Methylnaphthalene		1.5	--	--	--	--	--	0.010 U	0.010 U	--	--	--	--	**0.014**	0.010 U	0.010 U	--	--	--
2-Methylnaphthalene		14	--	--	--	--	--	0.010 U	0.010 U	--	--	--	--	**0.01 J**	0.010 U	0.010 U	--	--	--
Acenaphthene		5.3	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	**0.05**	0.04 U	0.04 U	**0.057**	**0.073**	**0.056**	**0.036**	0.04 U	0.04 U	0.04 U
Acenaphthylene		NE	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.01**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Anthracene		2.1	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.009 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Benzo(a)anthracene		0.00016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.0009 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Benzo(a)pyrene		0.000016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Benzo(b)fluoranthene		0.00016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Benzo(g,h,i)perylene		NE	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Benzo(j)fluoranthene		NE	--	--	--	--	--	0.010 U	0.010 U			--	--	0.01 U	0.010 U	0.010 U	--	--	--
Benzo(k)fluoranthene		0.0016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Benzofluoranthenes (Total)		NE	--	--	--	--	--	0.020 U	0.020 U	--	--	--	--	0.01 U	0.020 U	0.020 U	--	--	--
Carbazole		NE	--	--	--	--	--	0.010 U	0.010 U	--	--	--	--	**0.034**	**0.012**	**0.010**	--	--	--
Chrysene		0.016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Dibenzo(a,h)anthracene		0.000016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Dibenzofuran		3.1	--	--	--	--	--	0.010 U	0.010 U	--	--			**0.005 J**	0.010 U	0.010 U	--	--	--
Fluoranthene		1.8	0.04 U	**0.04**	0.04 U	**0.061**	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.009 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Fluorene		3.7	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.017**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Indeno(1,2,3-c,d)pyrene		0.00016	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Naphthalene		1.4	0.4 U	0.4 U	0.4 U	0.4 U	--	0.010 U	0.010 U	0.4 U	0.4 U	0.4 U	0.4 U	**0.042**	0.010 U	**0.019**	0.4 U	0.4 U	0.4 U
Perylene		NE	--	--	--	--	--	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--
Phenanthrene		NE	0.04 U	0.04 U	0.04 U	0.04 U	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.046**	**0.007 J**	**0.006 J**	0.04 U	0.04 U	0.04 U
Pyrene		2.0	0.04 U	0.04 U	0.04 U	**0.041**	--	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.009 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U
Total cPAH TEQ (ND=0.5RL)		0.0097	0.0302 U	0.0302 U	0.0302 U	0.0302 U	--	0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U	**0.00761 J**	0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U
Polychlorinated Biphenyls (PCBs) (µg/L)																			
PCB-Aroclor 1016		NE	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
PCB-Aroclor 1221		NE	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
PCB-Aroclor 1232		NE	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
PCB-Aroclor 1242		NE	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
PCB-Aroclor 1248		NE	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
PCB-Aroclor 1254		NE	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
PCB-Aroclor 1260		NE	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
PCB-Aroclor 1262		NE	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
PCB-Aroclor 1268		NE	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
Total PCB Aroclors		0.000007	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)																			
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
6:2 FTS		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	**0.0017 J**	--	--	--
8:2 FTS		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
NEtFOSAA		NE	--	--	--	--	**0.0034 J**	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
N-ethylperfluoro-1-octanesulfonamide		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
NMeFOSAA		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
N-methylperfluoro-1-octanesulfonamide		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluorobutanesulfonic acid (PFBS)		NE	--	--	--	--	**0.00051 J**	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluorodecanesulfonic acid (PFDS)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluorodecanoic acid (PFDA)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluorododecanoic acid (PFDoA)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluoroheptanoic acid (PFHpA)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	**0.0032 J**	--	--	--
Perfluorohexanesulfonic acid (PFHxS)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluorohexanoic acid (PFHxA)		NE	--	--	--	--	0.0092 U	--	--	--	--	--	--	--	--	0.0098 U	--	--	--
Perfluorononanoic acid (PFNA)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluorooctanesulfonamide (PFOSA)		NE	--	--	--	--	**0.00074 J**	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluorooctanesulfonic acid (PFOS)		NE	--	--	--	--	**0.00092 J**	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluorooctanoic acid (PFOA)		NE	--	--	--	--	**0.00065 J**	--	--	--	--	--	--	--	--	**0.0045**	--	--	--
Perfluoropentanoic acid (PFPeA)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	**0.023 J**	--	--	--
Perfluorotetradecanoic acid (PFTeA)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluorotridecanoic acid (PFTrDA)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--
Perfluoroundecanoic acid (PFUnA)		NE	--	--	--	--	0.004 U	--	--	--	--	--	--	--	--	0.0049 U	--	--	--

Analyte	Groundwater PCUL	Location ID	MW3	MW3	MW3	MW3	MW4	MW4	MW4	MW4	MW4	MW4	MW4	MW5	MW5	MW5	MW5	MW5	MW5
		Sample ID	MW3-W-15.0-20200427	MW3-220420	MW3-230713	MW3-20231205	MW4-W-20.0-20190723	MW4-W-20.0-20191217	MW4-W-50.0	MW4-W-20.0-20200428	MW-4-220422	MW4-230721	MW4-20231206	MW5-W-15.0-20190723	MW5-W-15.0-20191217	MW5-W-15.0-20200130	MW5-W-15.0-20200428	MW-5-220422	MW5-230720
		Sample Date	4/27/2020	4/20/2022	7/13/2023	12/5/2023	7/23/2019	12/17/2019	1/30/2020	4/28/2020	4/22/2022	7/21/2023	12/6/2023	7/23/2019	12/17/2019	1/30/2020	4/28/2020	4/22/2022	7/20/2023
Total Metals (µg/L)																			
Arsenic	8.0		**7.33**	**11.3**	**10.9**	**11.3**	**12.6**	**13.5**	**12**	**10.6**	**12.2**	**11.9**	**11.7**	10 U	**6.19**	10 U	**5.37**	**3.48**	**4.16**
Cadmium	1.2		--	0.1 U	0.500 U	**0.0640 J**	--	--	--	--	0.1 U	0.100 U	**0.0370 J**	--	--	--	--	100 U	0.100 U
Chromium	100		1 U	**1.09**	**1.14**	**0.862 J**	1 U	1 U	1 U	1 U	0.5 U	2.50 U	1.00 U	**132000**	**38900**	**42200**	**44600**	**133000**	**115000**
Copper	3.1		5 U	0.5 U	0.500 U	1.00 U	5 U	5 U	5 U	5 U	**0.707**	**0.295 J**	**0.340 J**	1000 U	5 U	50 U	25 U	**1.4**	**1.10**
Lead	5.6		--	0.1 U	0.100 U	0.200 U	--	--	--	--	0.1 U	0.100 U	**0.0720 J**	--	--	--	--	0.1 U	10.0 U
Mercury	0.025		--	0.00042 U	0.00042 U	**0.00024 J**	--	--	--	--	**0.00038 J**	0.00041 U	**0.00032 J**	--	--	--	--	**0.0283**	**0.0182**
Nickel	8.2		--	**3.55**	**2.53**	**3.38**	--	--	--	--	**1.26**	**0.647**	**0.497 J**	--	--	--	--	**12.5 J**	**7.46**
Selenium	50		1 U	0.5 U	1.00 U	1.00 U	1 U	2 U	1 U	1 U	0.5 U	**0.187 J**	0.500 U	200 U	1 U	10 U	5 U	0.5 U	0.500 U
Thallium	0.062		--	0.2 U	0.400 U	0.400 U	--	--	--	--	0.2 U	0.200 U	0.400 U	--	--	--	--	200 U	20.0 U
Zinc	81		--	6 U	6.00 U	**57.4**	--	--	--	--	6 U	6.00 U	6.00 U	--	--	--	--	6 U	6.00 U
Dissolved Metals (µg/L)																			
Arsenic	8.0		--	**10.7**	**11.7**	**10.3**	--	--	--	--	**11.8**	**11.2**	**11.7**	--	--	--	--	200 U	**4.90**
Cadmium	1.2		--	0.1 U	0.100 U	0.200 U	--	--	--	--	0.1 U	0.100 U	0.200 U	--	--	--	--	100 U	**0.0610 J**
Chromium	100		--	**1.24**	**1.81 J**	2.50 U	--	--	--	--	0.5 U	0.500 U	1.00 UJ	--	--	--	--	**134000**	**115000 J**
Chromium, Hexavalent	0.046		45 U	13 UJ	13 U	13 U	45 U	45 U	45 U	45 U	13 U	13 U	13 U	**117000 J**	**31600**	**36200**	**38500**	**136000**	**163000 J**
Chromium, Trivalent	27		1 U	--	--	--	1 U	1 U	1 U	1 U	0.5 U	2.50 U	1.00 U	--	--	--	--	ND	ND
Copper	3.1		--	0.5 U	0.500 U	**0.738 J**	--	--	--	--	**0.503**	**0.896**	**1.30**	--	--	--	--	500 U	**0.863**
Lead	5.6		--	0.1 U	0.100 U	0.500 U	--	--	--	--	0.1 U	0.100 U	0.200 U	--	--	--	--	100 U	10.0 U
Mercury	0.025		--	0.00041 U	0.00042 U	0.00105 U	--	--	--	--	0.00041 U	0.00041 U	**0.00018 J**	--	--	--	--	**0.0252**	**0.0127**
Nickel	8.2		--	**2.31**	**2.90**	**2.86**	--	--	--	--	**0.246 J**	**0.227 J**	**0.376 J**	--	--	--	--	500 U	**4.84**
Selenium	50		--	--	0.500 U	1.00 U	--	--	--	--	--	0.500 U	1.00 U	--	--	--	--	--	**0.642**
Thallium	0.062		--	--	0.200 U	1.00 U	--	--	--	--	--	0.200 U	0.400 U	--	--	--	--	--	20.0 U
Zinc	81		--	--	6.00 U	12.0 U	--	--	--	--	--	6.00 U	12.0 U	--	--	--	--	--	6.00 U
Total Petroleum Hydrocarbons (µg/L)																			
Gasoline-range hydrocarbons - HCID	800		--	250 U	250 U	250 U	--	--	--	--	250 U	250 U	250 U	--	--	--	--	250 U	250 U
Diesel-range hydrocarbons - HCID	500		--	500 U	500 U	500 U	--	--	--	--	500 U	500 U	500 U	--	--	--	--	500 U	500 U
Lube oil-range hydrocarbons - HCID	500		--	1000 U	1000 U	1000 U	--	--	--	--	1000 U	1000 U	1000 U	--	--	--	--	1000 U	1000 U
Total TPH - HCID	500		--	ND	ND	ND	--	--	--	--	ND	ND	ND	--	--	--	--	ND	ND
Diesel-range hydrocarbons	500		**92**	100 U	--	--	50 U	50 U	50 U	50 U	100 U	--	--	**93**	**58**	**94**	**130**	**101**	--
Lube oil-range hydrocarbons	500		250 U	200 U	--	--	250 U	250 U	200 U	250 U	200 U	--	--	250 U	250 U	250 U	250 U	200 U	--
Total TPH	500		**92**	ND	--	--	ND	ND	ND	ND	ND	--	--	**93**	**58**	**94**	**130**	**101**	--
Diesel-range hydrocarbons - w/SGC	500		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - w/SGC	500		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TPH - w/SGC	500		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (VPH) (µg/L)																			
1-Methylnaphthalene	1.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	1.6		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene, 1,2,3-Trimethyl-	80		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Decane	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dodecane	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	21		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	4.1		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	24		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	1.4		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octane	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentane	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	102		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, m-,p-	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, o-	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes	106		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Location ID / Sample ID / Sample Date	Groundwater PCUL	MW3 MW3-W-15.0-20200427 4/27/2020	MW3 MW3-220420 4/20/2022	MW3 MW3-230713 7/13/2023	MW3 MW3-20231205 12/5/2023	MW4 MW4-W-20.0-20190723 7/23/2019	MW4 MW4-W-20.0-20191217 12/17/2019	MW4 MW4-W-50.0 1/30/2020	MW4 MW4-W-20.0-20200428 4/28/2020	MW4 MW-4-220422 4/22/2022	MW4 MW4-230721 7/21/2023	MW4 MW4-20231206 12/6/2023	MW5 MW5-W-15.0-20190723 7/23/2019	MW5 MW5-W-15.0-20191217 12/17/2019	MW5 MW5-W-15.0-20200130 1/30/2020	MW5 MW5-W-15.0-20200428 4/28/2020	MW5 MW-5-220422 4/22/2022	MW5 MW5-230720 7/20/2023
Total Metals (µg/L)																			
Extractable Petroleum Hydrocarbons (EPH) (µg/L)																			
C8-C10 Aliphatics		NE	--	--	--	--	--	--	--	--	--	--	--						
C8-C10 Aromatics		NE	--	--	--	--	--	--	--	--	--	--	--						
C10-C12 Aliphatics		NE	--	--	--	--	--	--	--	--	--	--	--						
C10-C12 Aromatics		NE	--	--	--	--	--	--	--	--	--	--	--						
C12-C16 Aliphatics		NE	--	--	--	--	--	--	--	--	--	--	--						
C12-C16 Aromatics		NE	--	--	--	--	--	--	--	--	--	--	--						
C16-C21 Aliphatics		NE	--	--	--	--	--	--	--	--	--	--	--						
C16-C21 Aromatics		NE	--	--	--	--	--	--	--	--	--	--	--						
C21-C34 Aliphatics		NE	--	--	--	--	--	--	--	--	--	--	--						
C21-C34 Aromatics		NE	--	--	--	--	--	--	--	--	--	--	--						
Volatile Organic Compounds (VOCs) (µg/L)																			
1,1,1,2-Tetrachloroethane		1.7	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,1,1-Trichloroethane		200	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	**0.19 J**	
1,1,2,2-Tetrachloroethane		0.22	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)		NE	--	0.2 U	--	--	--	--	--	--	0.2 U	--	--					0.2 U	
1,1,2-Trichloroethane		0.90	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,1-Dichloroethane		7.7	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,1-Dichloroethylene		7.0	1 U	0.2 U	0.20 U	0.20 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	10 U	5 U	1 U	1 U	0.2 U	0.20 U
1,1-Dichloropropene		NE	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,2,3-Trichlorobenzene		6.4	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	5 U	1 U	1 U	0.5 U	
1,2,3-Trichloropropane		0.00038	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	5 U	1 U	1 U	0.5 U	
1,2,4-Trichlorobenzene		NE	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	5 U	1 U	1 U	0.5 U	
1,2,4-Trimethylbenzene		80	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	**0.11 J**	
1,2-Dibromo-3-Chloropropane		0.042	10 U	0.5 U	--	--	10 U	10 U	10 U	10 U	0.5 U	--	--	100 U	50 U	10 U	10 U	0.5 U	
1,2-Dibromoethane		NE	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,2-Dichlorobenzene		NE	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,2-Dichloroethane		3.5	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,2-Dichloropropane		3.1	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,3,5-Trimethylbenzene		80	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,3-Dichlorobenzene		NE	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,3-Dichloropropane		160	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
1,4-Dichlorobenzene		NE	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
2,2-Dichloropropane		NE	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
2-Chloroethyl vinyl ether		NE	--	1 U	--	--	--	--	--	--	1 U	--	--					1 U	
2-Chlorotoluene		160	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
2-Hexanone		40	10 U	5 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	100 U	50 U	10 U	10 U	5 U	
4-Chlorotoluene		NE	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
4-Isopropyltoluene		NE	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Acetone		7200	50 U	5 U	--	--	50 U	50 U	50 U	50 U	5 U	--	--	500 U	250 U	50 U	50 U	**7.84**	
Acrolein		1.1	--	5 U	--	--	--	--	--	--	5 U	--	--					5 U	
Acrylonitrile		7200	--	1 U	--	--	--	--	--	--	1 U	--	--					1 U	
Benzene		1.1	0.35 U	0.2 U	--	--	0.35 U	0.35 U	0.35 U	0.35 U	0.2 U	--	--	3.5 U	1.7 U	0.35 U	0.35 U	0.2 U	
Bromobenzene		64	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Bromochloromethane		NE	--	0.2 U	--	--					0.2 U	--	--					0.2 U	
Bromoform		12	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Bromomethane		11	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	--	--	10 U	5 U	1 U	1 U	1 U	
Carbon Disulfide		800	--	0.2 U	--	--	--	--	--	--	0.2 U	--	--					0.2 U	
Carbon Tetrachloride		0.35	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Chlorobenzene		100	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Chloroethane		14667	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Chloroform		1.2	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	**0.14 J**	
Chloromethane		153	10 U	0.5 U	--	--	10 U	10 U	10 U	10 U	0.5 U	--	--	100 U	50 U	10 U	10 U	0.5 U	
cis-1,2-Dichloroethylene		16	1 U	0.2 U	**0.08 J**	0.20 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	10 U	5 U	1 U	1 U	**0.46**	**0.61**
cis-1,3-Dichloropropene		0.44	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Dibromochloromethane		2.2	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Dibromomethane		80	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Dichlorobromomethane		1.4	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Dichlorodifluoromethane		4.2	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Ethylbenzene		21	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Hexachlorobutadiene		NE	1 U	2 U	--	--	1 U	1 U	1 U	1 U	2 U	--	--	10 U	5 U	1 U	1 U	2 U	
Hexane		NE	1 U		--	--	1 U	1 U	1 U	1 U	--	--	--	10 U	5 U	1 U	1 U		
Isopropylbenzene		800	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	
Methyl ethyl ketone (MEK)		4800	10 U	5 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	100 U	50 U	10 U	10 U	5 U	
Methyl Iodide		NE	--	1 U	--	--	--	--	--	--	1 U	--	--	--	--	--	--	1 U	--
Methyl isobutyl ketone		640	10 U	5 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	100 U	50 U	10 U	10 U	5 U	--
Methyl tert-butyl ether		24	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	5 U	1 U	1 U	0.5 U	--

Analyte	Groundwater PCUL	MW3 MW3-W-15.0-20200427 4/27/2020	MW3 MW3-220420 4/20/2022	MW3 MW3-230713 7/13/2023	MW3 MW3-20231205 12/5/2023	MW4 MW4-W-20.0-20190723 7/23/2019	MW4 MW4-W-20.0-20191217 12/17/2019	MW4 MW4-W-50.0 1/30/2020	MW4 MW4-W-20.0-20200428 4/28/2020	MW4 MW4-220422 4/22/2022	MW4 MW4-230721 7/21/2023	MW4 MW4-20231206 12/6/2023	MW5 MW5-W-15.0-20190723 7/23/2019	MW5 MW5-W-15.0-20191217 12/17/2019	MW5 MW5-W-15.0-20200130 1/30/2020	MW5 MW5-W-15.0-20200428 4/28/2020	MW5 MW5-220422 4/22/2022	MW5 MW5-230720 7/20/2023
Total Metals (µg/L)																		
Methylene Chloride	5.0	5 U	1 U	1.00 U	1.00 U	5 U	5 U	5 U	5 U	1 U	1.00 U	1.00 U	50 U	25 U	5 U	5 U	1 U	1.00 U
Naphthalene	1.4	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	10 U	5 U	1 U	1 U	0.5 U	--
n-Butylbenzene	400	--	0.2 U	--	--	--	--	--	--	0.2 U	--	--	--	--	--	--	0.2 U	--
n-Propylbenzene	800	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	--
Sec-Butylbenzene	800	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	**0.07 J**	--
Styrene	100	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	--
Tert-Butylbenzene	800	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	--
Tetrachloroethylene	2.9	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	**0.1 J**	--
Toluene	102	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	**0.06 J**	--
trans-1,2-Dichloroethylene	77	1 U	0.2 U	0.20 U	0.20 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	10 U	5 U	1 U	1 U	**0.08 J**	0.20 U
trans-1,3-Dichloropropene	0.44	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	--
trans-1,4-Dichloro-2-butene	NE	--	1 U	--	--	--	--	--	--	1 U	--	--	--	--	--	--	1 U	--
Trichloroethylene	0.70	1 U	0.2 U	0.20 U	0.20 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	10 U	5 U	**3.3**	**3.3**	**6.85**	**9.26**
Trichlorofluoromethane	120	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	--
Vinyl Acetate	7809	--	0.2 U	--	--	--	--	--	--	0.2 U	--	--	--	--	--	--	0.2 U	--
Vinyl Chloride	0.18	0.2 U	0.2 U	0.20 U	0.20 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.20 U	2 U	1 U	0.2 U	0.2 U	0.2 U	0.20 U
Xylene, m-,p-	NE	2 U	0.4 U	--	--	2 U	2 U	2 U	2 U	0.4 U	--	--	20 U	10 U	2 U	2 U	0.4 U	--
Xylene, o-	NE	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	10 U	5 U	1 U	1 U	0.2 U	--
Total Xylenes	106	2 U	0.6 U	--	--	2 U	2 U	2 U	2 U	0.6 U	--	--	20 U	10 U	2 U	2 U	0.6 U	--
Semivolatile Compounds (SVOCs) (µg/L)																		
1,2,4-Trichlorobenzene	0.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
1,2-Dichlorobenzene	4.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
1,3-Dichlorobenzene	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
1,4-Dichlorobenzene	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
1,4-Dioxane	0.44	--	**0.3**	**0.2**	**0.3**	--	--	--	--	**0.1 J**	0.2 U	0.2 UJ	--	--	--	--	**1.3**	**1.1**
2,2'-Oxybis[1-chloropropane]	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
2,4,5-Trichlorophenol	0.037	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
2,4,6-Trichlorophenol	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
2,4-Dichlorophenol	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
2,4-Dimethylphenol	2.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
2,4-Dinitrophenol	32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2 U	--
2,4-Dinitrotoluene	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
2,6-Dinitrotoluene	0.058	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
2-Chloronaphthalene	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
2-Chlorophenol	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
2-methylphenol	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
2-Nitroaniline	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
3,3'-Dichlorobenzidine	0.0033	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
4,6-Dinitro-2-Methylphenol	7.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2 U	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
4-Chloro-3-Methylphenol	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
4-Chloroaniline	0.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 UJ	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
4-methylphenol	106	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
4-Nitroaniline	4.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
Benzoic Acid	589	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.5 J**	--
Benzyl Alcohol	56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.09 J**	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Bis(2-Chloroethyl)Ether	0.040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Bis(2-Ethylhexyl) Phthalate	0.046	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Butyl benzyl Phthalate	0.013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Dibutyl Phthalate	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Diethyl Phthalate	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.3**	--
Dimethyl Phthalate	59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Di-N-Octyl Phthalate	2.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Hexachlorobenzene	0.000005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Hexachlorobutadiene	0.010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Hexachlorocyclopentadiene	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 UJ	--
Hexachloroethane	0.020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Isophorone	92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Nitrobenzene	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
N-Nitrosodi-n-propylamine	0.013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
N-Nitrosodiphenylamine	0.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--

Analyte	Location ID / Sample ID / Sample Date	Groundwater PCUL	MW3 MW3-W-15.0-20200427 4/27/2020	MW3 MW3-220420 4/20/2022	MW3 MW3-230713 7/13/2023	MW3 MW3-20231205 12/5/2023	MW4 MW4-W-20.0-20190723 7/23/2019	MW4 MW4-W-20.0-20191217 12/17/2019	MW4 MW4-W-50.0 1/30/2020	MW4 MW4-W-20.0-20200428 4/28/2020	MW4 MW-4-220422 4/22/2022	MW4 MW4-230721 7/21/2023	MW4 MW4-20231206 12/6/2023	MW5 MW5-W-15.0-20190723 7/23/2019	MW5 MW5-W-15.0-20191217 12/17/2019	MW5 MW5-W-15.0-20200130 1/30/2020	MW5 MW5-W-15.0-20200428 4/28/2020	MW5 MW5-W-5-220422 4/22/2022	MW5 MW5-230720 7/20/2023
Total Metals (µg/L)																			
Pentachlorophenol		0.0020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	--
Phenol		101	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2 U	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)																			
1-Methylnaphthalene		1.5	--	**0.002 J**	0.010 U	0.010 U	--	--	--	--	**0.002 J**	0.010 U	0.010 U	--	--	--	--	**0.012**	**0.011**
2-Methylnaphthalene		14	--	**0.003 J**	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	**0.01 J**	**0.008 J**
Acenaphthene		5.3	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U
Acenaphthylene		NE	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U
Anthracene		2.1	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.003 J**	0.010 U
Benzo(a)anthracene		0.00016	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.001 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U
Benzo(a)pyrene		0.000016	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U
Benzo(b)fluoranthene		0.00016	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.003 J**	0.010 U
Benzo(g,h,i)perylene		NE	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U
Benzo(j)fluoranthene		NE	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U
Benzo(k)fluoranthene		0.0016	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U
Benzofluoranthenes (Total)		NE	--	0.01 U	0.020 U	0.020 U	--	--	--	--	**0.004 J**	0.020 U	0.020 U	--	--	--	--	**0.006 J**	0.020 U
Carbazole		NE	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	**0.003 J**	0.010 U
Chrysene		0.016	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.001 J**	0.010 U
Dibenzo(a,h)anthracene		0.000016	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U
Dibenzofuran		3.1	--	**0.002 J**	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	**0.002 J**	0.010 U
Fluoranthene		1.8	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	**0.042**	0.04 U	**0.002 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U
Fluorene		3.7	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U
Indeno(1,2,3-c,d)pyrene		0.00016	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U
Naphthalene		1.4	0.4 U	**0.008 J**	0.010 U	0.010 U	0.4 U	0.4 U	0.4 U	0.4 U	0.01 U	0.010 U	0.010 U	0.4 U	0.4 U	0.4 U	0.4 U	**0.115**	**0.104**
Perylene		NE	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U
Phenanthrene		NE	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.003 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U
Pyrene		2.0	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U
Total cPAH TEQ (ND=0.5RL)		0.0097	0.0302 U	0.00805 U	0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U	**0.00692 J**	0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U	**0.00701 J**	0.00855 U
Polychlorinated Biphenyls (PCBs) (µg/L)																			
PCB-Aroclor 1016		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
PCB-Aroclor 1221		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
PCB-Aroclor 1232		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
PCB-Aroclor 1242		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
PCB-Aroclor 1248		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
PCB-Aroclor 1254		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
PCB-Aroclor 1260		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
PCB-Aroclor 1262		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
PCB-Aroclor 1268		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
Total PCB Aroclors		0.000007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)																			
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	**0.00023 J**
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
6:2 FTS		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	**0.032**	**0.029 J**
8:2 FTS		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	**0.00041 J**	0.0048 UJ
NEtFOSAA		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
N-ethylperfluoro-1-octanesulfonamide		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
NMeFOSAA		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
N-methylperfluoro-1-octanesulfonamide		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
Perfluorobutanesulfonic acid (PFBS)		NE	--	--	**0.0012 J**	**0.0016 J**	--	--	--	--	--	--	--	--	--	--	--	**0.0005 J**	**0.00049 J**
Perfluorodecanesulfonic acid (PFDS)		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
Perfluorodecanoic acid (PFDA)		NE	--	--	**0.0015 J**	**0.0012 J**	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
Perfluorododecanoic acid (PFDoA)		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
Perfluoroheptanesulfonic Acid (PFHpS)		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	**0.0011 J**	**0.00048 J**
Perfluoroheptanoic acid (PFHpA)		NE	--	--	**0.0083**	**0.011**	--	--	--	--	--	--	--	--	--	--	--	**0.0077**	**0.0067**
Perfluorohexanesulfonic acid (PFHxS)		NE	--	--	**0.0022 J**	**0.0018 J**	--	--	--	--	--	--	--	--	--	--	--	**0.0037 J**	**0.004 J**
Perfluorohexanoic acid (PFHxA)		NE	--	--	0.0094 U	**0.0096**	--	--	--	--	--	--	--	--	--	--	--	**0.011**	**0.0091 J**
Perfluorononanoic acid (PFNA)		NE	--	--	**0.0014 J**	**0.0019 J**	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
Perfluorooctanesulfonamide (PFOSA)		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
Perfluorooctanesulfonic acid (PFOS)		NE	--	--	**0.008**	**0.0091**	--	--	--	--	--	--	--	--	--	--	--	**0.045**	**0.013**
Perfluorooctanoic acid (PFOA)		NE	--	--	**0.015**	**0.016**	--	--	--	--	--	--	--	--	--	--	--	**0.021**	**0.02**
Perfluoropentanoic acid (PFPeA)		NE	--	--	**0.015**	**0.017**	--	--	--	--	--	--	--	--	--	--	--	**0.022**	**0.016**
Perfluorotetradecanoic acid (PFTeA)		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
Perfluorotridecanoic acid (PFTrDA)		NE	--	--	**0.0022 J**	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U
Perfluoroundecanoic acid (PFUnA)		NE	--	--	0.0047 U	0.0047 U	--	--	--	--	--	--	--	--	--	--	--	0.004 U	0.0048 U

Location ID		MW5	MW6	MW6	MW6	MW6	MW6	MW6	MW6	MW7	MW7	MW7	MW7	MW7	MW7	MW7	MW8	MW8
Sample ID		MW5-20231205	MW-6-W-15.0	MW6-W-15.0-20191216	MW6-W-15.0-20200429	MW6-W-15.0-20200427	MW-6-042022	MW6-230721	MW6-20231207	MW7-W-20.0	MW7-W-27.5-20191217	MW7-W-27.5-20200427	MW7-W-28.5	MW-7-04202022	MW7-230724	MW7-20231207	MW-8-W-19.0	MW8-W-15.0-20191217
Sample Date		12/5/2023	7/23/2019	12/16/2019	1/29/2020	4/27/2020	4/20/2022	7/21/2023	12/7/2023	7/24/2019	12/17/2019	4/27/2020	1/29/2020	4/20/2022	7/24/2023	12/7/2023	7/23/2019	12/17/2019
Analyte	**Groundwater PCUL**																	
Total Metals (µg/L)																		
Arsenic	8.0	20.0 U	**42.8**	**46.4**	**48.7**	**48.1**	**42.3**	**38.5**	**45.9**	**8.59**	**9.03**	**8.62**	**8.51**	**7.82**	**8.22**	**8.65**	**20.4**	**22.2**
Cadmium	1.2	10.0 U	--	--	--	--	0.5 U	2.00 U	2.00 U	--	--	v	--	0.1 U	0.100 U	0.500 U		--
Chromium	100	**105000**	**34.5**	**17.4**	**20.3**	**25.9**	**38.5**	**20.2**	**23.4**	**3.01**	**1.75**	5 U	**1.73**	**0.976**	**1.07 J**	2.50 U	**8.82**	10 U
Copper	3.1	50.0 U	**210**	5 U	5 U	25 U	**3.4**	10.0 U	**4.38 J**	10 U	5 U	25 U	**5.87**	**5.06**	**4.35**	**4.83**	**44.7**	50 U
Lead	5.6	10.0 U	--	--	--	--	**0.645**	2.00 U	**1.12 J**	--	--	--	--	**0.067 J**	0.100 U	0.500 U	--	--
Mercury	0.025	**0.0173**	--	--	--	--	**0.00512**	**0.00674**	**0.0105**	--	--	--	--	**0.217**	**0.133**	**0.141**	--	--
Nickel	8.2	50.0 U	--	--	--	--	**31.3**	**3.16 J**	**3.24 J**	--	--	--	--	**11.7**	**11.0**	**10.8**	--	--
Selenium	50	**18.3 J**	**11.8**	**13.5**	**14.3**	**6.15**	**3.75**	**12.4**	**5.82 J**	**6.24**	**8.21**	5 U	5 U	**0.226 J**	1.00 U	**1.30 J**	**2.99**	**3.44**
Thallium	0.062	20.0 U	--	--	--	--	1 U	4.00 U	4.00 U	--	--	--	--	0.2 U	0.200 U	1.00 U	--	--
Zinc	81	600 U	--	--	--	--	30 U	120 U	120 U	--	--	--	--	6 U	12.0 U	30.0 U	--	--
Dissolved Metals (µg/L)																		
Arsenic	8.0	20.0 U	--	--	--	--	**36.5**	**41.0**	**41.2**	--	--	--	--	**7.79**	**8.32**	**7.93**	--	--
Cadmium	1.2	10.0 U	--	--	--	--	0.2 U	2.00 U	2.00 U	--	--	--	--	0.1 U	0.100 U	0.200 U	--	--
Chromium	100	**99900**	--	--	--	--	**22.6**	**20.2**	**21.2**	--	--	--	--	**0.943**	**1.09**	**0.694 J**	--	--
Chromium, Hexavalent	0.046	**89800 J**	45 U	450 U	45 U	225 U	13 UJ	13 U	13 U	45 U	45 U	45 U	45 U	13 UJ	13 U	13 U	45 U	135 U
Chromium, Trivalent	27	**10100 J**	--	--	--	--	--	--	--	--	--	5 U	--	--	--	2.50 U	--	10 U
Copper	3.1	50.0 U	--	--	--	--	1 U	10.0 U	10.0 U	--	--		--	**5.2**	**4.21**	**5.59**	--	--
Lead	5.6	10.0 U	--	--	--	--	0.2 U	2.00 U	2.00 U	--	--		--	0.1 U	0.100 U	0.200 U	--	--
Mercury	0.025	0.00105 U	--	--	--	--	**0.00235**		**0.00390**	--	--		--	**0.127**	**0.111**	**0.127**	--	--
Nickel	8.2	**13.9 J**	--	--	--	--	**11.3**	**2.24 J**	**2.10 J**	--	--		--	**11.8**	**11.2**	**11.2**	--	--
Selenium	50	50.0 U	--	--	--	--		**10.2**	**4.26 J**	--	--		--	--	**0.408 J**	**1.14**	--	--
Thallium	0.062	20.0 U	--	--	--	--		4.00 U	4.00 U	--	--		--	--	0.200 U	0.400 U	--	--
Zinc	81	600 U	--	--	--	--		120 U	120 U	--	--		--	--	6.00 U	12.0 U	--	--
Total Petroleum Hydrocarbons (µg/L)																		
Gasoline-range hydrocarbons - HCID	800	250 U	--	--	--	--	250 U	250 U	250 U	--	--	--	--	250 U	250 U	250 U	--	--
Diesel-range hydrocarbons - HCID	500	500 U	--	--	--	--	500 U	500 U	500 U	--	--	--	--	500 U	500 U	500 U	--	--
Lube oil-range hydrocarbons - HCID	500	1000 U	--	--	--	--	1000 U	1000 U	1000 U	--	--	--	--	1000 U	1000 U	1000 U	--	--
Total TPH - HCID	500	ND	--	--	--	--	ND	ND	ND	--	--	--	--	ND	ND	ND	--	--
Diesel-range hydrocarbons	500	--	**550**	**410**	**370**	**590**	**471**	--	**282**	**80**	**99**	**170**	**88**	100 U	--	--	**370**	**430**
Lube oil-range hydrocarbons	500	--	**580**	**700**	**810**	**550**	**256**	--	**241**	250 U	250 U	250 U	250 U	200 U	--	--	250 U	**260**
Total TPH	500	--	**1130**	**1110**	**1180**	**1140**	**727**	--	**523**	**80**	**99**	**170**	**88**	ND	--	--	**370**	**690**
Diesel-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TPH - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (VPH) (µg/L)																		
1-Methylnaphthalene	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene, 1,2,3-Trimethyl-	80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Decane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dodecane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	4.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	102	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, m-,p-	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, o-	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes	106	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Location ID / Sample ID / Sample Date	Groundwater PCUL	MW5 MW5-20231205 12/5/2023	MW6 MW-6-W-15.0 7/23/2019	MW6 MW6-W-15.0-20191216 12/16/2019	MW6 MW6-W-15.0-20200429 1/29/2020	MW6 MW6-W-15.0-20200427 4/27/2020	MW6 MW-6-042022 4/20/2022	MW6 MW6-230721 7/21/2023	MW6 MW6-20231207 12/7/2023	MW7 MW7-W-20.0 7/24/2019	MW7 MW7-W-27.5-20191217 12/17/2019	MW7 MW7-W-27.5-20200427 4/27/2020	MW7 MW7-W-28.5 1/29/2020	MW7 MW-7-04202022 4/20/2022	MW7 MW7-230724 7/24/2023	MW7 MW7-20231207 12/7/2023	MW8 MW-8-W-19.0 7/23/2019	MW8 MW8-W-15.0-20191217 12/17/2019
Total Metals (µg/L)																			
Extractable Petroleum Hydrocarbons (EPH) (µg/L)																			
C8-C10 Aliphatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics	NE			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (VOCs) (µg/L)																			
1,1,1,2-Tetrachloroethane	1.7			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,1,1-Trichloroethane	200			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,1,2,2-Tetrachloroethane	0.22			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	NE			--	--	--	--	2 U	--	--					0.2 U	--	--		
1,1,2-Trichloroethane	0.90			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,1-Dichloroethane	7.7			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,1-Dichloroethylene	7.0		0.20 U	10 U	10 U	10 U	10 U	2 U	2.00 U	2.00 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	10 U
1,1-Dichloropropene	NE			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,2,3-Trichlorobenzene	6.4			10 U	10 U	10 U	10 U	5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	1 U	10 U
1,2,3-Trichloropropane	0.00038			10 U	10 U	10 U	10 U	5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	1 U	10 U
1,2,4-Trichlorobenzene	NE			10 U	10 U	10 U	10 U	5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	1 U	10 U
1,2,4-Trimethylbenzene	80			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,2-Dibromo-3-Chloropropane	0.042			100 U	100 U	100 U	100 U	5 U	--	--	10 U	10 U	10 U	10 U	0.5 U	--	--	10 U	100 U
1,2-Dibromoethane	NE			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,2-Dichlorobenzene	NE			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,2-Dichloroethane	3.5			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,2-Dichloropropane	3.1			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,3,5-Trimethylbenzene	80			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,3-Dichlorobenzene	NE			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,3-Dichloropropane	160			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
1,4-Dichlorobenzene	NE			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
2,2-Dichloropropane	NE			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
2-Chloroethyl vinyl ether	NE			--	--	--	--	10 U	--	--					1 U	--	--		--
2-Chlorotoluene	160			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
2-Hexanone	40			100 U	100 U	100 U	100 U	50 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	10 U	100 U
4-Chlorotoluene	NE			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
4-Isopropyltoluene	NE			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Acetone	7200			500 U	500 U	500 U	500 U	50 U	--	--	50 U	50 U	50 U	50 U	5 U	--	--	50 U	500 U
Acrolein	1.1			--	--	--	--	50 U	--	--	--	--	--	--	5 U	--	--		--
Acrylonitrile	7200			--	--	--	--	10 U	--	--	--	--	--	--	1 U	--	--		--
Benzene	1.1			3.5 U	3.5 U	3.5 U	3.5 U	2 U	--	--	0.35 U	0.35 U	0.35 U	0.35 U	0.2 U	--	--	0.35 U	3.5 U
Bromobenzene	64			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Bromochloromethane	NE			--	--	--	--	2 U	--	--	--	--	--	--	0.2 U	--	--		--
Bromoform	12			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Bromomethane	11			10 U	10 U	10 U	10 U	10 U	--	--	1 U	1 U	1 U	1 U	1 U	--	--	1 U	10 U
Carbon Disulfide	800			--	--	--	--	2 U	--	--	--	--	--	--	0.2 U	--	--	--	--
Carbon Tetrachloride	0.35			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Chlorobenzene	100			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Chloroethane	14667			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Chloroform	1.2			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Chloromethane	153			100 U	100 U	100 U	100 U	5 U	--	--	10 U	10 U	10 U	10 U	0.5 U	--	--	10 U	100 U
cis-1,2-Dichloroethylene	16	**0.68**		10 U	10 U	10 U	10 U	2 U	2.00 U	2.00 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	10 U
cis-1,3-Dichloropropene	0.44			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Dibromochloromethane	2.2			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Dibromomethane	80			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Dichlorobromomethane	1.4			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Dichlorodifluoromethane	4.2			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Ethylbenzene	21			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Hexachlorobutadiene	NE			10 U	10 U	10 U	10 U	20 U	--	--	1 U	1 U	1 U	1 U	2 U	--	--	1 U	10 U
Hexane	NE			10 U	10 U	10 U	10 U	--	--	--	1 U	1 U	1 U	1 U		--	--	1 U	10 U
Isopropylbenzene	800			10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Methyl ethyl ketone (MEK)	4800			100 U	100 U	100 U	100 U	50 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	10 U	100 U
Methyl Iodide	NE	--	--	--	--	--	--	10 U	--	--	--	--	--	--	1 U	--	--	--	--
Methyl isobutyl ketone	640	--		100 U	100 U	100 U	100 U	50 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	10 U	100 U
Methyl tert-butyl ether	24	--		10 U	10 U	10 U	10 U	5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	1 U	10 U

Analyte	Groundwater PCUL	MW5 MW5-20231205 12/5/2023	MW6 MW-6-W-15.0 7/23/2019	MW6 MW6-W-15.0-20191216 12/16/2019	MW6 MW6-W-15.0-20200429 1/29/2020	MW6 MW6-W-15.0-20200427 4/27/2020	MW6 MW-6-042022 4/20/2022	MW6 MW6-230721 7/21/2023	MW6 MW6-20231207 12/7/2023	MW7 MW7-W-20.0 7/24/2019	MW7 MW7-W-27.5-20191217 12/17/2019	MW7 MW7-W-27.5-20200427 4/27/2020	MW7 MW7-W-28.5 1/29/2020	MW7 MW7-7-04202022 4/20/2022	MW7 MW7-230724 7/24/2023	MW7 MW7-20231207 12/7/2023	MW8 MW-8-W-19.0 7/23/2019	MW8 MW8-W-15.0-20191217 12/17/2019
Total Metals (µg/L)																		
Methylene Chloride	5.0	1.00 U	50 U	50 U	50 U	50 U	**27.7**	10.0 U	10.0 U	5 U	5 U	5 U	5 U	1 U	1.00 U	1.00 U	5 U	50 U
Naphthalene	1.4	--	10 U	10 U	10 U	10 U	5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	1 U	10 U
n-Butylbenzene	400	--	--	--	--	--	2 U	--	--	--	--	--	--	0.2 U	--	--	--	--
n-Propylbenzene	800	--	10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Sec-Butylbenzene	800	--	10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Styrene	100	--	10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Tert-Butylbenzene	800	--	10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Tetrachloroethylene	2.9	--	10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Toluene	102	--	10 U	10 U	10 U	10 U	**0.56 J**	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
trans-1,2-Dichloroethylene	77	0.20 U	10 U	10 U	10 U	10 U	2 U	2.00 U	2.00 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	10 U
trans-1,3-Dichloropropene	0.44	--	10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
trans-1,4-Dichloro-2-butene	NE	--	--	--	--	--	10 U	--	--	--	--	--	--	1 U	--	--		
Trichloroethylene	0.70	**14.1**	10 U	10 U	10 U	10 U	2 U	2.00 U	2.00 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	10 U
Trichlorofluoromethane	120	--	10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Vinyl Acetate	7809	--	--	--	--	--	2 U	--	--	--	--	--	--	0.2 U	--	--	--	--
Vinyl Chloride	0.18	0.20 U	2 U	2 U	2 U	2 U	2 U	2.00 U	2.00 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.20 U	0.2 U	2 U
Xylene, m-,p-	NE	--	20 U	20 U	20 U	20 U	4 U	--	--	2 U	2 U	2 U	2 U	0.4 U	--	--	2 U	20 U
Xylene, o-	NE	--	10 U	10 U	10 U	10 U	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U
Total Xylenes	106	--	20 U	20 U	20 U	20 U	6 U	--	--	2 U	2 U	2 U	2 U	0.6 U	--	--	2 U	20 U
Semivolatile Compounds (SVOCs) (µg/L)																		
1,2,4-Trichlorobenzene	0.96	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	4.5	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	2.0	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	5.0	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	0.44	**1.1**	--	--	--	--	**0.2**	**0.2 J**	**0.2 J**	--	--	--	--	**0.5**	**0.4**	**0.3 J**	--	--
2,2'-Oxybis[1-chloropropane]	NE	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.037	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	8.0	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	10	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	2.9	--	--	--	--	--	1 UJ	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	32	--	--	--	--	--	2 U	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.18	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.058	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	100	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	17	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol	11	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	160	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.0033	--	--	--	--	--	1 UJ	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	7.0	--	--	--	--	--	2 U	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	36	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	0.44	--	--	--	--	--	1 UJ	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol	106	--	--	--	--	--	**0.06 J**	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	4.4	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	589	--	--	--	--	--	**0.7 J**	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	56	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.040	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.046	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.013	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NE	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	8.0	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	93	--	--	--	--	--	**0.3**	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	59	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	2.3	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.000005	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.010	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	1.0	--	--	--	--	--	1 UJ	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	0.020	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
Isophorone	92	--	--	--	--	--	**0.06 J**	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	16	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.013	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.55	--	--	--	--	--	0.2 U	--	--	--	--	--	--	--	--	--	--	--

Analyte	Groundwater PCUL	MW5 MW5-20231205 12/5/2023	MW6 MW-6-W-15.0 7/23/2019	MW6 MW6-W-15.0-20191216 12/16/2019	MW6 MW6-W-15.0-20200429 1/29/2020	MW6 MW6-W-15.0-20200427 4/27/2020	MW6 MW-6-042022 4/20/2022	MW6 MW6-230721 7/21/2023	MW6 MW6-20231207 12/7/2023	MW7 MW7-W-20.0 7/24/2019	MW7 MW7-W-27.5-20191217 12/17/2019	MW7 MW7-W-27.5-20200427 4/27/2020	MW7 MW7-W-28.5 1/29/2020	MW7 MW7-7-04202022 4/20/2022	MW7 MW7-230724 7/24/2023	MW7 MW7-20231207 12/7/2023	MW8 MW-8-W-19.0 7/23/2019	MW8 MW8-W-15.0-20191217 12/17/2019
Total Metals (µg/L)																		
Pentachlorophenol	0.0020	--	--	--	--	--	1 U	--	--	--	--	--	--	--	--	--	--	--
Phenol	101	--	--	--	--	--	**0.07 J**	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)																		
1-Methylnaphthalene	1.5	**0.008 J**	--	--	--	--	**0.002 J**	0.010 U	0.010 U	--	--	--	--	**0.001 J**	0.010 U	0.010 U	--	--
2-Methylnaphthalene	14	**0.007 J**	--	--	--	--	**0.002 J**	0.010 U	0.010 U	--	--	--	--	**0.002 J**	0.010 U	0.010 U	--	--
Acenaphthene	5.3	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Acenaphthylene	NE	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Anthracene	2.1	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Benzo(a)anthracene	0.00016	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Benzo(a)pyrene	0.000016	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Benzo(b)fluoranthene	0.00016	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	**0.007 J**	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Benzo(g,h,i)perylene	NE	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Benzo(j)fluoranthene	NE	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--
Benzo(k)fluoranthene	0.0016	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Benzofluoranthenes (Total)	NE	0.020 U	--	--	--	--	0.01 U	0.020 U	0.020 U	--	--	--	--	0.01 U	0.020 U	0.020 U	--	--
Carbazole	NE	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--
Chrysene	0.016	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Dibenzo(a,h)anthracene	0.000016	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Dibenzofuran	3.1	0.010 U	--	--	--	--	**0.003 J**	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--
Fluoranthene	1.8	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	**0.013**	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Fluorene	3.7	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Naphthalene	1.4	**0.069**	0.4 U	0.4 U	0.4 U	0.4 U	**0.006 J**	0.010 U	**0.007 J**	0.4 U	0.4 U	0.4 U	0.4 U	**0.006 J**	0.010 U	0.010 U	0.4 U	0.4 U
Perylene	NE	0.010 U	--	--	--	--	**0.01 J**	**0.015**	**0.007 J**	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--
Phenanthrene	NE	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	**0.018**	**0.006 J**	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Pyrene	2.0	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	**0.013**	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U
Total cPAH TEQ (ND=0.5RL)	0.0097	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U	0.00805 U	0.00855 U	**0.00875 J**	0.0302 U	0.0302 U	0.0302 U	0.0302 U	0.00805 U	0.00855 U	0.00855 U	0.0302 U	0.0302 U
Polychlorinated Biphenyls (PCBs) (µg/L)																		
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)																		
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	**0.0018 J**	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	--	--	--	--	--	0.05 U	**0.00031 J**	--	--	--	--	--	0.0049 U	0.0045 U	--	--
6:2 FTS	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	**0.0036 J**	**0.0036 J**	--	--
8:2 FTS	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
NEtFOSAA	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
NMeFOSAA	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
N-methylperfluoro-1-octanesulfonamide	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluorobutanesulfonic acid (PFBS)	NE	--	--	--	--	--	--	0.05 U	**0.0082**	--	--	--	--	--	**0.00081 J**	0.0045 U	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluorodecanoic acid (PFDA)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluorododecanoic acid (PFDoA)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluoroheptanoic acid (PFHpA)	NE	--	--	--	--	--	--	**0.022 J**	**0.011**	--	--	--	--	--	**0.0031 J**	0.0045 U	--	--
Perfluorohexanesulfonic acid (PFHxS)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluorohexanoic acid (PFHxA)	NE	--	--	--	--	--	--	0.1 U	**0.016**	--	--	--	--	--	0.0098 U	0.0092 U	--	--
Perfluorononanoic acid (PFNA)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluorooctanesulfonic acid (PFOS)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluorooctanoic acid (PFOA)	NE	--	--	--	--	--	--	**0.012 J**	**0.007**	--	--	--	--	--	**0.0019 J**	**0.0016 J**	--	--
Perfluoropentanoic acid (PFPeA)	NE	--	--	--	--	--	--	**0.024 J**	**0.026 J**	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--
Perfluoroundecanoic acid (PFUnA)	NE	--	--	--	--	--	--	0.05 U	0.0044 U	--	--	--	--	--	0.0049 U	0.0045 U	--	--

Analyte	Groundwater PCUL	MW8 MW8-W-15.0-20200129 1/29/2020	MW8 MW8-W-15.0-20200427 4/27/2020	MW8 MW-8-220421 4/21/2022	MW8 MW8-230714 7/14/2023	MW8 MW8-20231206 12/6/2023	MW9 MW-9-W-33.0 7/23/2019	MW9 MW9-W-33.5-20191216 12/16/2019	MW9 MW9-W-33.5-20200129 1/29/2020	MW9 MW9-W-32.5 4/28/2020	MW9 MW-9-04192022 4/19/2022	MW9 MW9-230714 7/14/2023	MW9 MW9-20231207 12/7/2023	MW10 MW-10-W-15.0 7/23/2019	MW10 MW10-W-15.0-20191217 12/17/2019	MW10 MW10-W-15.0-20200129 1/29/2020	MW10 MW10-W-15.0-20200427 4/27/2020
Total Metals (µg/L)																	
Arsenic	8.0	**18.6**	**6.38**	**11.2**	**6.54**	**10.2**	**9.26**	**11.5**	**10.9**	**8.24**	**10.8**	**10.3**	**10.3**	**16.2**	**13.2**	**25.5**	**14.9**
Cadmium	1.2	--	--	0.1 U	0.200 U	0.100 U	--	--	--		**0.058 J**	0.100 U	**0.100 J**				
Chromium	100	10 U	**6.3**	**9.98**	**8.50**	5.00 U	**1.56**	**21.6**	**2.2**	**2.02**	**1.4**	**1.57**	2.50 U	**7.96**	**7.67**	**10.5**	**11.5**
Copper	3.1	5 U	5 U	**0.206 J**	**2.37**	**0.234 J**	**5.87**	5 U	5 U	5 U	**2.86**	**1.62**	**2.53**	5 U	5 U	5 U	5 U
Lead	5.6	--	--	0.1 U	**0.536**	0.100 U	--	--	--	--	**0.113**	**0.110**	0.200 U	--	--	--	--
Mercury	0.025	--	--	**0.00239**	**0.00243**	**0.00313 J**	--	--	--	--	**0.0477**	**0.0189**	**0.0337**	--	--	--	--
Nickel	8.2	--	--	**5.46**	**6.75**	**4.99**	--	--	--	--	**58.5**	**46.2**	**46.9**	--	--	--	--
Selenium	50	5 U	1 U	**0.254 J**	**1.39**	**0.391 J**	**2.7**	**4.66**	5 U	1 U	**0.549**	**0.931**	**1.00**	**4.34**	**10.4**	5 U	**3.68**
Thallium	0.062	--	--	0.2 U	0.400 U	0.400 U	--	--	--	--	0.2 U	0.200 U	1.00 U	--	--	--	--
Zinc	81	--	--	6 U	**27.6**	6.00 U	--	--	--	--	6 U	6.00 U	12.0 U	--	--	--	--
Dissolved Metals (µg/L)																	
Arsenic	8.0	--	--	**10.9**	**6.05**	**11.4**	--	--	--	--	**9.92**	**10.2**	**9.64**	--	--	--	--
Cadmium	1.2	--	--	0.1 U	0.200 U	0.500 U	--	--	--	--	**0.042 J**	0.100 U	**0.0620 J**	--	--	--	--
Chromium	100	--	--	**7.67**	**7.91**	**7.43**	--	--	--	--	**1.32**	**1.44**	**0.934 J**	--	--	--	--
Chromium, Hexavalent	0.046	45 U	45 U	13 UJ	**16 J**	13 U	45 U	45 U	45 U	45 U	13 UJ	13 U	13 U	45 U	135 U	90 U	45 U
Chromium, Trivalent	27	10 U		--	--	5.00 U	--	--	--	--	--		2.50 U	--	--	--	--
Copper	3.1	--	--	0.5 U	1.00 U	2.50 U	--	--	--	--	**5.47**	**1.09**	**2.88**	--	--	--	--
Lead	5.6	--	--	0.1 U	0.200 U	0.500 U	--	--	--	--	**0.084 J**	0.100 U	0.200 U	--	--	--	--
Mercury	0.025	--	--	**0.00035 J**	**0.00126**	**0.00192**	--	--	--	--	**0.00303**	**0.00869**	**0.0199**	--	--	--	--
Nickel	8.2	--	--	**4.96**	**6.97**	**5.34**	--	--	--	--	**55.7**	**42.1**	**52.0**	--	--	--	--
Selenium	50	--	--	--	1.00 U	**1.08 J**	--	--	--	--	**0.697**	1.00 U	**0.808 J**	--	--	--	--
Thallium	0.062	--	--	--	0.400 U	1.00 U	--	--	--	--	0.2 U	0.200 U	0.400 U	--	--	--	--
Zinc	81	--	--	--	12.0 U	30.0 U	--	--	--	--	6 U	6.00 U	12.0 U	--	--	--	--
Total Petroleum Hydrocarbons (µg/L)																	
Gasoline-range hydrocarbons - HCID	800	--	--	250 U	250 U	250 U	--	--	--	--	250 U	250 U	250 U	--	--	--	--
Diesel-range hydrocarbons - HCID	500	--	--	500 U	500 U	500 U	--	--	--	--	500 U	500 U	500 U	--	--	--	--
Lube oil-range hydrocarbons - HCID	500	--	--	1000 U	1000 U	1000 U	--	--	--	--	1000 U	1000 U	1000 U	--	--	--	--
Total TPH - HCID	500	--	--	ND	ND	ND	--	--	--	--	ND	ND	ND	--	--	--	--
Diesel-range hydrocarbons	500	**300**	**340**	**210**	--	--	**110**	**200**	**100**	**140**	100 U	--	--	**370**	**440**	**410**	**650**
Lube oil-range hydrocarbons	500	250 U	250 U	200 U	--	--	250 U	**330**	250 U	250 U	200 U	--	--	250 U	**360**	**690**	**640**
Total TPH	500	**300**	**340**	**210**	--	--	**110**	**530**	**100**	**140**	ND	--	--	**370**	**800**	**1100**	**1290**
Diesel-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TPH - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (VPH) (µg/L)																	
1-Methylnaphthalene	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene, 1,2,3-Trimethyl-	80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Decane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dodecane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	4.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	102	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, m-,p-	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, o-	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes	106	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Groundwater PCUL	MW8 MW8-W-15.0-20200129 1/29/2020	MW8 MW8-W-15.0-20200427 4/27/2020	MW8 MW-8-220421 4/21/2022	MW8 MW8-230714 7/14/2023	MW8 MW8-20231206 12/6/2023	MW9 MW-9-W-33.0 7/23/2019	MW9 MW9-W-33.5-20191216 12/16/2019	MW9 MW9-W-33.5-20200129 1/29/2020	MW9 MW9-W-32.5 4/28/2020	MW9 MW-9-04192022 4/19/2022	MW9 MW9-230714 7/14/2023	MW9 MW9-20231207 12/7/2023	MW10 MW-10-W-15.0 7/23/2019	MW10 MW10-W-15.0-20191217 12/17/2019	MW10 MW10-W-15.0-20200129 1/29/2020	MW10 MW10-W-15.0-20200427 4/27/2020
Total Metals (µg/L)																	
Extractable Petroleum Hydrocarbons (EPH) (µg/L)																	
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (VOCs) (µg/L)																	
1,1,1,2-Tetrachloroethane	1.7	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
1,1,1-Trichloroethane	200	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	0.22	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	NE	--		0.2 U	--	--	--	--	--		0.2 U	--	--		--	--	--
1,1,2-Trichloroethane	0.90	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
1,1-Dichloroethane	7.7	1 U	1 U	**0.27**	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
1,1-Dichloroethylene	7.0	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	10 U	10 U	10 U
1,1-Dichloropropene	NE	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U			1 U	10 U	10 U	10 U
1,2,3-Trichlorobenzene	6.4	1 U	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U			1 U	10 U	10 U	10 U
1,2,3-Trichloropropane	0.00038	1 U	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U			1 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	NE	1 U	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U			1 U	10 U	10 U	10 U
1,2,4-Trimethylbenzene	80	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U			1 U	10 U	10 U	10 U
1,2-Dibromo-3-Chloropropane	0.042	10 U	10 U	0.5 U	--	--	10 U	10 U	10 U	10 U	0.5 U			10 U	100 U	100 U	100 U
1,2-Dibromoethane	NE	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U			1 U	10 U	10 U	10 U
1,2-Dichlorobenzene	NE	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U			1 U	10 U	10 U	10 U
1,2-Dichloroethane	3.5	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U			1 U	10 U	10 U	10 U
1,2-Dichloropropane	3.1	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
1,3,5-Trimethylbenzene	80	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
1,3-Dichlorobenzene	NE	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
1,3-Dichloropropane	160	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
1,4-Dichlorobenzene	NE	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
2,2-Dichloropropane	NE	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
2-Chloroethyl vinyl ether	NE	--	--	1 U	--	--					1 U	--	--	--	--	--	--
2-Chlorotoluene	160	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
2-Hexanone	40	10 U	10 U	5 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	10 U	100 U	100 U	100 U
4-Chlorotoluene	NE	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
4-Isopropyltoluene	NE	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Acetone	7200	50 U	50 U	5 U	--	--	50 U	50 U	50 U	50 U	5 U	--	--	50 U	500 U	500 U	500 U
Acrolein	1.1	--	--	5 U	--	--	--	--	--	--	5 U	--	--	--	--	--	--
Acrylonitrile	7200	--	--	1 U	--	--	--	--	--	--	1 U	--	--	--	--	--	--
Benzene	1.1	0.35 U	0.35 U	**0.05 J**	--	--	0.35 U	0.35 U	0.35 U	0.35 U	0.2 U	--	--	0.35 U	3.5 U	3.5 U	3.5 U
Bromobenzene	64	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Bromochloromethane	NE	--	--	0.2 U	--	--	--	--	--		0.2 U	--	--	--	--	--	--
Bromoform	12	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Bromomethane	11	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	--	--	1 U	10 U	10 U	10 U
Carbon Disulfide	800	--	--	0.2 U	--	--	--	--	--	--	0.2 U	--	--	--	--	--	--
Carbon Tetrachloride	0.35	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Chlorobenzene	100	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Chloroethane	14667	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Chloroform	1.2	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Chloromethane	153	10 U	10 U	0.5 U	--	--	10 U	10 U	10 U	10 U	0.5 U	--	--	10 U	100 U	100 U	100 U
cis-1,2-Dichloroethylene	16	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	0.44	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Dibromochloromethane	2.2	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Dibromomethane	80	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Dichlorobromomethane	1.4	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Dichlorodifluoromethane	4.2	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Ethylbenzene	21	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Hexachlorobutadiene	NE	1 U	1 U	2 U	--	--	1 U	1 U	1 U	1 U	2 U	--	--	1 U	10 U	10 U	10 U
Hexane	NE	1 U	1 U		--	--	1 U	1 U	1 U	1 U		--	--	1 U	10 U	10 U	10 U
Isopropylbenzene	800	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Methyl ethyl ketone (MEK)	4800	10 U	10 U	5 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	10 U	100 U	100 U	100 U
Methyl Iodide	NE	--		1 U	--	--	--	--	--	--	1 U	--	--	--	--	--	--
Methyl isobutyl ketone	640	10 U	10 U	5 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	10 U	100 U	100 U	100 U
Methyl tert-butyl ether	24	1 U	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	1 U	10 U	10 U	10 U

Analyte	Location ID / Sample ID / Sample Date	Groundwater PCUL	MW8 MW8-W-15.0-20200129 1/29/2020	MW8 MW8-W-15.0-20200427 4/27/2020	MW8 MW-8-220421 4/21/2022	MW8 MW8-230714 7/14/2023	MW8 MW8-20231206 12/6/2023	MW9 MW-9-W-33.0 7/23/2019	MW9 MW9-W-33.5-20191216 12/16/2019	MW9 MW9-W-33.5-20200129 1/29/2020	MW9 MW9-W-32.5 4/28/2020	MW9 MW-9-04192022 4/19/2022	MW9 MW9-230714 7/14/2023	MW9 MW9-20231207 12/7/2023	MW10 MW-10-W-15.0 7/23/2019	MW10 MW10-W-15.0-20191217 12/17/2019	MW10 MW10-W-15.0-20200129 1/29/2020	MW10 MW10-W-15.0-20200427 4/27/2020
Total Metals (µg/L)																		
Methylene Chloride		5.0	5 U	5 U	1 U	1.00 U	1.00 U	5 U	5 U	5 U	5 U	1 U	1.00 U	1.00 U	5 U	50 U	50 U	50 U
Naphthalene		1.4	1 U	1 U	0.5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	1 U	10 U	10 U	10 U
n-Butylbenzene		400	--		0.2 U	--	--	--	--	--	--	0.2 U	--	--	--	--	--	--
n-Propylbenzene		800	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Sec-Butylbenzene		800	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Styrene		100	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Tert-Butylbenzene		800	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Tetrachloroethylene		2.9	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Toluene		102	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
trans-1,2-Dichloroethylene		77	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	10 U	10 U	10 U
trans-1,3-Dichloropropene		0.44	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
trans-1,4-Dichloro-2-butene		NE			1 U	--	--	--	--	--	--	1 U	--	--		--	--	--
Trichloroethylene		0.70	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	1 U	10 U	10 U	10 U
Trichlorofluoromethane		120	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Vinyl Acetate		7809	--		0.2 U	--	--	--	--	--	--	0.2 U	--	--	--	--	--	--
Vinyl Chloride		0.18	0.2 U	0.2 U	0.2 U	0.20 U	0.20 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.20 U	0.2 U	2 U	2 U	2 U
Xylene, m-,p-		NE	2 U	2 U	0.4 U	--	--	2 U	2 U	2 U	2 U	0.4 U	--	--	2 U	20 U	20 U	20 U
Xylene, o-		NE	1 U	1 U	0.2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	1 U	10 U	10 U	10 U
Total Xylenes		106	2 U	2 U	0.6 U	--	--	2 U	2 U	2 U	2 U	0.6 U	--	--	2 U	20 U	20 U	20 U
Semivolatile Complounds (SVOCs) (µg/L)																		
1,2,4-Trichlorobenzene		0.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene		4.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene		2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene		5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane		0.44	--	--	**13.3**	**20.4**	**6.0 J**	--	--	--	--	**2.7**	**2.4**	**1.9**	--	--	--	--
2,2'-Oxybis[1-chloropropane]		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol		0.037	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol		8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol		10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol		2.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol		32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene		0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene		0.058	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene		100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol		17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol		11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline		160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine		0.0033	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol		7.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol		36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline		0.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol		106	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline		4.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid		589	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol		56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether		0.040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate		0.046	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate		0.013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole		NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate		8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate		93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate		59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate		2.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene		0.000005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene		0.010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene		1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane		0.020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone		92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene		16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine		0.013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine		0.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Groundwater PCUL	Location ID	MW8	MW8	MW8	MW8	MW8	MW9	MW9	MW9	MW9	MW9	MW9	MW9	MW10	MW10	MW10	MW10
		Sample ID	MW8-W-15.0-20200129	MW8-W-15.0-20200427	MW-8-220421	MW8-230714	MW8-20231206	MW-9-W-33.0	MW9-W-33.5-20191216	MW9-W-33.5-20200129	MW9-W-32.5	MW-9-04192022	MW9-230714	MW9-20231207	MW-10-W-15.0	MW10-W-15.0-20191217	MW10-W-15.0-20200129	MW10-W-15.0-20200427
		Sample Date	1/29/2020	4/27/2020	4/21/2022	7/14/2023	12/6/2023	7/23/2019	12/16/2019	1/29/2020	4/28/2020	4/19/2022	7/14/2023	12/7/2023	7/23/2019	12/17/2019	1/29/2020	4/27/2020
Total Metals (µg/L)																		
Pentachlorophenol	0.0020		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	101		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)																		
1-Methylnaphthalene	1.5		--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	**0.002 J**	0.010 U	0.010 U				
2-Methylnaphthalene	14		--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U				
Acenaphthene	5.3		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Acenaphthylene	NE		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Anthracene	2.1		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.001 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzo(a)anthracene	0.00016		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzo(a)pyrene	0.000016		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzo(b)fluoranthene	0.00016		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzo(g,h,i)perylene	NE		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzo(j)fluoranthene	NE		--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--	--
Benzo(k)fluoranthene	0.0016		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzofluoranthenes (Total)	NE		--	--	0.01 U	0.020 U	0.020 U	--	--	--	--	0.01 U	0.020 U	0.020 U	--	--	--	--
Carbazole	NE		--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	**0.006 J**	**0.006 J**	0.010 U	--	--	--	--
Chrysene	0.016		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Dibenzo(a,h)anthracene	0.000016		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Dibenzofuran	3.1		--	--	**0.002 J**	0.010 U	0.010 U	--	--	--	--	**0.002 J**	0.010 U	0.010 U	--	--	--	--
Fluoranthene	1.8		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Fluorene	3.7		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Indeno(1,2,3-c,d)pyrene	0.00016		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Naphthalene	1.4		0.4 U	0.4 U	0.01 U	0.010 U	0.010 U	0.4 U	0.4 U	0.4 U	0.4 U	0.01 U	0.010 U	0.010 U	0.4 U	0.4 U	0.4 U	0.4 U
Perylene	NE		--	--	0.01 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	--	--	--	--
Phenanthrene	NE		0.04 U	0.04 U	**0.002 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.002 J**	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Pyrene	2.0		0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U	0.01 U	0.010 U	0.010 U	0.04 U	0.04 U	0.04 U	0.04 U
Total cPAH TEQ (ND=0.5RL)	0.0097		0.0302 U	0.0302 U	0.00805 U	0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U	0.00805 U	0.00855 U	0.00855 U	0.0302 U	0.0302 U	0.0302 U	0.0302 U
Polychlorinated Biphenyls (PCBs) (µg/L)																		
PCB-Aroclor 1016	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000007		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)																		
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE		--	--	--	**0.00036 J**	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
6:2 FTS	NE		--	--	--	**0.0075 J**	--	--	--	--	--	--	**0.0027 J**	**0.0031 J**	--	--	--	--
8:2 FTS	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
NEtFOSAA	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
NMeFOSAA	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	NE		--	--	--	**0.0045 J**	--	--	--	--	--	--	**0.0018 J**	0.0046 U	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE		--	--	--	**0.017 J**	--	--	--	--	--	--	**0.003 J**	0.0046 U	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	NE		--	--	--	**0.0095**	--	--	--	--	--	--	**0.0017 J**	**0.0016 J**	--	--	--	--
Perfluorohexanoic acid (PFHxA)	NE		--	--	--	**0.037**	--	--	--	--	--	--	0.0094 U	0.0092 U	--	--	--	--
Perfluorononanoic acid (PFNA)	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	NE		--	--	--	**0.0051 J**	--	--	--	--	--	--	**0.0014 J**	**0.0014 J**	--	--	--	--
Perfluorooctanoic acid (PFOA)	NE		--	--	--	**0.035**	--	--	--	--	--	--	**0.0049**	**0.0041**	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE		--	--	--	**0.045**	--	--	--	--	--	--	**0.004 J**	0.0046 U	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE		--	--	--	0.0051 U	--	--	--	--	--	--	0.0047 U	0.0046 U	--	--	--	--

Analyte	Groundwater PCUL	MW10 MW-10-04192022 4/19/2022	MW10 MW10-230714 7/14/2023	MW10 MW10-20231207 12/7/2023	MW11 MW11-W-15.0-20190722 7/22/2019	MW11 MW11-W-15.0-20191216 12/16/2019	MW11 MW11-W-15.0-20200129 1/29/2020	MW11 MW11-W-15.0-20200427 4/27/2020	MW11 MW-11-220421 4/21/2022	MW11 MW11-230720 7/20/2023	MW11 MW11-20231205 12/5/2023	MW-12 MW-12-220425 4/25/2022	MW-12 MW12-230724 7/24/2023	MW-12 MW12-20231204 12/4/2023	MW-13 MW-13-220427 4/27/2022	MW-13 MW13-230724 7/24/2023	MW-13 MW13-20231204 12/4/2023
Total Metals (µg/L)																	
Arsenic	8.0	**29.9**	**22.4**	**26.1**	10 U	**6.16**	**7.16**	**4.1**	**5.37**	**5.27**	**5.74**	**30.8**	**19.2**	**21.7**	**9.39**	**9.75**	**11.9**
Cadmium	1.2	0.2 U	**0.430 J**	0.500 U	--	--	--	--	0.1 U	**0.470 J**	0.200 U	0.1 U	0.100 U	0.100 U	0.1 U	0.100 U	0.100 U
Chromium	100	**15.7**	**12.1**	**10.2**	10 U	**2.48**	**3.42**	**3.1**	**14.4**	**3.22 J**	**2.98**	0.5 U	0.500 U	2.50 U	0.5 U	0.500 U	2.50 U
Copper	3.1	**0.794 J**	5.00 U	2.50 U	50 U	5 U	5 U	5 U	**0.354 J**	5.00 U	1.00 U	**1.36**	**0.187 J**	**0.378 J**	0.5 U	0.500 U	1.00 U
Lead	5.6	**0.278**	1.00 U	0.500 U	--	--	--	--	0.1 U	1.00 U	0.200 U	**0.073 J**	**0.0690 J**	**0.128**	0.1 U	0.100 U	0.100 U
Mercury	0.025	**0.00445**	**0.00127**	**0.00194**	--	--	--	--	0.00042 U	0.00042 U	**0.00228**	**0.00111**	**0.00055**	**0.00187**	0.00041 U	0.00041 U	**0.00015 J**
Nickel	8.2	**7.51**	**5.24**	**9.76**	--	--	--	--	**0.845**	5.00 U	**0.646 J**	**0.777**	**0.302 J**	**0.362 J**	**0.198 J**	**0.222 J**	**0.308 J**
Selenium	50	**1.26**	**2.94 J**	**2.63**	10 U	**2.66**	**1.76**	1 U	**0.378 J**	5.00 U	1.00 U	0.5 U	0.500 U	1.00 U	0.5 U	0.500 U	1.00 U
Thallium	0.062	0.4 U	2.00 U	1.00 U	--	--	--	--	0.2 U	2.00 U	1.00 U	0.2 U	0.200 U	0.200 U	0.2 U	0.200 U	0.200 U
Zinc	81	12 U	60.0 U	30.0 U	--	--	--	--	6 U	60.0 U	12.0 U	6 U	6.00 U	12.0 U	6 U	6.00 U	12.0 U
Dissolved Metals (µg/L)																	
Arsenic	8.0	**28.4**	**19.1**	**21.8**	--	--	--	--	**5.42**	**4.52**	**5.94**	**27.6**	**19.3**	**22.4**	**9.69**	**9.53**	**11.3**
Cadmium	1.2	0.2 U	**0.530 J**	0.100 U	--	--	--	--	0.1 U	1.00 U	0.200 U	0.1 U	0.100 U	0.200 U	0.1 U	0.100 U	0.200 U
Chromium	100	**14.3**	**11.0**	**10.2**	--	--	--	--	**3.2**	**3.15 J**	2.50 U	0.5 U	1.00 U	2.50 U	0.5 U	1.00 U	2.50 U
Chromium, Hexavalent	0.046	13 UJ	13 U	13 U	45 U	45 U	45 U	45 U	13 UJ	13 U	13 U	13 U	13 U	13 U	13 U	13 U	13 UJ
Chromium, Trivalent	27	--	--	--	10 U	--	--	--	--	--	--	0.5 U	0.500 U	2.50 U	0.5 U	0.500 U	2.50 U
Copper	3.1	1 U	5.00 U	1.00 U	--	--	--	--	**0.202 J**	5.00 U	1.00 U	**1.75**	0.500 U	**0.604 J**	0.5 U	0.500 U	**0.396 J**
Lead	5.6	0.2 U	1.00 U	0.100 U	--	--	--	--	0.1 U	1.00 U	0.200 U	0.1 U	0.100 U	0.100 U	0.1 U	0.100 U	0.100 U
Mercury	0.025	**0.001**	**0.00073**		--	--	--	--	0.00042 U	0.00042 U	0.00042 U	0.00041 U	**0.00024 J**	**0.00099**	0.00041 U	0.00041 U	**0.00115**
Nickel	8.2	**7.2**	**4.47 J**	**6.76**	--	--	--	--	**0.643**	5.00 U	**0.706 J**	**0.631**	**0.0960 J**	**0.356 J**	**0.159 J**	**0.192 J**	**0.302 J**
Selenium	50	**1.73**	5.00 U	**1.65**	--	--	--	--	--	5.00 U	1.00 U	--	0.500 U	1.00 U		0.500 U	1.00 U
Thallium	0.062	0.4 U	2.00 U	2.00 U	--	--	--	--	--	2.00 U	0.400 U	--	0.200 U	0.400 U		0.200 U	0.400 U
Zinc	81	12 U	60.0 U	12.0 U	--	--	--	--	--	60.0 U	12.0 U	--	6.00 U	12.0 U		6.00 U	12.0 U
Total Petroleum Hydrocarbons (µg/L)																	
Gasoline-range hydrocarbons - HCID	800	250 U	250 U	250 U	--	--	--	--	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Diesel-range hydrocarbons - HCID	500	500 U	500 U	500 U	--	--	--	--	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U
Lube oil-range hydrocarbons - HCID	500	1000 U	1000 U	1000 U	--	--	--	--	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U
Total TPH - HCID	500	ND	ND	ND	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diesel-range hydrocarbons	500	**335**	--	**108**	**200**	**250**	**150**	**260**	**136**	--	--	100 U	--	--	100 U	--	--
Lube oil-range hydrocarbons	500	200 U	--	200 U	250 U	**430**	250 U	250 U	200 U	--	--	200 U	--	--	200 U	--	--
Total TPH	500	**335**	--	**108**	**200**	**680**	**150**	**260**	**136**	--	--	ND	--	--	ND	--	--
Diesel-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TPH - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (VPH) (µg/L)																	
1-Methylnaphthalene	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene, 1,2,3-Trimethyl-	80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Decane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dodecane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	4.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	102	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, m-,p-	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, o-	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes	106	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Groundwater PCUL	MW10 MW-10-04192022 4/19/2022	MW10 MW10-230714 7/14/2023	MW10 MW10-20231207 12/7/2023	MW11 MW11-W-15.0-20190722 7/22/2019	MW11 MW11-W-15.0-20191216 12/16/2019	MW11 MW11-W-15.0-20200129 1/29/2020	MW11 MW11-W-15.0-20200427 4/27/2020	MW11 MW-11-220421 4/21/2022	MW11 MW11-230720 7/20/2023	MW11 MW11-20231205 12/5/2023	MW-12 MW-12-220425 4/25/2022	MW-12 MW12-230724 7/24/2023	MW-12 MW12-20231204 12/4/2023	MW-13 MW-13-220427 4/27/2022	MW-13 MW13-230724 7/24/2023	MW-13 MW13-20231204 12/4/2023
Total Metals (µg/L)																	
Extractable Petroleum Hydrocarbons (EPH) (µg/L)																	
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (VOCs) (µg/L)																	
1,1,1,2-Tetrachloroethane	1.7	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,1,1-Trichloroethane	200	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,1,2,2-Tetrachloroethane	0.22	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	NE	2 U	--	--	--	--	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,1,2-Trichloroethane	0.90	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,1-Dichloroethane	7.7	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,1-Dichloroethylene	7.0	2 U	1.00 U	2.00 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U
1,1-Dichloropropene	NE	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,2,3-Trichlorobenzene	6.4	5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--
1,2,3-Trichloropropane	0.00038	5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--
1,2,4-Trichlorobenzene	NE	5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--
1,2,4-Trimethylbenzene	80	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,2-Dibromo-3-Chloropropane	0.042	5 U	--	--	10 U	10 U	10 U	10 U	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--
1,2-Dibromoethane	NE	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,2-Dichlorobenzene	NE	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,2-Dichloroethane	3.5	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,2-Dichloropropane	3.1	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,3,5-Trimethylbenzene	80	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,3-Dichlorobenzene	NE	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,3-Dichloropropane	160	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
1,4-Dichlorobenzene	NE	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
2,2-Dichloropropane	NE	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
2-Chloroethyl vinyl ether	NE	10 U	--	--	--	--	--	--	1 U	--	--	1 U	--	--	1 U	--	--
2-Chlorotoluene	160	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
2-Hexanone	40	50 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	5 U	--	--	5 U	--	--
4-Chlorotoluene	NE	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
4-Isopropyltoluene	NE	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Acetone	7200	50 U	--	--	50 U	50 U	50 U	50 U	**4.86 J**	--	--	**19.8**	--	--	5 U	--	--
Acrolein	1.1	50 U	--	--	--	--	--	--	5 U	--	--	5 U	--	--	5 U	--	--
Acrylonitrile	7200	10 U	--	--	--	--	--	--	1 U	--	--	1 U	--	--	1 U	--	--
Benzene	1.1	2 U	--	--	0.35 U	0.35 U	0.35 U	0.35 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Bromobenzene	64	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Bromochloromethane	NE	2 U	--	--	--	--	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Bromoform	12	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Bromomethane	11	10 U	--	--	1 U	1 U	1 U	1 U	1 U	--	--	1 U	--	--	1 U	--	--
Carbon Disulfide	800	2 U	--	--	--	--	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Carbon Tetrachloride	0.35	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Chlorobenzene	100	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Chloroethane	14667	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Chloroform	1.2	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Chloromethane	153	5 U	--	--	10 U	10 U	10 U	10 U	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--
cis-1,2-Dichloroethylene	16	2 U	1.00 U	2.00 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U
cis-1,3-Dichloropropene	0.44	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Dibromochloromethane	2.2	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Dibromomethane	80	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Dichlorobromomethane	1.4	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Dichlorodifluoromethane	4.2	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Ethylbenzene	21	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Hexachlorobutadiene	NE	20 U	--	--	1 U	1 U	1 U	1 U	2 U	--	--	2 U	--	--	2 U	--	--
Hexane	NE	--	--	--	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	--
Isopropylbenzene	800	2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Methyl ethyl ketone (MEK)	4800	50 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	5 U	--	--	5 U	--	--
Methyl Iodide	NE	10 U	--	--	--	--	--	--	1 U	--	--	1 U	--	--	1 U	--	--
Methyl isobutyl ketone	640	50 U	--	--	10 U	10 U	10 U	10 U	5 U	--	--	5 U	--	--	5 U	--	--
Methyl tert-butyl ether	24	5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--

Analyte	Groundwater PCUL	Location ID	MW10	MW10	MW10	MW11	MW11	MW11	MW11	MW11	MW11	MW11	MW12	MW12	MW12	MW13	MW13	MW13
		Sample ID	MW-10-04192022	MW10-230714	MW10-20231207	MW11-W-15.0-20190722	MW11-W-15.0-20191216	MW11-W-15.0-20200129	MW11-W-15.0-20200427	MW-11-220421	MW11-230720	MW11-20231205	MW-12-220425	MW12-230724	MW12-20231204	MW-13-220427	MW13-230724	MW13-20231204
		Sample Date	4/19/2022	7/14/2023	12/7/2023	7/22/2019	12/16/2019	1/29/2020	4/27/2020	4/21/2022	7/20/2023	12/5/2023	4/25/2022	7/24/2023	12/4/2023	4/27/2022	7/24/2023	12/4/2023
Total Metals (µg/L)																		
Methylene Chloride	5.0		**26.2**	5.00 U	10.0 U	5 U	5 U	5 U	5 U	1 U	1.00 U	1.00 U	1 U	1.00 U	1.00 U	1 U	1.00 U	1.00 U
Naphthalene	1.4		5 U	--	--	1 U	1 U	1 U	1 U	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--
n-Butylbenzene	400		2 U	--	--	--	--	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
n-Propylbenzene	800		2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Sec-Butylbenzene	800		2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Styrene	100		2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Tert-Butylbenzene	800		2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Tetrachloroethylene	2.9		2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Toluene	102		**0.53 J**	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
trans-1,2-Dichloroethylene	77		2 U	1.00 U	2.00 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U
trans-1,3-Dichloropropene	0.44		2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U		
trans-1,4-Dichloro-2-butene	NE		10 U	--	--	--	--	--	--	1 U	--	--	1 U	--	--	1 U		
Trichloroethylene	0.70		2 U	1.00 U	2.00 U	1 U	1 U	1 U	1 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U
Trichlorofluoromethane	120		2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U		
Vinyl Acetate	7809		2 U	--	--	--	--	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U		
Vinyl Chloride	0.18		2 U	1.00 U	2.00 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U
Xylene, m-,p-	NE		4 U	--	--	2 U	2 U	2 U	2 U	0.4 U	--	--	0.4 U	--	--	0.4 U	--	--
Xylene, o-	NE		2 U	--	--	1 U	1 U	1 U	1 U	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--
Total Xylenes	106		6 U	--	--	2 U	2 U	2 U	2 U	0.6 U	--	--	0.6 U	--	--	0.6 U	--	--
Semivolatile Compounds (SVOCs) (µg/L)																		
1,2,4-Trichlorobenzene	0.96		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	4.5		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	2.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	5.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	0.44		**2.7**	**1.3**	**2.0**	--	--	--	--	**0.9**	**0.6**	**0.6**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2'-Oxybis[1-chloropropane]	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.037		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	8.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	2.9		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	32		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.058		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	100		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol	11		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	160		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.0033		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	7.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	36		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	0.44		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol	106		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	4.4		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	589		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	56		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.040		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.046		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.013		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	8.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	93		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	59		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	2.3		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.000005		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	1.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	0.020		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	92		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.013		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.55		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Groundwater PCUL	MW10 MW-10-04192022 4/19/2022	MW10 MW10-230714 7/14/2023	MW10 MW10-20231207 12/7/2023	MW11 MW11-W-15.0-20190722 7/22/2019	MW11 MW11-W-15.0-20191216 12/16/2019	MW11 MW11-W-15.0-20200129 1/29/2020	MW11 MW11-W-15.0-20200427 4/27/2020	MW11 MW-11-220421 4/21/2022	MW11 MW11-230720 7/20/2023	MW11 MW11-20231205 12/5/2023	MW-12 MW-12-220425 4/25/2022	MW-12 MW12-230724 7/24/2023	MW-12 MW12-20231204 12/4/2023	MW-13 MW-13-220427 4/27/2022	MW-13 MW13-230724 7/24/2023	MW-13 MW13-20231204 12/4/2023
Total Metals (µg/L)																	
Pentachlorophenol	0.0020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	101	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)																	
1-Methylnaphthalene	1.5	**0.003 J**	0.010 U	0.010 UJ					**0.017**	0.100 U	**0.011**	**0.003 J**	0.010 U	0.005 U	**0.002 J**	0.010 U	0.005 U
2-Methylnaphthalene	14	0.01 U	0.010 U	0.010 UJ					0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	**0.006 J**	0.010 U	0.005 U
Acenaphthene	5.3	0.01 U	0.010 U	0.010 UJ	**1.9**	**1.7**	**2**	**1.3**	**1.7**	**1.85**	**1.98**	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Acenaphthylene	NE	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	**0.008 J**	0.100 U	**0.006 J**	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Anthracene	2.1	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	**0.003 J**	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Benzo(a)anthracene	0.00016	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Benzo(a)pyrene	0.000016	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Benzo(b)fluoranthene	0.00016	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Benzo(g,h,i)perylene	NE	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Benzo(j)fluoranthene	NE	0.01 U	0.010 U	0.010 UJ	--	--	--	--	0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Benzo(k)fluoranthene	0.0016	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Benzofluoranthenes (Total)	NE	0.01 U	0.020 U	0.020 UJ	--	--	--	--	0.015 U	0.200 U	0.020 U	0.01 U	0.020 U	0.010 U	0.01 U	0.020 U	0.010 U
Carbazole	NE	**0.002 J**	0.010 U	0.010 UJ	--	--	--	--	**0.069**	0.100 U	**0.073**	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Chrysene	0.016	**0.002 J**	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	**0.001 J**	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Dibenzo(a,h)anthracene	0.000016	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Dibenzofuran	3.1	**0.002 J**	0.010 U	0.010 UJ	--	--	--	--	**0.003 J**	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Fluoranthene	1.8	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	**0.003 J**	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Fluorene	3.7	0.01 U	0.010 U	0.010 UJ	**0.23**	**0.15**	**0.23**	**0.1**	**0.106**	0.100 U	**0.080**	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.01 U	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Naphthalene	1.4	0.01 U	0.010 U	0.010 UJ	0.4 U	0.4 U	0.4 U	0.4 U	0.015 U	0.100 U	**0.027**	0.01 U	0.010 U	0.005 U	**0.03**	0.010 U	0.005 U
Perylene	NE	**0.009 J**	**0.007 J**	**0.007 J**	--	--	--	--	0.015 U	0.100 U	0.010 U	0.01 U	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Phenanthrene	NE	**0.003 J**	0.010 U	0.010 UJ	**0.1**	**0.061**	**0.079**	**0.048**	**0.046**	0.100 U	**0.028**	**0.003 J**	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Pyrene	2.0	**0.002 J**	0.010 U	0.010 UJ	0.04 U	0.04 U	0.04 U	0.04 U	0.015 U	0.100 U	0.010 U	**0.002 J**	0.010 U	0.005 U	0.01 U	0.010 U	0.005 U
Total cPAH TEQ (ND=0.5RL)	0.0097	**0.00802 J**	0.00855 U	0.00855 UJ	0.0302 U	0.0302 U	0.0302 U	0.0302 U	0.01208 U	0.0855 U	0.00855 U	**0.00801 J**	0.00855 U	0.00428 U	0.00805 U	0.00855 U	0.00428 U
Polychlorinated Biphenyls (PCBs) (µg/L)																	
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)																	
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
6:2 FTS	NE	--	**0.00097 J**	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
8:2 FTS	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
NEtFOSAA	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	**0.00096 J**	--	--	**0.00062 J**	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
NMeFOSAA	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
N-methylperfluoro-1-octanesulfonamide	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
Perfluorobutanesulfonic acid (PFBS)	NE	--	**0.0022 J**	**0.0074**	--	--	--	--	--	**0.0017 J**	--	**0.00068 J**	--	--	**0.00088 J**	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	**0.00052 J**	--	--	0.004 U	--	--
Perfluorodecanoic acid (PFDA)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
Perfluorododecanoic acid (PFDoA)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
Perfluoroheptanoic acid (PFHpA)	NE	--	**0.0045 J**	**0.0036 J**	--	--	--	--	--	**0.0066 J**	--	0.004 U	--	--	0.004 U	--	--
Perfluorohexanesulfonic acid (PFHxS)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
Perfluorohexanoic acid (PFHxA)	NE	--	0.0098 U	**0.011**	--	--	--	--	--	0.05 U	--	0.0092 U	--	--	0.0092 U	--	--
Perfluorononanoic acid (PFNA)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
Perfluorooctanesulfonic acid (PFOS)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	**0.0042 J**	--	**0.00066 J**	--	--	**0.00077 J**	--	--
Perfluorooctanoic acid (PFOA)	NE	--	**0.011**	**0.015**	--	--	--	--	--	**0.01**	--	**0.00043 J**	--	--	**0.00092 J**	--	--
Perfluoropentanoic acid (PFPeA)	NE	--	**0.013**	**0.014**	--	--	--	--	--	**0.019 J**	--	0.004 U	--	--	0.004 U	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--
Perfluoroundecanoic acid (PFUnA)	NE	--	0.0049 U	0.0045 U	--	--	--	--	--	0.025 U	--	0.004 U	--	--	0.004 U	--	--

Analyte	Groundwater PCUL	MW-14 MW-14-220425 4/25/2022	MW-14 MW14-230724 7/24/2023	MW-14 MW14-20231204 12/4/2023	MW-15 MW-15-220422 4/22/2022	MW-15 MW15-230720 7/20/2023	MW-15 MW15-20231204 12/4/2023	MW-16 MW-16-04192022 4/19/2022	MW-16 MW16-230721 7/21/2023	MW-16 MW16-20231205 12/5/2023	MW-17 MW17-220420 4/20/2022	MW-17 MW17-230720 7/20/2023	MW-17 MW17-20231205 12/5/2023	MW-18 MW-18-220421 4/21/2022	MW-18 MW18-230713 7/13/2023	MW-18 MW18-20231205 12/5/2023	MW-19 MW19-230725 7/25/2023	MW-19 MW19-20231206 12/6/2023
Total Metals (µg/L)																		
Arsenic	8.0	**10.7**	**11.9**	**14.4**	**8.79**	**13.9**	**16.4**	**13.6**	**10.7**	**13.4**	**7.15**	**4.46**	**3.53**	**44.3**	**25.6**	**34.9**	**7.49**	**37.1**
Cadmium	1.2	0.1 U	0.100 U	0.100 U	0.1 U	0.100 U	0.100 U	0.1 U	0.100 U	0.200 U	0.1 U	0.100 U	0.200 U	**0.048 J**	1.00 U	0.200 U	**0.0990 J**	**0.0500 J**
Chromium	100	**0.89**	**0.897**	2.50 U	**0.306 J**	0.500 U	2.50 U	**1.09**	**0.955**	**0.946 J**	**0.352 J**	0.500 U	1.00 U	**36.5**	**70.1**	**24.2**	2.50 U	5.00 U
Copper	3.1	**0.336 J**	0.500 U	1.00 U	**0.484 J**	**0.261 J**	1.00 U	**0.235 J**	0.500 U	**0.470 J**	**0.278 J**	**0.276 J**	**0.728 J**	**27.8**	**29.6**	**1.22**	**1.28**	**0.740**
Lead	5.6	0.1 U	0.100 U	**0.101**	**0.155**	0.100 U	0.100 U	0.1 U	0.100 U	0.200 U	**0.155**	**0.0900 J**	**0.218**	**6.43**	**9.07**	**0.502**	**0.196**	**0.115**
Mercury	0.025	**0.00151**	**0.00056**	**0.00217**	**0.00031 J**	0.00041 U	**0.00119**	**0.00121**	**0.00046**	**0.00085**	**0.00137**	**0.00031 J**	**0.00045**	**0.801**	**0.147**	**0.0307**	**0.00293**	**0.00361**
Nickel	8.2	**1.32**	**0.662**	**0.898 J**	**0.527**	**0.471 J**	**0.300 J**	**2.24**	**1.34**	**1.76**	**1.39**	**0.818**	**0.846 J**	**65.6**	**66.2**	**46.7**	**5.92**	**4.05**
Selenium	50	0.5 U	0.500 U	1.00 U	0.5 U	0.500 U	1.00 U	**0.203 J**	**0.854**	1.00 U	0.5 U	0.500 U	1.00 U	**0.514**	5.00 U	1.00 U	**0.259 J**	**0.295 J**
Thallium	0.062	0.2 U	0.200 U	0.200 U	0.2 U	0.200 U	0.200 U	0.2 U	0.200 U	0.400 U	0.2 U	0.200 U	0.400 U	0.2 U	2.00 U	1.00 U	0.200 U	0.400 U
Zinc	81	**4.14 J**	6.00 U	12.0 U	6 U	**13.1**	12.0 U	6 U	6.00 U	**13.2**	6 U	**4.56 J**	**6.01 J**	**8.89**	60.0 U	**11.9 J**	6.00 U	**4.79 J**
Dissolved Metals (µg/L)																		
Arsenic	8.0	**7.94**	**12.1**	**13.5**	**9.23**	**13.6**	**16.4**	**13.7**	**6.66**	**16.0**	**7.28**	**3.39**	**6.85**	**48.8**	**37.6**	**30.7**	**16.6**	**35.4**
Cadmium	1.2	0.1 U	0.100 U	0.200 U	0.2 U	0.100 U	0.200 U	0.1 U	**0.0410 J**	0.200 U	0.1 U	0.100 U	0.200 U	0.1 U	0.100 U	0.200 U	**0.0770 J**	**0.185 J**
Chromium	100	**0.781**	**0.742 J**	**0.670 J**	1 U	0.500 U	1.00 U	**0.695**	**0.893**	2.50 U	0.5 U	0.500 U	2.50 U	**31.7**	**52.6**	**22.8**	**0.686 J**	2.50 U
Chromium, Hexavalent	0.046	13 U	13 U	13 U	13 U	13 U	13 U	13 UJ	13 U	13 U	13 UJ	13 U	13 U	**19**	13 U	13 UJ	13 UJ	13 U
Chromium, Trivalent	27	--	--	2.50 U	--	0.500 U	2.50 U	--	--	--	--	0.500 U	1.00 U	**12.7**			2.50 U	5.00 U
Copper	3.1	**0.377 J**	**0.342 J**	**0.670 J**	1 U	0.500 U	1.00 U	0.5 U	0.500 U	**0.544 J**	0.5 U	0.500 U	**0.556 J**	**0.249 J**	0.500 U	**0.564 J**	**0.505**	**1.06 J**
Lead	5.6	**0.071 J**	0.100 U	0.100 U	0.2 U	0.100 U	0.100 U	0.1 U	0.100 U	0.500 U	0.1 U	0.100 U	0.500 U	0.1 U	**0.0920 J**	0.200 U	0.100 U	0.500 U
Mercury	0.025	**0.0004 J**	**0.00029 J**	**0.00060**	0.00041 U	0.00041 U	**0.00155**	0.00041 U	**0.00035 J**	0.00105 U	0.00041 U	0.00041 U	0.00042 U	**0.00792**	**0.00247**	0.00105 U	**0.00039 J**	**0.00169**
Nickel	8.2	**1.24**	**0.637**	**0.804 J**	**0.192 J**	**0.156 J**	**0.220 J**	**1.72**	**1.12**	**1.40**	**0.487 J**	**0.561**	**0.676 J**	**60.2**	**55.9**	**48.4**	**6.38**	**3.92**
Selenium	50	--	0.500 U	1.00 U	--	0.500 U	1.00 U	**0.272 J**	**0.616**	1.00 U	--	**0.239 J**	1.00 U	--	0.500 U	1.00 U	**0.193 J**	2.50 U
Thallium	0.062	--	0.200 U	0.400 U	--	0.200 U	0.400 U	0.2 U	0.200 U	1.00 U	--	0.200 U	1.00 U	--	0.200 U	0.400 U	0.200 U	1.00 U
Zinc	81	--	6.00 U	12.0 U	--	6.00 U	12.0 U	6 U	6.00 U	12.0 U	--	6.00 U	12.0 U	--	6.00 U	12.0 U	**3.05 J**	30.0 U
Total Petroleum Hydrocarbons (µg/L)																		
Gasoline-range hydrocarbons - HCID	800	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Diesel-range hydrocarbons - HCID	500	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	**500**	**500**	500 U	500 U	500 U
Lube oil-range hydrocarbons - HCID	500	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U
Total TPH - HCID	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**500**	**500**	ND	ND	ND
Diesel-range hydrocarbons	500	100 U	--	--	100 U	--	--	100 U	--	--	100 U	--	--	**754**	**876**	**338**	--	--
Lube oil-range hydrocarbons	500	200 U	--	--	200 U	--	--	200 U	--	--	200 U	--	--	200 U	**234**	200 U	--	--
Total TPH	500	ND	--	--	ND	--	--	ND	--	--	ND	--	--	**754**	**1110**	**338**	--	--
Diesel-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	**169 J**	--	--	--
Lube oil-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	200 UJ	--	--	--
Total TPH - w/SGC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	**169 J**	--	--	--
Volatile Petroleum Hydrocarbons (VPH) (µg/L)																		
1-Methylnaphthalene	1.5	--	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--
Benzene	1.6	--	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--
Benzene, 1,2,3-Trimethyl-	80	--	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--
C12-C13 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--
C5-C6 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--
C6-C8 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	50 U	--	--	--	--
Decane	NE	--	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--
Dodecane	NE	--	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--
Ethylbenzene	21	--	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--
Hexane	4.1	--	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--
Methyl tert-butyl ether	24	--	--	--	--	--	--	--	--	--	--	--	--	5 U	--	--	--	--
Naphthalene	1.4	--	--	--	--	--	--	--	--	--	--	--	--	5 U				
Octane	NE	--	--	--	--	--	--	--	--	--	--	--	--	5 U				
Pentane	NE	--	--	--	--	--	--	--	--	--	--	--	--	5 U				
Toluene	102	--	--	--	--	--	--	--	--	--	--	--	--	5 U				
Xylene, m-,p-	NE	--	--	--	--	--	--	--	--	--	--	--	--	10 U				
Xylene, o-	NE	--	--	--	--	--	--	--	--	--	--	--	--	5 U				
Total Xylenes	106	--	--	--	--	--	--	--	--	--	--	--	--	10 U				

Analyte	Groundwater PCUL	MW-14 MW-14-220425 4/25/2022	MW-14 MW14-230724 7/24/2023	MW-14 MW14-20231204 12/4/2023	MW-15 MW-15-220422 4/22/2022	MW-15 MW15-230720 7/20/2023	MW-15 MW15-20231204 12/4/2023	MW-16 MW-16-04192022 4/19/2022	MW-16 MW16-230721 7/21/2023	MW-16 MW16-20231205 12/5/2023	MW-17 MW17-220420 4/20/2022	MW-17 MW17-230720 7/20/2023	MW-17 MW17-20231205 12/5/2023	MW-18 MW-18-220421 4/21/2022	MW-18 MW18-230713 7/13/2023	MW-18 MW18-20231205 12/5/2023	MW-19 MW19-230725 7/25/2023	MW-19 MW19-20231206 12/6/2023
Total Metals (µg/L)																		
Extractable Petroleum Hydrocarbons (EPH) (µg/L)																		
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 UJ	40 UJ	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 U	40 UJ	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 UJ	40 UJ	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 U	40 UJ	--	--	--
C12-C16 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 UJ	40 UJ	--	--	--
C12-C16 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 U	40 UJ	--	--	--
C16-C21 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 UJ	40 UJ	--	--	--
C16-C21 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 U	40 UJ	--	--	--
C21-C34 Aliphatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 UJ	40 UJ	--	--	--
C21-C34 Aromatics	NE	--	--	--	--	--	--	--	--	--	--	--	--	40 U	40 UJ	--	--	--
Volatile Organic Compounds (VOCs) (µg/L)																		
1,1,1,2-Tetrachloroethane	1.7	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,1,1-Trichloroethane	200	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,1,2,2-Tetrachloroethane	0.22	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,1,2-Trichloroethane	0.90	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,1-Dichloroethane	7.7	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	**0.32**	--	--	--	--
1,1-Dichloroethylene	7.0	**0.38**	**0.27**	**0.29**	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloropropene	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,2,3-Trichlorobenzene	6.4	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	--	--
1,2,3-Trichloropropane	0.00038	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	--	--
1,2,4-Trichlorobenzene	NE	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	--	--
1,2,4-Trimethylbenzene	80	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,2-Dibromo-3-Chloropropane	0.042	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	--	--
1,2-Dibromoethane	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,2-Dichlorobenzene	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,2-Dichloroethane	3.5	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,2-Dichloropropane	3.1	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,3,5-Trimethylbenzene	80	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,3-Dichlorobenzene	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,3-Dichloropropane	160	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
1,4-Dichlorobenzene	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
2,2-Dichloropropane	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
2-Chloroethyl vinyl ether	NE	1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	--	--	--
2-Chlorotoluene	160	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
2-Hexanone	40	5 U	--	--	5 U	--	--	5 U	--	--	5 U	--	--	5 U	--	--	--	--
4-Chlorotoluene	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
4-Isopropyltoluene	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Acetone	7200	5 U	--	--	5 U	--	--	**8.37**	--	--	5 U	--	--	**4.99 J**	--	--	--	--
Acrolein	1.1	5 U	--	--	5 U	--	--	5 U	--	--	5 U	--	--	5 U	--	--	--	--
Acrylonitrile	7200	1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	--	--	--
Benzene	1.1	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	**0.06 J**	--	--	--	--
Bromobenzene	64	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Bromochloromethane	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Bromoform	12	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Bromomethane	11	1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	--	--	--
Carbon Disulfide	800	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Carbon Tetrachloride	0.35	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Chlorobenzene	100	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Chloroethane	14667	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Chloroform	1.2	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Chloromethane	153	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	--	--
cis-1,2-Dichloroethylene	16	**26.3**	**24.8**	**22.6**	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	**0.36**	**0.33**	**0.29**	**0.14 J**	**0.14 J**
cis-1,3-Dichloropropene	0.44	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Dibromochloromethane	2.2	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Dibromomethane	80	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Dichlorobromomethane	1.4	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Dichlorodifluoromethane	4.2	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Ethylbenzene	21	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Hexachlorobutadiene	NE	2 U	--	--	2 U	--	--	2 U	--	--	2 U	--	--	2 U	--	--	--	--
Hexane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	800	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Methyl ethyl ketone (MEK)	4800	5 U	--	--	5 U	--	--	5 U	--	--	5 U	--	--	5 U	--	--	--	--
Methyl Iodide	NE	1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	--	--	--
Methyl isobutyl ketone	640	5 U	--	--	5 U	--	--	5 U	--	--	5 U	--	--	5 U	--	--	--	--
Methyl tert-butyl ether	24	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	--	--

Analyte	Groundwater PCUL	MW-14 MW-14-220425 4/25/2022	MW-14 MW14-230724 7/24/2023	MW-14 MW14-20231204 12/4/2023	MW-15 MW-15-220422 4/22/2022	MW-15 MW15-230720 7/20/2023	MW-15 MW15-20231204 12/4/2023	MW-16 MW-16-04192022 4/19/2022	MW-16 MW16-230721 7/21/2023	MW-16 MW16-20231205 12/5/2023	MW-17 MW17-220420 4/20/2022	MW-17 MW17-230720 7/20/2023	MW-17 MW17-20231205 12/5/2023	MW-18 MW-18-220421 4/21/2022	MW-18 MW18-230713 7/13/2023	MW-18 MW18-20231205 12/5/2023	MW-19 MW19-230725 7/25/2023	MW-19 MW19-20231206 12/6/2023
Total Metals (µg/L)																		
Methylene Chloride	5.0	1 U	1.00 U	1.00 U	1 U	1.00 U	1.00 U	1 U	1.00 U	1.00 U	1 U	1.00 U	1.00 U	1 U	1.00 U	1.00 U	1.00 U	**0.58 J**
Naphthalene	1.4	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	**3.28**				
n-Butylbenzene	400	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U				
n-Propylbenzene	800	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U				
Sec-Butylbenzene	800	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Styrene	100	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Tert-Butylbenzene	800	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Tetrachloroethylene	2.9	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Toluene	102	0.2 U	--	--	0.2 U	--	--	**0.05 J**	--	--	0.2 U	--	--	0.2 U	--	--	--	--
trans-1,2-Dichloroethylene	77	**0.14 J**	**0.19 J**	**0.15 J**	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,3-Dichloropropene	0.44	0.2 U			0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
trans-1,4-Dichloro-2-butene	NE	1 U			1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	--	--	--
Trichloroethylene	0.70	**40.3**	**23.2**	**24.3**	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichlorofluoromethane	120	0.2 U			0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Vinyl Acetate	7809	0.2 U			0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Vinyl Chloride	0.18	**0.32**	**1.56**	**0.96**	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	**0.22**	0.20 U	**0.15 J**	0.20 U	0.20 U
Xylene, m-,p-	NE	0.4 U	--	--	0.4 U	--	--	0.4 U	--	--	0.4 U	--	--	0.4 U	--	--	--	--
Xylene, o-	NE	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	--	--
Total Xylenes	106	0.6 U	--	--	0.6 U	--	--	0.6 U	--	--	0.6 U	--	--	0.6 U	--	--	--	--
Semivolatile Compounds (SVOCs) (µg/L)																		
1,2,4-Trichlorobenzene	0.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	4.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	5.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dioxane	0.44	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	**0.2**	**0.3**	0.2 U	0.2 U	0.2 U	**0.4**	**0.4**	**0.3**	0.2 U	0.2 UJ
2,2'-Oxybis[1-chloropropane]	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.037	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	2.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.058	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.0033	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	7.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	0.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol	106	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	4.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	589	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.046	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	2.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.000005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	0.020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte	Groundwater PCUL	MW-14 MW-14-220425 4/25/2022	MW-14 MW14-230724 7/24/2023	MW-14 MW14-20231204 12/4/2023	MW-15 MW-15-220422 4/22/2022	MW-15 MW15-230720 7/20/2023	MW-15 MW15-20231204 12/4/2023	MW-16 MW-16-04192022 4/19/2022	MW-16 MW16-230721 7/21/2023	MW-16 MW16-20231205 12/5/2023	MW-17 MW17-220420 4/20/2022	MW-17 MW17-230720 7/20/2023	MW-17 MW17-20231205 12/5/2023	MW-18 MW-18-220421 4/21/2022	MW-18 MW18-230713 7/13/2023	MW-18 MW18-20231205 12/5/2023	MW-19 MW19-230725 7/25/2023	MW-19 MW19-20231206 12/6/2023
Total Metals (µg/L)																		
Pentachlorophenol	0.0020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	101	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)																		
1-Methylnaphthalene	1.5	**0.003 J**	0.010 U	0.010 U	**0.002 J**	0.010 U	0.010 U	**0.006 J**	0.010 U	0.010 U	**0.005 J**	0.010 U	0.010 U	**0.333**	**0.292**	**0.072**	0.010 UJ	0.010 U
2-Methylnaphthalene	14	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.006 J**	0.010 U	0.010 U	**0.39**	**0.239**	**0.037**	0.010 UJ	0.010 U
Acenaphthene	5.3	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.628**	**0.848**	**0.377**	0.010 UJ	0.010 U
Acenaphthylene	NE	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.006 J**	0.050 U	0.010 U	0.010 UJ	0.010 U
Anthracene	2.1	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.002 J**	0.010 U	0.010 U	**0.002 J**	0.010 U	0.010 U	**0.055**	0.050 U	**0.047**	0.010 UJ	0.010 U
Benzo(a)anthracene	0.00016	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.013**	0.050 U	0.010 U	0.010 UJ	0.010 U
Benzo(a)pyrene	0.000016	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.009 J**	0.050 U	0.010 U	0.010 UJ	0.010 U
Benzo(b)fluoranthene	0.00016	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.011**	0.050 U	0.010 U	0.010 UJ	0.010 U
Benzo(g,h,i)perylene	NE	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.004 J**	0.050 U	0.010 U	0.010 UJ	0.010 U
Benzo(j)fluoranthene	NE	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.006 J**	0.050 U	0.010 U	0.010 UJ	0.010 U
Benzo(k)fluoranthene	0.0016	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.007 J**	0.050 U	0.010 U	0.010 UJ	0.010 U
Benzofluoranthenes (Total)	NE	0.01 U	0.020 U	0.020 U	0.01 U	0.020 U	0.020 U	0.01 U	0.020 U	0.020 U	0.01 U	0.020 U	0.020 U	**0.024**	0.100 U	0.020 U	0.020 UJ	0.020 U
Carbazole	NE	**0.001 J**	0.010 U	0.010 U	**0.001 J**	0.010 U	0.010 U	**0.003 J**	0.010 U	0.010 U	**0.001 J**	0.010 U	0.010 U	**0.067**	**0.129**	**0.234**	0.010 UJ	0.010 U
Chrysene	0.016	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.023**	0.050 U	0.010 U	0.010 UJ	0.010 U
Dibenzo(a,h)anthracene	0.000016	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.050 U	0.010 U	0.010 UJ	0.010 U
Dibenzofuran	3.1	**0.002 J**	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.002 J**	0.010 U	0.010 U	**0.002 J**	0.010 U	0.010 U	**0.169**	**0.137**	**0.215**	0.010 UJ	0.010 U
Fluoranthene	1.8	**0.004 J**	0.010 U	0.010 U	**0.002 J**	0.010 U	0.010 U	**0.005 J**	0.010 U	0.010 U	**0.002 J**	0.010 U	0.010 U	**0.113**	0.050 U	**0.054**	0.010 UJ	0.010 U
Fluorene	3.7	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.003 J**	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.267**	**0.247**	**0.332**	0.010 UJ	0.010 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.004 J**	0.050 U	0.010 U	0.010 UJ	0.010 U
Naphthalene	1.4	**0.012**	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	**0.006 J**	**0.013**	0.010 U	0.010 U	**1.11**	**1.06**	**0.239**	**0.058 J**	**0.040**
Perylene	NE	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	**0.043**	0.050 U	0.010 U	0.010 UJ	0.010 U
Phenanthrene	NE	**0.003 J**	0.010 U	0.010 U	**0.005 J**	0.010 U	0.010 U	**0.009 J**	0.010 U	0.010 U	**0.006 J**	0.010 U	0.010 U	**0.317**	**0.165**	**0.303**	0.010 UJ	0.010 U
Pyrene	2.0	**0.002 J**	0.010 U	0.010 U	**0.002 J**	0.010 U	0.010 U	**0.003 J**	0.010 U	0.010 U	**0.002 J**	0.010 U	0.010 U	**0.078**	0.050 U	**0.042**	0.010 UJ	0.010 U
Total cPAH TEQ (ND=0.5RL)	0.0097	0.00805 U	0.00855 U	0.00855 U	0.00805 U	0.00855 U	0.00855 U	0.00805 U	0.00855 U	0.00855 U	0.00805 U	0.00855 U	0.00855 U	**0.01563 J**	0.04275 U	0.00855 U	0.00855 UJ	0.00855 U
Polychlorinated Biphenyls (PCBs) (µg/L)																		
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)																		
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	**0.00013 J**	--	--	**0.00023 J**	--	0.0049 U	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	0.0049 U	--
6:2 FTS	NE	0.0042 U	--	--	0.004 U	--	--	--	**0.0032 J**	--	--	0.0049 U	--	--	**0.077 J**	--	**0.00069 J**	--
8:2 FTS	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	**0.00035 J**	--	0.0049 U	--
NEtFOSAA	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	0.0049 U	--
NMeFOSAA	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	0.0049 U	--
Perfluorobutanesulfonic acid (PFBS)	NE	**0.00052 J**	--	--	0.004 U	--	--	--	0.0049 U	--	--	**0.00089 J**	--	--	**0.034**	--	**0.0030 J**	--
Perfluorodecanesulfonic acid (PFDS)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	0.0049 U	--
Perfluorodecanoic acid (PFDA)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	0.0049 U	--
Perfluorododecanoic acid (PFDoA)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	0.0049 U	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	**0.006**	--	0.0049 U	--
Perfluoroheptanoic acid (PFHpA)	NE	**0.0007 J**	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	**0.14**	--	**0.0043 J**	--
Perfluorohexanesulfonic acid (PFHxS)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	**0.0019 J**	--	--	**0.24**	--	**0.0034 J**	--
Perfluorohexanoic acid (PFHxA)	NE	0.0092 U	--	--	0.0092 U	--	--	--	0.0098 U	--	--	0.0098 U	--	--	**0.21**	--	0.0098 U	--
Perfluorononanoic acid (PFNA)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	**0.0016 J**	--	0.0049 U	--
Perfluorooctanesulfonamide (PFOSA)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	0.0049 U	--
Perfluorooctanesulfonic acid (PFOS)	NE	**0.002 J**	--	--	0.004 U	--	--	--	0.0049 U	--	--	**0.0018 J**	--	--	**0.07**	--	**0.0019 J**	--
Perfluorooctanoic acid (PFOA)	NE	**0.0019**	--	--	0.0016 U	--	--	--	**0.002**	--	--	0.002 U	--	--	**0.75**	--	**0.0095**	--
Perfluoropentanoic acid (PFPeA)	NE	0.0042 U	--	--	0.004 U	--	--	--	**0.0059**	--	--	0.0049 U	--	--	**0.099**	--	**0.01**	--
Perfluorotetradecanoic acid (PFTeA)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	0.0049 U	--
Perfluorotridecanoic acid (PFTrDA)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	**0.0013 J**	--	0.0049 U	--
Perfluoroundecanoic acid (PFUnA)	NE	0.0042 U	--	--	0.004 U	--	--	--	0.0049 U	--	--	0.0049 U	--	--	0.0048 U	--	0.0049 U	--

Analyte	Groundwater PCUL	Location ID: MW-20 Sample ID: MW20-230725 Sample Date: 7/25/2023	MW-20 MW20-20231206 12/6/2023	MW-21 MW21-230725 7/25/2023	MW-21 MW21-20231207 12/6/2023	MW-22 MW22-230725 7/25/2023	MW-22 MW22-20231206 12/6/2023	MW-23 MW23-230724 7/24/2023	MW-23 MW23-20231206 12/6/2023
Total Metals (µg/L)									
Arsenic	8.0	**1.90**	**5.16**	**6.10**	**9.36**	**6.07**	**4.54**	**72.5**	**98.6**
Cadmium	1.2	**0.202**	**0.0650 J**	0.200 U	0.500 U	**0.0310 J**	**0.186**	0.500 U	0.100 U
Chromium	100	**1.11**	5.00 U	**0.764 J**	2.50 U	**1.61**	1.00 U	**3.51**	5.00 U
Copper	3.1	**2.10**	**0.375 J**	1.00 U	2.50 U	**0.471 J**	**0.311 J**	**1.85 J**	**0.191 J**
Lead	5.6	**0.200**	**0.0560 J**	**0.198 J**	0.500 U	**0.126**	**0.145**	**0.300 J**	**0.0600 J**
Mercury	0.025	**0.00411**	**0.00267**	0.00042 U	**0.00026 J**	**0.00153**	**0.00118**	**0.00078**	**0.00234**
Nickel	8.2	**8.89**	**5.30**	**1.27**	**0.810 J**	**0.779**	**0.766**	**2.71**	**1.97**
Selenium	50	**0.486 J**	**0.392 J**	1.00 U	2.50 U	**0.355 J**	**0.272 J**	**1.29 J**	**0.566**
Thallium	0.062	0.400 U	0.400 U	0.400 U	1.00 U	0.200 U	0.400 U	1.00 U	0.400 U
Zinc	81	12.0 U	**3.74 J**	12.0 U	30.0 U	6.00 U	**3.09 J**	30.0 U	**3.41 J**
Dissolved Metals (µg/L)									
Arsenic	8.0	**1.54**	**5.94**	**6.38**	**8.10**	**5.96**	**4.46**	**72.0**	**92.8**
Cadmium	1.2	**0.153**	0.500 U	0.100 U	0.500 U	0.100 U	0.200 U	0.200 U	**0.165 J**
Chromium	100	**1.10**	2.50 U	**0.958 J**	2.50 U	1.00 U	**0.610 J**	**2.27 J**	**1.76 J**
Chromium, Hexavalent	0.046	13 U	13 U	13 U	13 U	13 U	13 U	**13**	13 U
Chromium, Trivalent	27		5.00 U		2.50 U		1.00 U	ND	5.00 U
Copper	3.1	**1.77**	2.50 U	0.500 U	**1.37 J**	**0.378 J**	**0.400 J**	1.00 U	**1.49 J**
Lead	5.6	**0.101**	0.500 U	0.100 U	0.500 U	0.100 U	0.200 U	0.200 U	0.500 U
Mercury	0.025	**0.00305**	**0.00363**	0.00042 U	0.00042 U	**0.00076**	**0.00065**	**0.00026 J**	**0.00261**
Nickel	8.2	**9.69**	**6.11**	**1.16**	**0.735 J**	**0.485 J**	**1.29**	**2.47**	**1.82 J**
Selenium	50	**0.328 J**	2.50 U	0.500 U	2.50 U	**0.247 J**	**1.46**	**0.500 J**	2.50 U
Thallium	0.062	0.200 U	1.00 U	0.200 U	1.00 U	0.200 U	0.400 U	0.400 U	1.00 U
Zinc	81	6.00 U	**17.2 J**	6.00 U	30.0 U	6.00 U	12.0 U	12.0 U	30.0 U
Total Petroleum Hydrocarbons (µg/L)									
Gasoline-range hydrocarbons - HCID	800	250 U	250 U	250 U	250 U	--	250 U	250 U	250 U
Diesel-range hydrocarbons - HCID	500	500 U	500 U	500 U	500 U	--	500 U	500 U	500 U
Lube oil-range hydrocarbons - HCID	500	1000 U	1000 U	1000 U	1000 U	--	1000 U	1000 U	1000 U
Total TPH - HCID	500	ND	ND	ND	ND	--	ND	ND	ND
Diesel-range hydrocarbons	500	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons	500	--	--	--	--	--	--	--	--
Total TPH	500	--	--	--	--	--	--	--	--
Diesel-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons - w/SGC	500	--	--	--	--	--	--	--	--
Total TPH - w/SGC	500	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (VPH) (µg/L)									
1-Methylnaphthalene	1.5	--	--	--	--	--	--	--	--
Benzene	1.6	--	--	--	--	--	--	--	--
Benzene, 1,2,3-Trimethyl-	80	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--
C12-C13 Aromatics	NE	--	--	--	--	--	--	--	--
C5-C6 Aliphatics	NE	--	--	--	--	--	--	--	--
C6-C8 Aliphatics	NE	--	--	--	--	--	--	--	--
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--
Decane	NE	--	--	--	--	--	--	--	--
Dodecane	NE	--	--	--	--	--	--	--	--
Ethylbenzene	21	--	--	--	--	--	--	--	--
Hexane	4.1	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	24	--	--	--	--	--	--	--	--
Naphthalene	1.4								
Octane	NE								
Pentane	NE								
Toluene	102								
Xylene, m-,p-	NE								
Xylene, o-	NE								
Total Xylenes	106								

Analyte	Groundwater PCUL	MW-20 MW20-230725 7/25/2023	MW-20 MW20-20231206 12/6/2023	MW-21 MW21-230725 7/25/2023	MW-21 MW21-20231207 12/6/2023	MW-22 MW22-230725 7/25/2023	MW-22 MW22-20231206 12/6/2023	MW-23 MW23-230724 7/24/2023	MW-23 MW23-20231206 12/6/2023
Location ID									
Sample ID									
Sample Date									
Total Metals (µg/L)									
Extractable Petroleum Hydrocarbons (EPH) (µg/L)									
C8-C10 Aliphatics	NE	--	--	--	--	--	--	--	--
C8-C10 Aromatics	NE	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	NE	--	--	--	--	--	--	--	--
C10-C12 Aromatics	NE	--	--	--	--	--	--	--	--
C12-C16 Aliphatics	NE	--	--	--	--	--	--	--	--
C12-C16 Aromatics	NE	--	--	--	--	--	--	--	--
C16-C21 Aliphatics	NE	--	--	--	--	--	--	--	--
C16-C21 Aromatics	NE	--	--	--	--	--	--	--	--
C21-C34 Aliphatics	NE	--	--	--	--	--	--	--	--
C21-C34 Aromatics	NE	--	--	--	--	--	--	--	--
Volatile Organic Compounds (VOCs) (µg/L)									
1,1,1,2-Tetrachloroethane	1.7	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	200	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	0.22	--	--	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	NE	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	0.90	--	--	--	--	--	--	--	--
1,1-Dichloroethane	7.7	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	7.0	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloropropene	NE	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	6.4	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	0.00038	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NE	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	80	--	--	--	--	--	--	--	--
1,2-Dibromo-3-Chloropropane	0.042	--	--	--	--	--	--	--	--
1,2-Dibromoethane	NE	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NE	--	--	--	--	--	--	--	--
1,2-Dichloroethane	3.5	--	--	--	--	--	--	--	--
1,2-Dichloropropane	3.1	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	80	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NE	--	--	--	--	--	--	--	--
1,3-Dichloropropane	160	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NE	--	--	--	--	--	--	--	--
2,2-Dichloropropane	NE	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	NE	--	--	--	--	--	--	--	--
2-Chlorotoluene	160	--	--	--	--	--	--	--	--
2-Hexanone	40	--	--	--	--	--	--	--	--
4-Chlorotoluene	NE	--	--	--	--	--	--	--	--
4-Isopropyltoluene	NE	--	--	--	--	--	--	--	--
Acetone	7200	--	--	--	--	--	--	--	--
Acrolein	1.1	--	--	--	--	--	--	--	--
Acrylonitrile	7200	--	--	--	--	--	--	--	--
Benzene	1.1	--	--	--	--	--	--	--	--
Bromobenzene	64	--	--	--	--	--	--	--	--
Bromochloromethane	NE	--	--	--	--	--	--	--	--
Bromoform	12	--	--	--	--	--	--	--	--
Bromomethane	11	--	--	--	--	--	--	--	--
Carbon Disulfide	800	--	--	--	--	--	--	--	--
Carbon Tetrachloride	0.35	--	--	--	--	--	--	--	--
Chlorobenzene	100	--	--	--	--	--	--	--	--
Chloroethane	14667	--	--	--	--	--	--	--	--
Chloroform	1.2	--	--	--	--	--	--	--	--
Chloromethane	153	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethylene	16	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,3-Dichloropropene	0.44	--	--	--	--	--	--	--	--
Dibromochloromethane	2.2	--	--	--	--	--	--	--	--
Dibromomethane	80	--	--	--	--	--	--	--	--
Dichlorobromomethane	1.4	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	4.2	--	--	--	--	--	--	--	--
Ethylbenzene	21	--	--	--	--	--	--	--	--
Hexachlorobutadiene	NE	--	--	--	--	--	--	--	--
Hexane	NE	--	--	--	--	--	--	--	--
Isopropylbenzene	800	--	--	--	--	--	--	--	--
Methyl ethyl ketone (MEK)	4800	--	--	--	--	--	--	--	--
Methyl Iodide	NE	--	--	--	--	--	--	--	--
Methyl isobutyl ketone	640	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	24	--	--	--	--	--	--	--	--

	Location ID	MW-20	MW-20	MW-21	MW-21	MW-22	MW-22	MW-23	MW-23
	Sample ID	MW20-230725	MW20-20231206	MW21-230725	MW21-20231207	MW22-230725	MW22-20231206	MW23-230724	MW23-20231206
	Sample Date	7/25/2023	12/6/2023	7/25/2023	12/6/2023	7/25/2023	12/6/2023	7/24/2023	12/6/2023
Analyte	**Groundwater PCUL**								
Total Metals (µg/L)									
Methylene Chloride	5.0	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Naphthalene	1.4								
n-Butylbenzene	400								
n-Propylbenzene	800								
Sec-Butylbenzene	800	--	--	--	--	--	--	--	--
Styrene	100	--	--	--	--	--	--	--	--
Tert-Butylbenzene	800	--	--	--	--	--	--	--	--
Tetrachloroethylene	2.9	--	--	--	--	--	--	--	--
Toluene	102	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethylene	77	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,3-Dichloropropene	0.44	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NE	--	--	--	--	--	--	--	--
Trichloroethylene	0.70	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichlorofluoromethane	120	--	--	--	--	--	--	--	--
Vinyl Acetate	7809	--	--	--	--	--	--	--	--
Vinyl Chloride	0.18	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Xylene, m-,p-	NE	--	--	--	--	--	--	--	--
Xylene, o-	NE	--	--	--	--	--	--	--	--
Total Xylenes	106	--	--	--	--	--	--	--	--
Semivolatile Compounds (SVOCs) (µg/L)									
1,2,4-Trichlorobenzene	0.96	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	4.5	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	2.0	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	5.0	--	--	--	--	--	--	--	--
1,4-Dioxane	0.44	**0.2**	**0.2 J**	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 U	**0.2 J**
2,2'-Oxybis[1-chloropropane]	NE	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	0.037	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	8.0	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	10	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	2.9	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	32	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.18	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.058	--	--	--	--	--	--	--	--
2-Chloronaphthalene	100	--	--	--	--	--	--	--	--
2-Chlorophenol	17	--	--	--	--	--	--	--	--
2-methylphenol	11	--	--	--	--	--	--	--	--
2-Nitroaniline	160	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.0033	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	7.0	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	36	--	--	--	--	--	--	--	--
4-Chloroaniline	0.44	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	NE	--	--	--	--	--	--	--	--
4-methylphenol	106	--	--	--	--	--	--	--	--
4-Nitroaniline	4.4	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	--	--	--	--	--
Benzoic Acid	589	--	--	--	--	--	--	--	--
Benzyl Alcohol	56	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	NE	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.040	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	0.046	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	0.013	--	--	--	--	--	--	--	--
Carbazole	NE	--	--	--	--	--	--	--	--
Dibutyl Phthalate	8.0	--	--	--	--	--	--	--	--
Diethyl Phthalate	93	--	--	--	--	--	--	--	--
Dimethyl Phthalate	59	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	2.3	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.000005	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.010	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	1.0	--	--	--	--	--	--	--	--
Hexachloroethane	0.020	--	--	--	--	--	--	--	--
Isophorone	92	--	--	--	--	--	--	--	--
Nitrobenzene	16	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	0.013	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.55	--	--	--	--	--	--	--	--

Location ID		MW-20	MW-20	MW-21	MW-21	MW-22	MW-22	MW-23	MW-23
Sample ID		MW20-230725	MW20-20231206	MW21-230725	MW21-20231207	MW22-230725	MW22-20231206	MW23-230724	MW23-20231206
Sample Date		7/25/2023	12/6/2023	7/25/2023	12/6/2023	7/25/2023	12/6/2023	7/24/2023	12/6/2023
Analyte	**Groundwater PCUL**								
Total Metals (µg/L)									
Pentachlorophenol	0.0020	--	--	--	--	--	--	--	--
Phenol	101	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)									
1-Methylnaphthalene	1.5	0.010 U	0.010 U	**0.104**	**0.110**	--	0.010 U	**0.014**	0.010 U
2-Methylnaphthalene	14	0.010 U	0.010 U	**0.007 J**	**0.007 J**	--	0.010 U	**0.021**	0.010 U
Acenaphthene	5.3	0.010 U	0.010 U	**0.007 J**	**0.007 J**	--	0.010 U	0.010 U	0.010 U
Acenaphthylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Anthracene	2.1	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Benzo(a)anthracene	0.00016	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Benzo(a)pyrene	0.000016	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Benzo(b)fluoranthene	0.00016	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Benzo(g,h,i)perylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Benzo(j)fluoranthene	NE	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Benzo(k)fluoranthene	0.0016	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Benzofluoranthenes (Total)	NE	0.020 U	0.020 U	0.020 U	0.020 U	--	0.020 U	0.020 U	0.020 U
Carbazole	NE	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	**0.011**
Chrysene	0.016	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Dibenzo(a,h)anthracene	0.000016	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Dibenzofuran	3.1	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Fluoranthene	1.8	0.010 U	0.010 U	0.010 U	**0.009 J**	--	0.010 U	0.010 U	0.010 U
Fluorene	3.7	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Indeno(1,2,3-c,d)pyrene	0.00016	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Naphthalene	1.4	**0.009 J**	0.010 U	**0.015 J**	0.010 U	--	0.010 U	0.010 U	0.010 U
Perylene	NE	0.010 U	0.010 U	0.010 U	0.010 U	--	0.010 U	0.010 U	0.010 U
Phenanthrene	NE	0.010 U	0.010 U	0.010 U	**0.008 J**	--	0.010 U	0.010 U	0.010 U
Pyrene	2.0	0.010 U	0.010 U	0.010 U	**0.010 J**	--	0.010 U	0.010 U	0.010 U
Total cPAH TEQ (ND=0.5RL)	0.0097	0.00855 U	0.00855 U	0.00855 U	0.00855 U	--	0.00855 U	0.00855 U	0.00855 U
Polychlorinated Biphenyls (PCBs) (µg/L)									
PCB-Aroclor 1016	NE	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	--	--	--	--	--	--	--	--
PCB-Aroclor 1262	NE	--	--	--	--	--	--	--	--
PCB-Aroclor 1268	NE	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.000007	--	--	--	--	--	--	--	--
Per- and Polyfluoroalkyl Substances (PFAS) (µg/L)									
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	NE	**0.00029 J**	--	**0.00023 J**	--	--	--	--	--
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	NE	0.0049 U	--	0.0050 U	--	--	--	--	--
6:2 FTS	NE	0.0049 U	--	0.0050 U	--	--	--	--	--
8:2 FTS	NE	0.0049 U	--	0.0050 U	--	--	--	--	--
NEtFOSAA	NE	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	NE	0.0049 U	--	0.0050 U	--	--	--	--	--
NMeFOSAA	NE	--	--	--	--	--	--	--	--
N-methylperfluoro-1-octanesulfonamide	NE	0.0049 U	--	0.0050 U	--	--	--	--	--
Perfluorobutanesulfonic acid (PFBS)	NE	**0.0039 J**	--	**0.0026 J**	--	--	--	--	--
Perfluorodecanesulfonic acid (PFDS)	NE	0.0049 U	--	**0.00037 J**	--	--	--	--	--
Perfluorodecanoic acid (PFDA)	NE	**0.0012 J**	--	0.0050 U	--	--	--	--	--
Perfluorododecanoic acid (PFDoA)	NE	0.0049 U	--	0.0050 U	--	--	--	--	--
Perfluoroheptanesulfonic Acid (PFHpS)	NE	0.0049 U	--	0.0050 U	--	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	NE	**0.01**	--	**0.0038 J**	--	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	NE	**0.0051**	--	**0.0019 J**	--	--	--	--	--
Perfluorohexanoic acid (PFHxA)	NE	**0.011**	--	0.01 U	--	--	--	--	--
Perfluorononanoic acid (PFNA)	NE	**0.0014 J**	--	0.0050 U	--	--	--	--	--
Perfluorooctanesulfonamide (PFOSA)	NE	0.0049 U	--	0.0050 U	--	--	--	--	--
Perfluorooctanesulfonic acid (PFOS)	NE	**0.017**	--	**0.012**	--	--	--	--	--
Perfluorooctanoic acid (PFOA)	NE	**0.014**	--	**0.0073**	--	--	--	--	--
Perfluoropentanoic acid (PFPeA)	NE	**0.011**	--	**0.0046 J**	--	--	--	--	--
Perfluorotetradecanoic acid (PFTeA)	NE	0.0049 U	--	0.0050 U	--	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	NE	**0.0014 J**	--	0.0050 U	--	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	NE	0.0049 U	--	0.0050 U	--	--	--	--	--

Table K-4

Ditch Water Sample Data

Former Precision Engineering Property

Seattle, Washington

	Location ID	SW1	SW1	SW2
	Sample ID	SW1-230328	SW1-20231204	SW2-20231204
	Sample Date	3/28/2023	12/4/2023	12/4/2023
Analyte	**Water PCUL[1]**			
Total Metals (µg/L)				
Arsenic	8.0	**4.33**	**0.342 J**	**0.286 J**
Cadmium	1.2	**0.824**	**0.158 J**	**0.222**
Chromium	100	**47.1**	**2.22**	**0.610 J**
Copper	3.1	**142**	**7.67**	**6.80**
Lead	5.6	**60.3**	**0.974**	**0.782**
Mercury	0.025	**0.118**	**0.00841**	**0.00795**
Nickel	8.2	**18.7**	**3.38**	**7.52**
Selenium	50	1.00 U	1.00 U	1.00 U
Thallium	0.062	0.400 U	0.400 U	0.200 U
Zinc	81	**274**	**134**	**301**
Dissolved Metals (µg/L)				
Arsenic	8.0	**0.536**	**0.396 J**	**0.354 J**
Cadmium	1.2	**0.189**	**0.112 J**	**0.242**
Chromium	100	**5.35**	**2.28**	**0.850 J**
Chromium, Hexavalent	0.046	13 U	13 U	13 U
Copper	3.1	**14.4**	**8.30**	**7.38**
Lead	5.6	**0.976**	**0.598**	**0.442**
Mercury	0.025	**0.026 J**	**0.00668**	**0.00681**
Nickel	8.2	**7.40**	**3.50**	**6.95**
Selenium	50	0.500 U	1.00 U	1.00 U
Thallium	0.062	0.200 U	0.400 U	0.400 U
Zinc	81	**143**	**132**	**289**
Total Petroleum Hydrocarbons (µg/L)				
Gasoline-range hydrocarbons - HCID	800	250 U	250 U	250 U
Diesel-range hydrocarbons - HCID	500	500 U	500 U	500 U
Lube oil-range hydrocarbons - HCID	500	1,000 U	1,000 U	1,000 U
Total TPH - HCID	500	ND	ND	ND
Gasoline-range hydrocarbons	800	100 U		
Volatile Organic Compounds (VOCs) (µg/L)				
1,1-Dichloroethylene	7.0	**0.11 J**	0.20 U	0.20 U
cis-1,2-Dichloroethylene	16	**8.97**	0.20 U	0.20 U
Methylene Chloride	5.0	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethylene	77	**0.08 J**	0.20 U	0.20 U
Trichloroethylene	0.70	**0.20 J**	0.20 U	0.20 U
Vinyl Chloride	0.18	0.20 U	0.20 U	0.20 U
Semivolatile Complounds (SVOCs) (µg/L)				
1,4-Dioxane	0.44	**0.2 J**	0.2 U	0.2 U
Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L)				
1-Methylnaphthalene	1.5	**0.003 J**	**0.013**	0.010 U
2-Methylnaphthalene	14	**0.004 J**	**0.013**	0.010 U
Acenaphthene	5.3	0.010 U	0.010 U	0.010 U
Acenaphthylene	NE	0.010 U	0.010 U	0.010 U
Anthracene	2.1	**0.002 J**	0.010 U	0.010 U
Benzo(a)anthracene	0.00016	**0.012**	0.010 U	0.010 U
Benzo(a)pyrene	0.000016	**0.015**	0.010 U	0.010 U
Benzo(b)fluoranthene	0.00016	**0.017**	0.010 U	0.010 U
Benzo(g,h,i)perylene	NE	**0.019**	0.010 U	0.010 U
Benzo(j)fluoranthene	NE	**0.007 J**	0.010 U	0.010 U
Benzo(k)fluoranthene	0.0016	**0.009 J**	0.010 U	0.010 U
Benzofluoranthenes (Total)	NE	**0.033**	0.020 U	0.020 U
Carbazole	NE	**0.002 J**	0.010 U	0.010 U
Chrysene	0.016	**0.018**	0.010 U	0.010 U
Dibenzo(a,h)anthracene	0.000016	**0.003 J**	0.010 U	0.010 U
Dibenzofuran	3.1	**0.002 J**	0.010 U	0.010 U
Fluoranthene	1.8	**0.030**	0.010 U	0.010 U
Fluorene	3.7	0.010 U	**0.005 J**	0.010 U
Indeno(1,2,3-c,d)pyrene	0.00016	**0.012**	0.010 U	0.010 U
Naphthalene	1.4	**0.044**	**0.006 J**	0.010 U
Perylene	NE	0.010 U	0.010 U	0.010 U
Phenanthrene	NE	**0.017**	**0.009 J**	0.010 U
Pyrene	2.0	**0.035**	0.010 U	0.010 U
Total cPAH TEQ (ND=0.5RL)	0.0097	**0.02378 J**	0.00855 U	0.00855 U

Table K-5

Soil Gas, Indoor Air, and Ambient Air Data - TCE and Breakdown Products

Former Precision Engineering Property

Seattle, Washington

			Analyte	TCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	VC
			Air SL	0.33	91	NA	18	0.28
			Sub slab SL	11	300	NA	610	9.4
Location	**Sample**	**Date**	**Type**					
A1	A1-042806	4/28/06	Soil gas	4 U	--	3 U	3 U	1.9 U
A2	A2-042806	4/28/06	Soil gas	4.9 U	--	3.6 U	3.6 U	2.3 U
A3	A3B-042806	4/28/06	Soil gas	**6100**	--	**470**	13 U	8.4 U
A5	A5B-042806	4/28/06	Soil gas	**37000**	--	**1700**	100 U	**420**
A6	A6-042806	4/28/06	Soil gas	3.5 U	--	2.6 U	2.6 U	1.7 U
A7	A7-042806	4/28/06	Soil gas	3.5 U	--	2.6 U	2.6 U	1.7 U
IA1	IA1	6/13/06	Indoor Air	**0.2**	0.063 U	0.12 U	0.63 U	0.04 U
IA2	IA2	6/13/06	Indoor Air	**0.083**	0.065 U	0.13 U	0.65 U	0.042 U
IA3	IA3	6/13/06	Indoor Air	**0.11**	0.074 U	0.15 U	0.74 U	0.048 U
IA4	IA4	6/13/06	Indoor Air	**0.14**	0.069 U	0.14 U	0.69 U	0.045 U
IA5	IA5	6/13/06	Indoor Air	**0.16**	0.08 U	0.16 U	0.8 U	0.051 U
IA6	IA6	6/13/06	Indoor Air	**0.15**	0.06 U	0.12 U	0.6 U	0.039 U
IA7	IA7	6/13/06	Ambient Air	**0.046**	0.065 U	0.13 U	0.65 U	0.042 U
IA8	IA8	6/13/06	Indoor Air	**0.15**	0.065 U	0.13 U	0.65 U	0.042 U
SS1	SS-1-020715	2/7/15	Soil Gas	**95**	1.6 U	1.6 U	1.6 U	0.5 U
IA-SHOP	IA-SHOP-020715	2/7/15	Indoor Air	**240**	0.4 U	0.4 U	0.4 U	0.25
AMB-OUTDOOR	AMB-OUTDOOR-020715	2/7/15	Ambient Air	**0.96**	0.4 U	0.4 U	0.4 U	0.13 U
A8	A8	2/1/20	Soil gas	**160**	3.3 U	3.3 U	3.3 U	2.1 U
A9	A9	2/1/20	Soil gas	**1100**	6.3 U	**21**	6.3 U	4.1 U
A10	A10	2/1/20	Soil gas	**29**	17 U	**40**	17 U	11 U
A11	A11	2/1/20	Soil gas	**82**	3.3 U	3.3 U	3.3 U	2.1 U
AA1	AA1	2/1/20	Ambient Air	0.16 U	0.4 U	0.4 U	0.4 U	0.26 U
AA2	AA2	2/1/20	Ambient Air	0.16 U	0.4 U	0.4 U	0.4 U	0.26 U
AA3	AA3	2/1/20	Ambient Air	0.27 U	0.63 U	0.63 U	0.63 U	0.41 U
AA4	AA4	2/1/20	Ambient Air	0.16 U	0.4 U	0.4 U	0.4 U	0.26 U
AA5	AA5	2/1/20	Ambient Air	0.16 U	0.4 U	0.4 U	0.4 U	0.26 U
IA8	IA8-020120	2/1/20	Indoor Air	**270**	0.4 U	0.4 U	0.4 U	0.26 U
IA9	IA9	2/1/20	Indoor Air	**330**	0.4 U	0.4 U	0.4 U	0.26 U
IA10	IA10	2/1/20	Indoor Air	**340**	0.4 U	0.4 U	0.4 U	0.26 U
IA11	IA11	2/1/20	Indoor Air	**170**	0.4 U	0.4 U	0.4 U	0.26 U
IA12	IA12	2/1/20	Indoor Air	**200**	0.4 U	0.4 U	0.4 U	0.26 U
IA13	IA13	2/1/20	Indoor Air	**210**	0.4 U	0.4 U	0.4 U	0.26 U
IA14	IA14	2/1/20	Indoor Air	**110**	0.4 U	0.4 U	0.4 U	0.26 U
IA15	IA15	2/1/20	Indoor Air	**170**	0.4 U	0.4 U	0.4 U	0.26 U
IA16	IA16	2/11/20	Indoor Air	**2.8**	--	--	--	--
IA16	IA16-022020	2/20/20	Indoor Air	**1.9**	--	--	--	--
IA16	IA16050220	5/2/20	Indoor Air	0.27 U	--	--	--	--
IA17	IA17	2/11/20	Indoor Air	**93**	--	--	--	--
IA17	IA17-022020	2/20/20	Indoor Air	**4.5**	--	--	--	--
IA17	IA17050220	5/2/20	Indoor Air	0.27 U	--	--	--	--
IA18	IA18	2/11/20	Indoor Air	**45**	--	--	--	--
IA18	IA18050220	5/2/20	Indoor Air	0.27 U	--	--	--	--
IA19	IA19	2/11/20	Indoor Air	**110**	--	--	--	--
IA19	IA19-022020	2/20/20	Indoor Air	**2.3**	--	--	--	--
IA19	IA19050220	5/2/20	Indoor Air	0.27 U	--	--	--	--
IA20	IA20	2/11/20	Indoor Air	**73**	--	--	--	--
RAD1	RAD1	2/1/20	Indoor Air	**110**	--	--	--	--
RAD1	RAD1-022020	2/20/20	Indoor Air	**1.3**	--	--	--	--
RAD1	RAD1-051520	5/15/20	Indoor Air	**1.4**	--	--	--	--
RAD1	RAD1-121720	12/17/20	Indoor Air	**0.54**	--	--	--	--
RAD1	RAD1-032221	3/22/21	Indoor Air	**0.44**	--	--	--	--
RAD1	RAD1-100722	10/7/22	Indoor Air	**0.19**	--	--	--	--
RAD1	RAD1-022323	2/23/23	Indoor Air	**0.052**	--	--	--	--
RAD1	RAD1-110723	11/28/23	Indoor Air	**0.080**	--	--	--	--
RAD2	RAD2	2/1/20	Indoor Air	**110**	--	--	--	--
RAD2	RAD2-022323	2/23/23	Indoor Air	0.048 U	--	--	--	--
RAD2	RAD2-110723	11/28/23	Indoor Air	0.048 U	--	--	--	--
RAD3	RAD3	2/1/20	Indoor Air	**170**	--	--	--	--
RAD3	RAD3-022323	2/23/23	Indoor Air	**0.089**	--	--	--	--
RAD3	RAD3-110723	11/28/23	Indoor Air	**0.082**	--	--	--	--
RAD4	RAD4	2/20/20	Indoor Air	**2.6**	--	--	--	--
RAD4	RAD4-051520	5/15/20	Indoor Air	**2.6**	--	--	--	--
RAD4	RAD4-121720	12/17/20	Indoor Air	**0.87**	--	--	--	--
RAD4	RAD4-032221	3/22/21	Indoor Air	**0.95**	--	--	--	--
RAD4	RAD4-100722	10/7/22	Indoor Air	**0.27**	--	--	--	--
RAD4	RAD4-022323	2/23/23	Indoor Air	**0.089**	--	--	--	--
RAD4	RAD4-110723	11/28/23	Indoor Air	**0.080**	--	--	--	--
RAD5	RAD5	2/20/20	Indoor Air	**2.3**	--	--	--	--
RAD5	RAD5-051520	5/15/20	Indoor Air	**1.7**	--	--	--	--
RAD5	RAD5-121720	12/17/20	Indoor Air	**0.77**	--	--	--	--
RAD5	RAD5-032221	3/22/21	Indoor Air	**0.71**	--	--	--	--
RAD5	RAD5-100722	10/7/22	Indoor Air	**0.14**	--	--	--	--
RAD5	RAD5-022323	2/23/23	Indoor Air	**0.085**	--	--	--	--
RAD5	RAD5-110723	11/28/23	Indoor Air	**0.063**	--	--	--	--

Table K-6

Soil Gas, Indoor Air, and Ambient Air Data - Non-TCE and Breakdown Products

Former Precision Engineering Property

Seattle, Washington

		Location ID	A1	A2	A3	A5	A6	A7	IA1	IA2	IA3	IA4	IA5	IA6	IA7	IA8	SS1	IA-SHOP	AMB-OUTDOOR	A8
		Sample ID	A1-042806	A2-042806	A3B-042806	A5B-042806	A6-042806	A7-042806	IA1	IA2	IA3	IA4	IA5	IA6	IA7	IA8	SS-1-020715	IA-SHOP-020715	MB-OUTDOOR-02071	A8
		Sample Date	4/28/2006	4/28/2006	4/28/2006	4/28/2006	4/28/2006	4/28/2006	6/13/2006	6/13/2006	6/13/2006	6/13/2006	6/13/2006	6/13/2006	6/13/2006	6/13/2006	2/7/2015	2/7/2015	2/7/2015	2/1/2020
		Matrix	Soil gas	Soil gas	Soil gas	Soil gas	Soil gas	Soil gas	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Ambient Air	Indoor Air	Soil Gas	Indoor Air	Ambient Air	Soil gas
Analyte (µg/m^3)	**Air CUL**	**Sub Slab SL**																		
1,1,1,2-Tetrachloroethane	0.34	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.8 U	0.7 U	0.7 U	--
1,1,1-Trichloroethane	2300	76000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**4.4**	0.55 U	0.55 U	--
1,1,2,2-Tetrachloroethane	0.043	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.8 U	0.7 U	0.7 U	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.1 U	0.77 U	0.77 U	--
1,1,2-Trichloroethane	0.091	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.2 U	0.55 U	0.55 U	--
1,1-Dichloroethane	1.6	52	--	--	--	--	--	--	0.13 U	0.13 U	0.15 U	0.14 U	0.16 U	0.12 U	0.13 U	0.13 U	1.6 U	0.41 U	0.41 U	3.3 U
1,2,4-Trichlorobenzene	0.91	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.5 U	1.9 U	1.9 U	--
1,2,4-Trimethylbenzene	27	910	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**3.7**	**12**	0.5 U	--
1,2-Dibromoethane (EDB)	0.0042	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.1 U	0.78 U	0.78 U	--
1,2-Dichlorobenzene	91	3000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.4 U	0.61 U	0.61 U	--
1,2-Dichloroethane	0.096	3.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.6 U	0.41 U	0.41 U	0.33 U
1,2-Dichloropropane	0.68	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.9 U	0.47 U	0.47 U	--
1,3,5-Trimethylbenzene	27	910	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2 U	**5**	0.5 U	--
1,3-Dichlorobenzene	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.4 U	0.61 U	0.61 U	--
1,4-Dichlorobenzene	0.23	7.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.4 U	0.61 U	0.61 U	--
2-Hexanone	14	460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.3 U	0.83 U	0.83 U	--
Acetone	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**320**	**33**	**4.6**	--
Benzene	0.32	10.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**7**	**2.6**	**0.67**	--
Benzene, 1-Ethyl-4-Methyl-	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2 U	**2.2**	0.5 U	--
Bromoform	2.3	76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.2 U	1 U	1 U	--
Bromomethane	2.3	76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.6 U	**0.75**	0.39 U	--
Butane	NA	NA	**73**	**160**	31 U	250 U	**350**	**330**	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	320	1100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**2.2**	**0.64**	0.32 U	--
Carbon Tetrachloride	0.42	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3 U	**0.45**	**0.4**	--
CFC-114	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.8 U	0.71 U	0.71 U	--
Chlorobenzene	23	760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.9 U	0.47 U	0.47 U	--
Chloroethane	4600	15000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1 U	0.27 U	0.27 U	22 U
Chloroform	0.11	3.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1 U	0.25 U	0.25 U	--
Chloromethane	41	1400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.8 U	**1.4**	**1.1**	--
cis-1,3-Dichloropropene	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8 U	0.46 U	0.46 U	--
Dibromochloromethane	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.5 U	0.86 U	0.86 U	--
Dichlorobromomethane	0.067	2.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.7 U	0.68 U	0.68 U	--
Dichlorodifluoromethane	46	1500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4 U	**2.9**	**2.3**	--
Ethylbenzene	460	15000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**3.8**	**5.9**	0.44 U	--
Hexachlorobutadiene	0.11	3.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11 U	2.7 U	2.7 U	--
Isobutane	NA	NA	**5800 J**	**5500 J**	**2600 J**	620 U	**11000 J**	**13000 J**	--	--	--	--	--	--	--	--	--	--	--	--
Methyl ethyl ketone (MEK)	2300	76000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**18**	**3.3**	**0.79**	--
Methyl isobutyl ketone	1400	46000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**12**	**2.3**	0.83 U	--
Methylene Chloride	66	2200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.4 U	**0.66**	0.35 U	--
Styrene	460	1500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**2.8**	**0.66**	0.43 U	--
Tetrachloroethylene	9.6	320	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**11**	**1.6**	0.69 U	--
Toluene	2300	76000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**32**	**45**	**2.2**	--
trans-1,3-Dichloropropene	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8 U	0.46 U	0.46 U	--
Trichlorofluoromethane	320	1100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.3 U	**1.2**	**1.2**	--
Xylene, m-,p-	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**11**	**12**	**1.1**	--
Xylene, o-	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**4.1**	**5.1**	0.44 U	--
Total xylenes	46	1525	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**15.1**	**17.1**	**1.1**	--

		Location ID	A9	A10	A11	AA1	AA2	AA3	AA4	AA5	IA8	IA9	IA10	IA11	IA12	IA13	IA14	IA15
		Sample ID	A9	A10	A11	AA1	AA2	AA3	AA4	AA5	IA8-020120	IA9	IA10	IA11	IA12	IA13	IA14	IA15
		Sample Date	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020	2/1/2020
		Matrix	Soil gas	Soil gas	Soil gas	Ambient Air	Ambient Air	Ambient Air	Ambient Air	Ambient Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Analyte (µg/m^3)	**Air CUL**	**Sub Slab SL**																
1,1,1,2-Tetrachloroethane	0.34	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	2300	76000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	0.043	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	0.091	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	1.6	52	6.5 U	18 U	**14**	0.4 U	0.4 U	0.65 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2,4-Trichlorobenzene	0.91	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	27	910	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane (EDB)	0.0042	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	91	3000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	0.096	3.2	0.65 U	1.8 U	0.33 U	**0.065**	**0.065**	**0.065**	**0.065**	**0.065**	**0.093**	**0.085**	**0.089**	**0.097**	**0.093**	**0.089**	**0.085**	**0.093**
1,2-Dichloropropane	0.68	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	27	910	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	0.23	7.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	14	460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	0.32	10.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene, 1-Ethyl-4-Methyl-	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	2.3	76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	2.3	76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butane	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	320	1100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	0.42	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CFC-114	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	23	760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	4600	15000	42 U	120 U	22 U	2.6 U	2.6 U	4.2 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
Chloroform	0.11	3.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	41	1400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorobromomethane	0.067	2.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	46	1500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	460	15000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.11	3.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isobutane	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl ethyl ketone (MEK)	2300	76000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl isobutyl ketone	1400	46000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	66	2200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	460	1500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	9.6	320	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	2300	76000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	320	1100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, m-,p-	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene, o-	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total xylenes	46	1525	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix L
Laboratory Data and Data Validation Reports

Appendix M
Groundwater Modeling

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MEMORANDUM

TO: Mark Adams, Ecology

DATE: February 25, 2008

FROM: Matthew Hickey and James Peale

PROJECT: No. 8006.08.04

RE: Groundwater Cleanup Levels for the Protection of Surface Water and Groundwater Fate and Transport Modeling for the Former Precision Engineering Site, VCP ID Number NW 1511

Maul Foster & Alongi, Inc. (MFA) has prepared this memorandum to describe groundwater fate and transport modeling for the Precision Engineering, Inc. (Precision) site located at 1231 S Director Street in Seattle, Washington. This memorandum also addresses a request by the Washington State Department of Ecology (Ecology) to develop groundwater cleanup levels (CULs) for the protection of surface water. Because the modeling shows that indicator hazardous substances (IHSs) present at the site will not reach the Duwamish River, groundwater CULs that exceed surface-water CULs can be established consistent with WAC 173-340-720(6)(c)(i)(E).

MFA used the groundwater model to derive groundwater CULs for site IHSs that, if exceeded at the eastern property boundary, are predicted to result in exceedances of surface-water criteria at the point where groundwater discharges to the Duwamish River. The following discussion includes a description of the groundwater model used, model inputs, assumptions, and results.

Model Description

MFA performed the groundwater modeling using U.S. Environmental Protection Agency's (USEPA's) BIOCHLOR model (USEPA, 2002). BIOCHLOR is based on the Domenico analytical solute transport model and has the ability to simulate 1-D advection, 3-D dispersion, linear adsorption, and biotransformation or degradation. BIOCHLOR includes three different model types:

- Type I: Solute transport without decay
- Type II: Solute transport with biotransformation or degradation modeled as a sequential first-order decay process
- Type III: Solute transport with biotransformation or degradation modeled as a sequential first-order decay process with two different reaction zones (i.e., each zone has a different set of rate coefficient values)

All compounds were modeled using the Type I or II models Type II was used for all compounds except metals. Type I was used for metals, which do not decay. Type I and Type II were used for trichloroethene (TCE) and vinyl chloride, to accommodate a request by Ecology, as explained further below.

Model Inputs, Assumptions, and Output

The model required the following data inputs:

- Source concentrations
- Source dimensions (lateral and vertical)
- Groundwater velocity (either entered directly or calculated using gradient, hydraulic conductivity, and porosity)
- Retardation factors (either entered directly or calculated using default partition coefficients and organic carbon data for soil)
- Degradation rates based on half-life data (a half-life x factor of 2 was used for TCE and VC)
- Model domain size and duration

These parameters are summarized on Table A1 and discussed further (along with the assumptions) in the following sections. The output of the model is the concentration at a designated distance downgradient of the source.

Compounds Modeled

MFA modeled the fate and transport of the following IHSs:

- Copper
- Trivalent and hexavalent chromium
- Trichloroethene (TCE)
- Vinyl chloride

Diesel- and oil-range organics are also IHSs in site groundwater, but the chemical properties necessary to run the model are not available for diesel or oil. Instead, selected polycyclic aromatic hydrocarbons (PAHs) (which are constituents of diesel- and oil-range organics) that were detected in site groundwater at a concentration above the Ecology or USEPA surface-water criteria were modeled. Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene were modeled as surrogates.

Arsenic and selenium, which are IHSs at the site, were not modeled because based on the data collected, Precision does not appear to be a source of these IHSs. The spatial distribution of arsenic concentrations in groundwater is not consistent with what would be expected if the former Precision site was the source. The arsenic detections are representative of naturally occurring background concentrations. For example, the highest concentration of arsenic detected at the site (32.3 µg/L) was in a sample from monitoring well MW1, located upgradient of the facility. Arsenic is ubiquitous in groundwater throughout the site at concentrations that appear to be consistent with naturally occurring background levels and there is no indication that Precision is a source of the arsenic in groundwater. Selenium is detected in some of the downgradient

monitoring wells at the site; however, selenium was not detected in soil and is no link between selenium and Precision.

It was not necessary to model benzo(b)fluoranthene and benzo(k)fluoranthene to demonstrate that these constituents would not reach the river reach the Duwamish River as it was already shown that they were not detected in monitoring locations at or near the property boundary nor in borings where IHSs may not be detected in downgradient locations.

Source Concentrations, Downgradient Concentrations, and Surface-Water Criteria

The maximum detected concentrations in groundwater samples collected from monitoring wells at the eastern property boundary were used as the source concentration to demonstrate that constituents at the site will not reach the river (see Table A1). Although TCE and vinyl chloride were not detected in property boundary monitoring wells, concentrations from geoprobe groundwater reconnaissance sample GP-13, located approximately 75 feet upgradient of the property boundary were used. Data from GP-13 was used as the boring was in a location where Ecology had expressed concern that IHSs may not show up in downgradient wells.

To calculate the groundwater CUL, an iterative process was used whereby assumed source concentrations were input into the model until the calculated downgradient concentration matched the most conservative applicable surface-water criteria. The groundwater CUL for a given IHS is the source concentration that predicts groundwater concentrations equal to the surface-water criteria (see Table A2). Groundwater CULs for the volatile organic compounds (VOCs) TCE and vinyl chloride were calculated in three ways: using a degradation rate based on reference values (Howard, et. El., 1991), using the same reference value multiplied by a factor of two, and with no degradation occurring (i.e., Type I model).

Table A3 summarizes applicable surface-water criteria. The most conservative (lowest) criteria from Table A3 were used for the model. Water-quality criteria were obtained from the Cleanup Levels and Risk Calculations (CLARC) Web page (Ecology, 2007). Applicable surface-water criteria included Model Toxics Control Act (MTCA) Method B and Method C CULs for surface water, and Ecology and USEPA surface-water criteria for aquatic life and for human health in both freshwater and marine environments. Criteria for both freshwater and marine environments were used based on reports that the base of the Duwamish is saline, while approximately the top 10 feet is freshwater (Duwamish Coalition, 1998). Use of water-quality criteria for the consumption of organisms and water is overly conservative, as water in the Duwamish is brackish and is not used for drinking water.

Source Area Dimensions

Source dimensions were based on the areal extent of IHS detections at the site. The extent of the contaminants was estimated to be equal to the distance between a sample location in which the constituent was detected in groundwater and the nearest sample location in which the constituent was not detected. Data from both monitoring wells and reconnaissance borings were considered in estimating the source-area widths.

The source width for trivalent chromium, and all of the PAHs was 300 feet (based on detections near the north and south property boundaries). The source width for hexavalent chromium was 50 feet (based on detections in GP6 and MW4). Copper source width was 225 feet, based on detections in MW6, MW2, and MW8. The source width for vinyl chloride was 200 feet (based on the detection of vinyl chloride in GP-13 and MW-8). The source width for TCE was 40 feet (based on the detections of TCE in GP6, GP8, and GP-13). It is important to note that hexavalent chromium, TCE, and vinyl chloride were not detected at the property boundary (i.e., applying these concentrations at the property boundary is an overly conservative case).

The source-area thickness for all IHSs was estimated as 15 feet (based on the difference in elevation between the top of the water table and the top of the aquitard).

BIOCHLOR allows the user to specify either a constant concentration source or a variety of source decay scenarios. Using a decay scenario requires an estimate of the mass contained in the original release. MFA conservatively assumed a constant, nondegrading source. This assumption significantly overestimates the amount of mass in the subsurface, considering that TCE use at the property ended in the mid-1980s, that the outside steam-cleaning area was relocated before 1986, that the boiler UST was abandoned in place and filled with a slurry in 1992, that chrome-plating operations ceased in 2005, and the evidence that the organic compounds are degrading (the presence, for example, of the TCE degradation product vinyl chloride).

Groundwater Velocity

Groundwater models are typically sensitive to variations in groundwater velocity, which is dependent on the hydraulic conductivity (K) of the water-bearing zone (as well as the porosity [n] and the gradient [i]). A gradient of 0.003 was calculated using site groundwater-elevation data collected from MW6 (located at the property boundary) on April 17, 2006, and an average daily staff-gauge elevation for the Duwamish on the same day (USGS, 2007). A porosity of 0.3 was assumed based on typical estimates for the soil types at the site.

Values of K can range over orders of magnitude. The estimate of K from the document titled Development of a Three-Dimensional Numerical Groundwater Flow Model for the Duwamish River Basin (Duwamish Coalition, 1998) is 0.001 centimeters per second for the area near the former Precision site. MFA modeled the groundwater flow using a K value five times the Duwamish Coalition estimate (i.e. 0.005 centimeters per second). Applying this value to Darcy's law results in a linear velocity of 52 feet per year. The assumed K value is conservative compared to the value used by the Duwamish Coalition (i.e., overestimates groundwater velocity and consequently potential contaminant migration).

Retardation Factor

The velocity of organic constituents in the dissolved phase is usually less than (i.e., retarded relative to) the groundwater velocity due to sorption effects. Sorption of organic constituents occurs as dissolved-phase organic constituents partition to the organic carbon in soil. The rate of sorption depends on the amount of organic carbon in the soil and the distribution coefficients (K_{oc} values). The K_{oc} values for TCE, benzo(a)anthracene, benzo(b)fluoranthene,

benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene were obtained from Ecology's CLARC Web page (Ecology, 2007). The CLARC Web page listed distribution coefficients for volatile organic compounds (VOCs) of 94 L/kg for TCE and 19 L/kg for vinyl chloride, indicating low tendency for sorption (and thus retardation). Distribution coefficients for PAHs were significantly larger (i.e., $3.6x10^5$ L/kg for benzo(a)anthracene, $1.2x10^6$ L/kg for benzo(b)fluoranthene and benzo(k)fluoranthene, $4.0x10^5$ L/kg for chrysene, $1.8x10^6$ L/kg for dibenzo(a,h)anthracene, and $3.5x10^6$ L/kg for indeno(1,2,3-cd)pyrene).

Sorption of dissolved inorganic constituents occurs primarily due to cation- or anion-exchange processes. The amount of solute that is adsorbed to the aquifer matrix is also described by a distribution coefficient (K_d). Distribution coefficients for arsenic, copper, trivalent chromium, hexavalent chromium, and selenium were also obtained from the CLARC Web page. The CLARC Web page listed distribution coefficients for metals of 29 L/kg for arsenic, 22 L/kg for copper, 1,000 L/kg for trivalent chromium, 19 L/kg for hexavalent chromium, and 5 L/kg for selenium.

No organic carbon data are available for the former Precision site. MFA used the default value (0.0018) supplied by the BIOCHLOR model and the distribution coefficients to calculate retardation factors. Resulting retardation factors for the metals and VOCs were calculated and are shown on Tables A1 and A2.

Because of the high propensity of PAHs to adhere to soil, (reflected in the high partitioning coefficients for the PAHs), calculated retardation factors for PAHs were also high. Solutions to the advection-dispersion equations using the superposition approach used by BIOCHLOR for solving the Domenico analytical model are known to diverge from solutions obtained by more robust numerical models for contaminants with large retardation factors. MFA confirmed this when attempting to model the PAH contaminants; high retardation factors caused the model to produce unrealistic results. In order to make the model function correctly, while still maintaining a high level of model conservatism, MFA set the retardation factors for all PAHs to a value of 10. This is a highly conservative approach, and resulted in migration of these contaminants being overestimated. Therefore, the CULs for the PAHs developed using these lower retardation factors are much lower than CULs that would have been calculated had the model been able to use the higher retardation factors.

Degradation Rates and Dispersion

BIOCHLOR allows the application of half-life data for calculating a first-order decay scenario. Literature values for half-lives of the VOCs and PAHs are appropriate to use. At the request of Ecology, MFA modeled a range of degradation rates for both TCE and vinyl chloride. CULs were calculated for all IHS's using the average of literature values for the degradation rates. Additionally, CULS for TCE and VC were calculated based on half lives that are two times longer than the literature values as well as with no degradation. Degradation of TCE at the site has been confirmed by the presence of vinyl chloride (a degradation product); however, to be conservative, the final groundwater CULs for TCE and vinyl chloride are assumed to be those calculated using the half lives increased by a factor of two. Degradation of total petroleum

hydrocarbon constituents in the subsurface has been widely documented and can be inferred at this site.

Dispersion occurs when groundwater encounters soil grains and the contaminant molecules are deflected or dispersed away from each other. Dispersion occurs in the longitudinal direction (i.e., along the groundwater plume axis in the direction of groundwater flow) and in the transverse planes (i.e., lateral or crossgradient to groundwater flow, in two dimensions). The amount of longitudinal and lateral dispersion is typically considered to be a function of plume length. For the purposes of this model, dispersion was calculated (using the internal BIOCHLOR algorithm) to be 180 feet, based on a hypothetical plume length of 1,800 feet.

Model Domain Size and Duration

The model domain was set at 800 feet wide and 3,600 feet long, well in excess of the width of the property and the distance to the Duwamish River. The models were run assuming a 35-year period, which is the estimated approximate length of time that it would take groundwater to travel 1,800 feet (i.e., the distance from the eastern property boundary to the Duwamish River), based on estimated groundwater seepage velocity at the site. Given that the primary sources of the contamination are no longer present, it is unlikely that impacts will continue for this length of time.

It is important to note that the assumptions of constant contaminant sources at maximum detected concentrations assumed at the eastern property edge are very conservative. Mass loading to the system is in fact finite due to the UST decommissioning and soil excavation conducted in the 1980's, and maximum concentrations in several cases were located an additional 50 to 130 feet west of the eastern property edge. The model was also set up to assume maximum concentrations throughout the source area. In reality, this would not be the case due to dispersive effects.

Results

Table A1 presents a summary of modeling results indicating that none of the IHSs at the site will reach the Duwamish River at concentrations at or above method detection limits. Figures A1 through A9 show concentration vs. distance with the assumed source area concentration at the eastern property boundary and the corresponding concentration at the river.[1]

Table A2 provides the modeling results to determine site specific CULs for the protection of surface water. Concentration vs. distance graphs showing the most stringent surface water CUL concentration at the Duwamish (i.e, at 1,800 feet, and the site specific CUL at the property boundary (0 feet), are included as Figures A10 through A20.

Table A4 compares the calculated CULs to concentrations of IHSs and PAHs detected in site groundwater samples. On-site groundwater concentrations of hexavalent chromium exceeded their respective CULs. All other IHSs and the modeled PAHs in groundwater are below their

[1] Note that the modeled concentrations shown on the graphs are expressed in milligrams per liter. Some modeled concentrations were converted to micrograms per liter (µg/L) in the tables for the ease of comparison, as site data and criteria are presented in µg/L for the constituents modeled.

respective CULs. Hexavalent chromium concentrations that exceeded CULs were detected in groundwater samples collected from borings and MW5, located within the building footprint, and from one sample collected from MW1, located upgradient of the building. Concentrations of hexavalent chromium in wells located near the eastern property line were not detected above their method reporting limits and did not exceed CULs.

Attachments

References
Tables A1 through A4
Figures A1 through A20

References

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TABLES

Appendix A Table Notes
Precision Engineering, Inc.
Seattle, Washington

Bold font indicates an exceedance of the CUL.

ARAR = applicable or relevant and appropriate requirement.
AWQC = ambient water quality criteria.
CUL = cleanup level.
J = estimated.
mg/L = milligrams per liter.
MTCA = Washington State Department of Ecology's Model Toxics Control Act.
µg/L = micrograms per liter.
NA = not analyzed.
NC = not calculated.
NR = not researched.
NV = no value.
U = not detected at or above the method reporting limit.

[a] Surface water of the Duwamish is brackish and is not used for drinking.
[b] Based on literature estimates from *Development of a Three-Dimensional Numerical Groundwater Flow Model for the Duwamish River Basin* ; University of Washington; August, 1998.
[c] Based on field data.
[d] Standard assumption.
[e] Calculated (v=(k*i)/n).
[f] Due to sorption; calculated (R=1+(rho/n)*Koc*foc).
[g] Actual calculated retardation factor or more conservative.
[h] Based on distance between sample locations with detections.
[i] Based on screen intervals/recon intervals.
[j] Groundwater Chemicals Desk Reference; Montgomery ed.; CRC Press, 1996.
[k] Concentration at a distance of 1,800 ft from eastern property boundary (distance to Duwamish River) was set equal to the surface-water criteria.

Table A1
Fate and Transport Model Inputs and Results Showing no Discharge of IHSs to the Duwamish
Precision Engineering, Inc.
Seattle, Washington

Model Parameters	Chromium, Trivalent	Chromium, Hexavalent	Copper	Trichloro-ethene	Vinyl Chloride
Hydraulic Conductivity (k, cm/sec)[b]	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03
Gradient (i)[c]	0.003	0.003	0.003	0.003	0.003
Porosity (n)[d]	0.3	0.3	0.3	0.3	0.3
Groundwater Velocity (v, ft/yr)[e]	52	52	52	52	52
Retardation Factor[f]	5334	102	118	1.90	1.18
Modeled Retardation[g]	10	10	10	1.90	1.18
Simulation Time (yrs)	35	35	35	35	35
Source Concentration (µg/L)	47	7.38	4.02	0.220	16.5
Source Width (ft)[h]	300	50	225	40	200
Source Thickness (ft)[i]	15	15	15	15	15
Modeled Half-life (days)[j]	NV	NV	NV	1751	832
Results					
Detection Limits (µg/L)	10	10	1	0.2	0.2
Concentration at Duwamish (ug/L)	<10	<10	<1	<0.01	<0.1

Table A1
Fate and Transport Model Inputs and Results Showing no Discharge of IHSs to the Duwamish
Precision Engineering, Inc.
Seattle, Washington

Model Parameters	Benzo(a) anthracene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno(1,2,3-cd)pyrene
Hydraulic Conductivity (k, cm/sec)[b]	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03
Gradient (i)[c]	0.003	0.003	0.003	0.003	0.003	0.003
Porosity (n)[d]	0.3	0.3	0.3	0.3	0.3	0.3
Groundwater Velocity (v, ft/yr)[e]	52	52	52	52	52	52
Retardation Factor[f]	3,433	11,809	11,809	3,822	17,176	33,313
Modeled Retardation[g]	10	10	10	10	10	10
Simulation Time (yrs)	35	35	35	35	35	35
Source Concentration (µg/L)	0.035	ND	ND	0.013	0.038	0.039
Source Width (ft)[h]	300	300	300	300	300	300
Source Thickness (ft)[i]	15	15	15	15	15	15
Modeled Half-life (days)[j]	782	970	3,029	1,371	1,301	1,330
Results						
Detection Limits (µg/L)	0.01	0.01	0.01	0.01	0.01	0.01
Concentration at Duwamish (ug/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Table A2
Development of Site Specific Groundwater Clean-up Levels
Precision Engineering, Inc.
Seattle, Washington

Model Parameters	Chromium, Trivalent	Chromium, Hexavalent	Copper	Trichloro-ethene	Vinyl Chloride
Hydraulic Conductivity (k, cm/sec)[b]	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03
Gradient (i)[c]	0.003	0.003	0.003	0.003	0.003
Porosity (n)[d]	0.3	0.3	0.3	0.3	0.3
Groundwater Velocity (v, ft/yr)[e]	52	52	52	52	52
Retardation Factor[f]	5334	102	118	1.9	1.18
Modeled Retardation[g]	10	10	10	1.9	1.18
Simulation Time (yrs)	35	35	35	35	35
Source Width (ft)[h]	300	50	225	40	200
Source Thickness (ft)[i]	15	15	15	15	15
Half-life (days)[j]	NV	NV	NV	876	416
Concentration of groundwater discharge to surface water = Surface Water Criteria value (µg/L)[k]	74	11	3.1	1.5	0.025
Results (Source Area Concentration)					
Type I	3,600,000,000,000	160	22	188	18.70
Type II	NC	NC	NC	128,800	2,640
Type II with Half-life x factor of 2 for TCE and VC (µg/L)	NC	NC	NC	1,630	52

Table A2
Development of Site Specific Groundwater Clean-up Levels
Precision Engineering, Inc.
Seattle, Washington

Model Parameters	Benzo(a) anthracene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno(1,2,3-cd)pyrene
Hydraulic Conductivity (k, cm/sec)[b]	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03
Gradient (i)[c]	0.003	0.003	0.003	0.003	0.003	0.003
Porosity (n)[d]	0.3	0.3	0.3	0.3	0.3	0.3
Groundwater Velocity (v, ft/yr)[e]	52	52	52	52	52	52
Retardation Factor[f]	3,433	11,809	11,809	3,822	17,176	33,313
Modeled Retardation[g]	10	10	10	10	10	10
Simulation Time (yrs)	35	35	35	35	35	35
Source Width (ft)[h]	300	300	300	300	300	300
Source Thickness (ft)[i]	15	15	15	15	15	15
Half-life (days)[j]	782	970	3,029	1,371	1,301	1,330
Concentration of groundwater discharge to surface water = Surface Water Criteria value (µg/L)[k]	0.0038	0.0038	0.0038	0.0038	0.0038	0.0038
Results (Source Area Concentration)						
Type I	NC	NC	NC	NC	NC	NC
Type II	200,000,000	165,000,000	55,000,000	130,000,000	135,000,000	132,000,000
Type II with Half-life x factor of 2 for TCE and VC (µg/L)	NC	NC	NC	NC	NC	NC

Table A3
Applicable Surface-Water Criteria
Precision Engineering, Inc.
Seattle, Washington

Surface-Water Criteria	Hexavalent Chromium (mg/L)	Dissolved Trivalent Chromium[a] (mg/L)	Copper (µg/L)	Trichloro-ethene (µg/L)	Vinyl chloride (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(b) fluoranthene (µg/L)
MTCA Method B Surface Water CULs, carcinogen or non-carcinogen	0.490	240	2700	**1.5**	3.7	0.0300	0.0300
MTCA Method C Surface Water CULs, carcinogen or non-carcinogen	1.20	610	6,700	37	92	0.74	0.74
AWQC—Human Health	NR	NR	1,300	2.5	**0.025**	**0.0038**	**0.0038**
Surface Water ARAR—Aquatic Life—Freshwater/Acute	0.15	1.8	4.6	NR	NR	NR	NR
AWQC—Aquatic Life—Chronic	**0.011**	**0.074**	**3.1**	NR	NR	NR	NR

*Lowest CUL bolded

Table A3
Applicable Surface-Water Criteria
Precision Engineering, Inc.
Seattle, Washington

Surface-Water Criteria	Benzo(k) fluoranthene (µg/L)	Benzo(b+k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenzo(a,h) anthracene (µg/L)	Indeno(1,2,3-cd) pyrene (µg/L)	Diesel-Range Organics (mg/L)	Oil-Range Organics (mg/L)
MTCA Method B Surface Water CULs, carcinogen or non-carcinogen	0.0300	0.0300	0.0300	0.0300	0.0300	NV	NV
MTCA Method C Surface Water CULs, carcinogen or non-carcinogen	0.74	0.74	0.74	0.74	0.74	NV	NV
AWQC—Human Health	**0.0038**	NR	**0.0038**	**0.0038**	**0.0038**	NV	NV
Surface Water ARAR—Aquatic Life—Freshwater/Acute	NR	NR	NR	NR	NR	NV	NV
AWQC—Aquatic Life—Chronic	NR	NR	NR	NR	NR	NV	NV

*Lowest CUL bolded

Table A4
Risk Screening
Groundwater Protection of Surface Water
Precision Engineering, Inc.
Seattle, Washington

Location	Date	Dissolved Chromium (Trivalent)	Chromium (Hexavalent)	Copper	Selenium	Trichloro-ethene	Vinyl chloride	Diesel-Range Organics	Oil-Range Organics
		mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
Site-Specific Groundwater CUL for the Protection of Surface Water		2,800,000,000	0.15	22	25	1,630	52	NV	NV
Monitoring Well Groundwater Data									
MW1	6/16/2005	NC	**0.269**	NA	NA	1 U	1 U	NA	NA
	12/27/2005	NC	0.00625 U	1.01	1.00 U	0.200 U	0.200 U	0.248 U	0.495 U
	04/18/2006	NC	0.02 U	2.0 U	2.0 U	1 U	1 U	0.26 U	0.52 U
MW2	6/17/2005	NC	0.01 U	NA	NA	1 U	1 U	0.438	0.512
	12/28/2005	0.00879	0.00625 U	1.17	6.28	0.200 U	0.200 U	1.19	1.04
	04/19/2006	0.021	0.02 U	2.5	10	1 U	1 U	0.41	0.58 U
MW3	6/7/2005	NC	0.01 U	NA	NA	1 U	1 U	NA	NA
	12/29/2005	0.00215	0.00625 U	1.00 U	1.00 U	0.200 U	0.200 U	0.312	0.505 U
	04/17/2006	0.0078	0.02 U	2.0 U	2.0 U	1 U	1 U	0.28 U	0.57 U
MW4	6/9/2005	NC	0.01 U	NA	NA	1 U	1 U	NA	NA
	6/9/2005	NC	0.01 U	NA	NA	1 U	1 U	NA	NA
	12/27/2005	NC	0.00625 U	1.00 U	1.00 U	0.200 U	0.200 U	0.248 U	0.495 U
	04/18/2006	NC	0.023	2.0 U	2.0 U	1 U	1 U	0.27 U	0.54 U
MW5	12/28/2005	47	**450**	3.67	1000 U	22.1	0.200 U	0.831	0.495 U
	04/19/2006	NC	**350**	2.0 U	2.0 U	7.9	0.14 U	0.26 U	0.51 U
MW6	12/29/2005	0.0187	0.00625 U	4.02	12.3	1 U	1 U	2.64	1.32
	04/19/2006	0.047	0.02 U	5.1	19	1 U	1 U	0.76	1.2
MW7	12/28/2005	0.0106	0.00738	2.12	2.77	0.200 U	0.200 U	0.248 U	0.495 U
	04/18/2006	0.013	0.02U	2.4	5	1 U	1 U	0.26 U	0.51 U
	04/18/2006	NC	0.02 U	NA	NA	1 U	1 U	0.26 U	0.51 U
MW8	12/28/2005	0.00755	0.00625 U	1.00 U	4.11	0.200 U	0.560	1.71	1.00
	12/28/2005	0.00849	0.02 U	1.03	4.27	0.200 U	0.400	1.79	1.21
	04/18/2006	0.021	0.02 UJ	2.0 U	3.6	1 U	0.80 J	0.45	0.58 U

Table A4
Risk Screening
Groundwater Protection of Surface Water
Precision Engineering, Inc.
Seattle, Washington

Location	Date	Dissolved Chromium (Trivalent)	Chromium (Hexavalent)	Copper	Selenium	Trichloro-ethene	Vinyl chloride	Diesel-Range Organics	Oil-Range Organics
		mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
Site-Specific Groundwater CUL for the Protection of Surface Water		2,800,000,000	0.15	22	25	1,630	52	NV	NV
Reconnaissance Groundwater Data									
GP2	6/9/2005	32.38	**4.72**	NA	NA	5 U	5 U	NA	NA
GP4	6/16/2005	31	**236**	NA	NA	1 U	1 U	0.325	0.478 U
GP5	6/16/2005	NC	0.0897	NA	NA	1 U	1 U	NA	NA
GP6	6/16/2005	43	**300**	NA	NA	1,130	20 U	NA	NA
GP7	6/16/2005	NC	0.101	NA	NA	1 U	1 U	NA	NA
GP8	6/16/2005	61	**294**	NA	NA	16.8	1 U	0.814	0.479 U
GP-13	12/14/2005	NC	NA	NA	NA	0.220	16.5	NA	NA
GP-15	12/14/2005	NC	NA	NA	NA	0.2 U	0.2 U	NA	NA

Table A4
Risk Screening
Groundwater Protection of Surface Water
Precision Engineering, Inc.
Seattle, Washington

Location	Date	Benzo(a) anthracene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Benzo(b+k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno(1,2,3-cd) pyrene
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Site-Specific Groundwater CUL for the Protection of Surface Water		145,000,000	108,000,000	38,000,000	NV	95,000,000	100,000,000	97,000,000
Monitoring Well Groundwater Data								
MW1	6/16/2005	NA	NA	NA	NA	NA	NA	NA
	12/27/2005	0.107	0.104	0.108	NA	0.132	0.0114 U	0.0114 U
	04/18/2006	0.029 J	NA	NA	0.030 U	0.014 J	0.095 U	0.034 J
MW2	6/17/2005	0.192 U	NA	NA	0.962 U	0.192 U	0.192 U	0.192 U
	12/28/2005	0.00990 U	0.00990 U	0.00990 U	NA	0.00990 U	0.00990 U	0.00990 U
	04/19/2006	0.031 J	NA	NA	0.034 U	0.11 U	0.11 U	0.11 U
MW3	6/7/2005	NA	NA	NA	NA	NA	NA	NA
	12/29/2005	0.0100 U	0.0100 U	0.0100 U	NA	0.0100 U	0.0100 U	0.0100 U
	04/17/2006	0.11 U	NA	NA	0.033 U	0.11 U	0.11 U	0.11 U
MW4	6/9/2005	NA	NA	NA	NA	NA	NA	NA
	6/9/2005	NA	NA	NA	NA	NA	NA	NA
	12/27/2005	0.0100 U	0.0100 U	0.0100 U	NA	0.0100 U	0.0100 U	0.0100 U
	04/18/2006	0.10 U	NA	NA	0.032 U	0.10 U	0.10 U	0.10 U
MW5	12/28/2005	0.00990 U	0.00990 U	0.00990 U	NA	0.00990 U	0.00990 U	0.00990 U
	04/19/2006	0.095 U	NA	NA	0.030 U	0.095 U	0.095 U	0.095 U
MW6	12/29/2005	0.00990 U	0.00990 U	0.00990 U	NA	0.00990 U	0.00990 U	0.00990 U
	04/19/2006	0.10 U	NA	NA	0.032 U	0.10 U	0.10 U	0.10 U
MW7	12/28/2005	0.00990 U	0.00990 U	0.00990 U	NA	0.00990 U	0.00990 U	0.00990 U
	04/18/2006	0.035 J	NA	NA	0.031 U	0.013 J	0.038 J	0.039 J
	04/18/2006	0.10 U	NA	NA	0.031 U	0.10 U	0.10 U	0.10 U
MW8	12/28/2005	0.0100 U	0.0100 U	0.0100 U	NA	0.0100 U	0.0100 U	0.0100 U
	12/28/2005	0.0990 U	0.00990 U	0.00990 U	NA	0.00990 U	0.00990 U	0.00990 U
	04/18/2006	0.13 U	NA	NA	0.039 U	0.13 U	0.13U	0.13 U

Table A4
Risk Screening
Groundwater Protection of Surface Water
Precision Engineering, Inc.
Seattle, Washington

Location	Date	Benzo(a) anthracene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Benzo(b+k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno(1,2,3-cd) pyrene
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Site-Specific Groundwater CUL for the Protection of Surface Water		145,000,000	108,000,000	38,000,000	NV	95,000,000	100,000,000	97,000,000
Reconnaissance Groundwater Data								
GP2	6/9/2005	NA	NA	NA	NA	NA	NA	NA
GP4	6/16/2005	0.191 U	0.954 U	NA	NA	0.191 U	0.191 U	0.191 U
GP5	6/16/2005	NA	NA	NA	NA	NA	NA	NA
GP6	6/16/2005	NA	NA	NA	NA	NA	NA	NA
GP7	6/16/2005	NA	NA	NA	NA	NA	NA	NA
GP8	6/16/2005	0.194 U	0.97 U	NA	NA	0.194 U	0.194 U	0.194 U
GP-13	12/14/2005	NA	NA	NA	NA	NA	NA	NA
GP-15	12/14/2005	NA	NA	NA	NA	NA	NA	NA

FIGURES

Figure A1
Fate and Transport Modeling
Trivalent Chromium
Precision Engineering, Inc.
Seattle, Washington

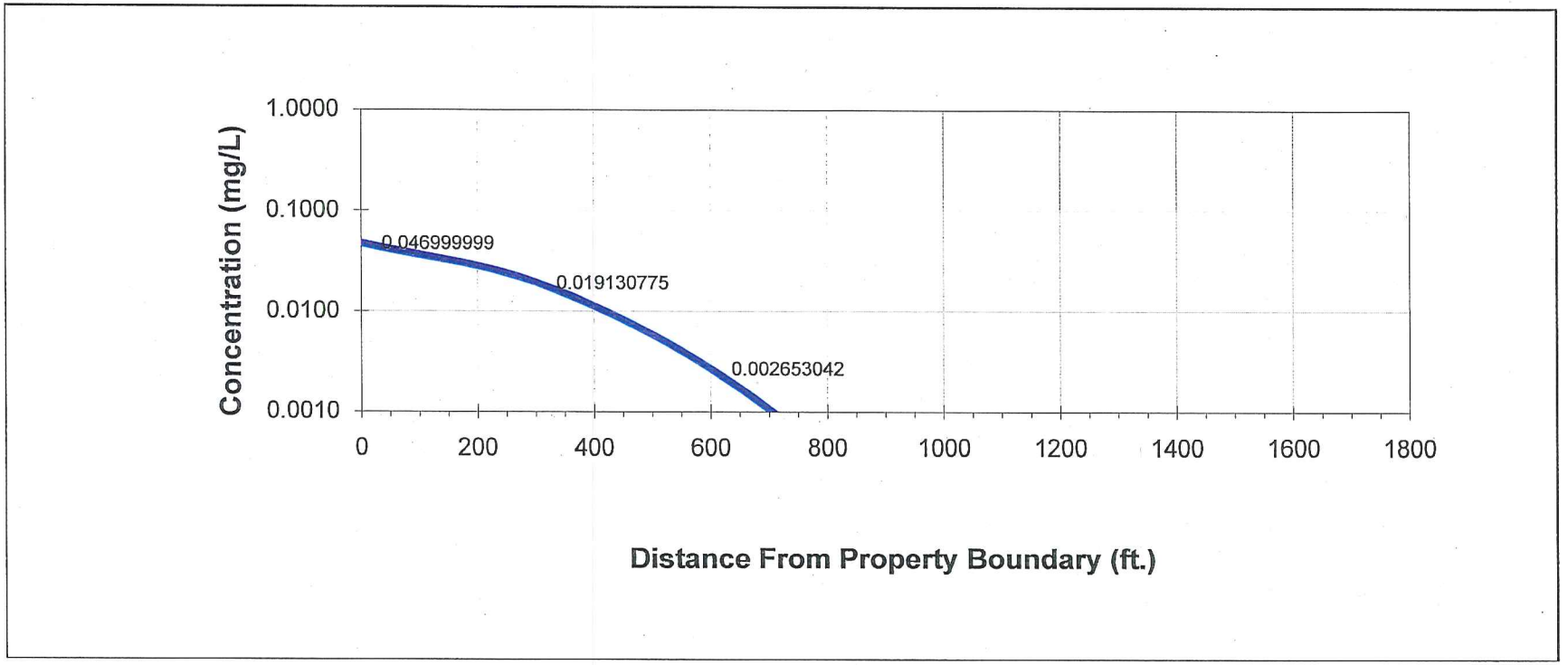


Figure A2
Fate and Transport Modeling
Hexavalent Chromium
Precision Engineering, Inc.
Seattle, Washington

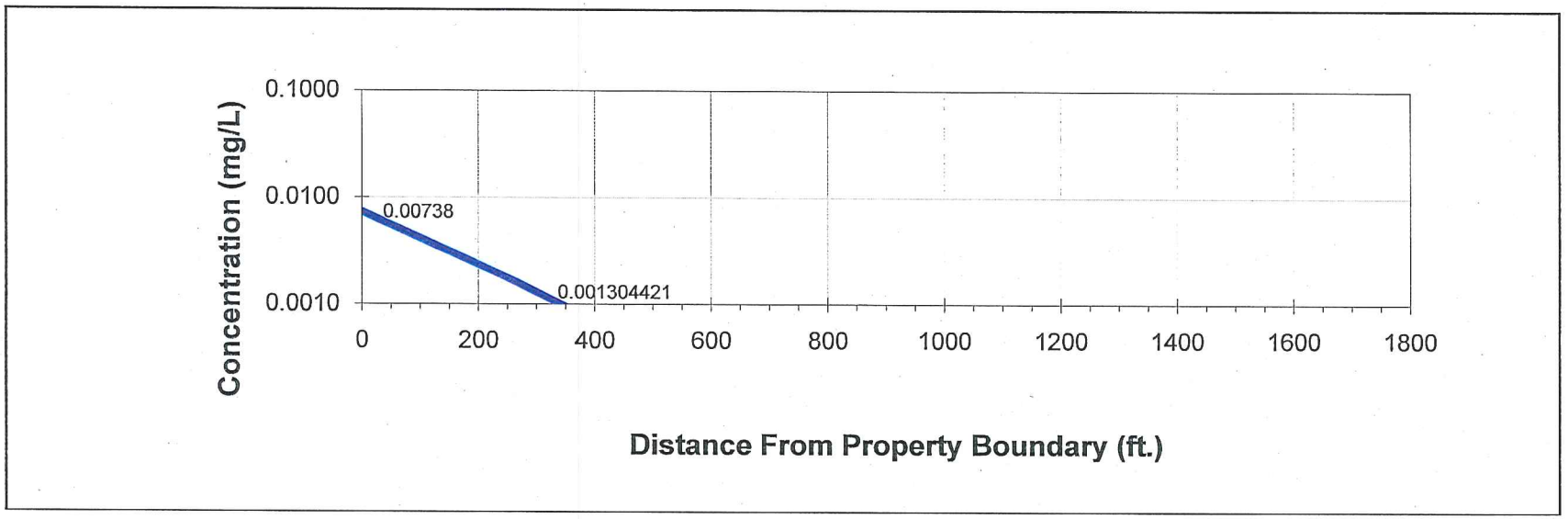


Figure A3
Fate and Transport Modeling
Copper
Precision Engineering, Inc.
Seattle, Washington

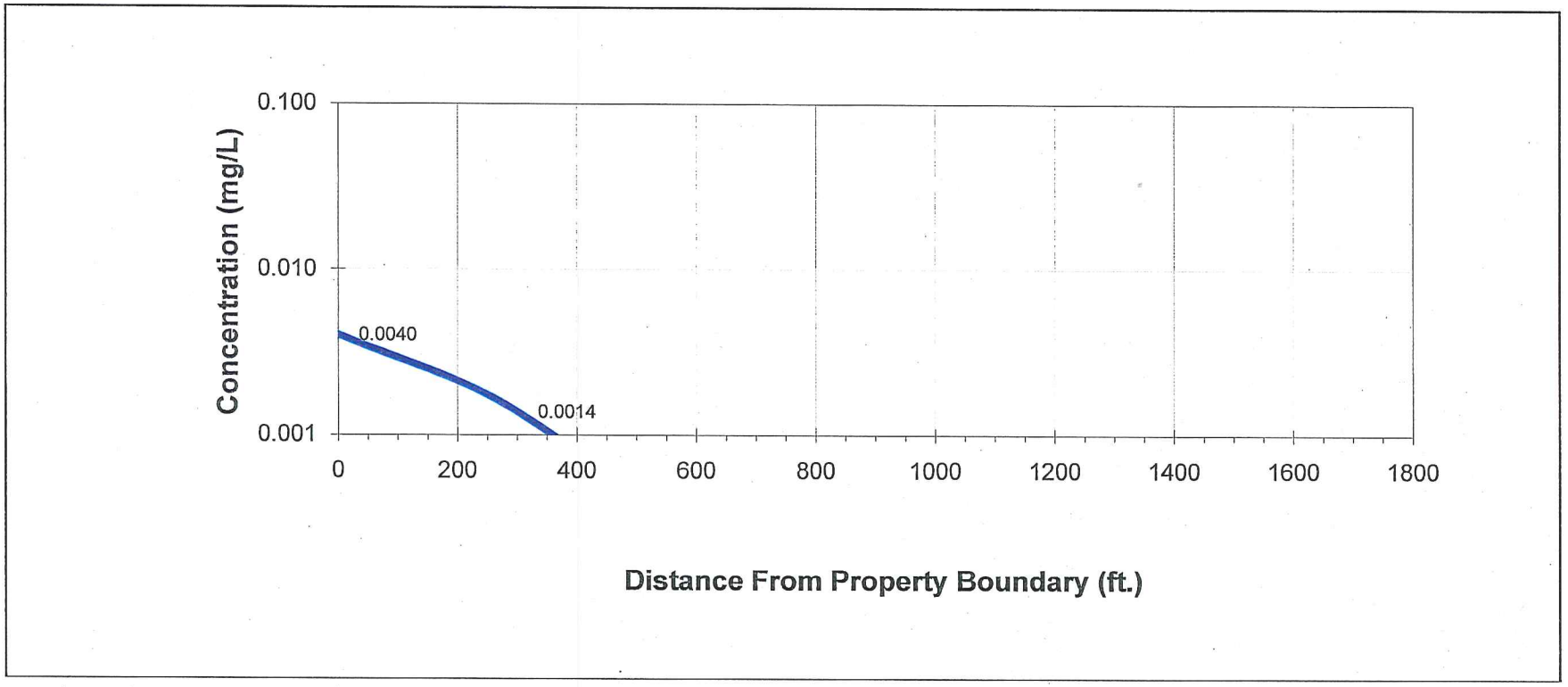


Figure A4
Fate and Transport Modeling
Trichloroethene
Precision Engineering, Inc.
Seattle, Washington

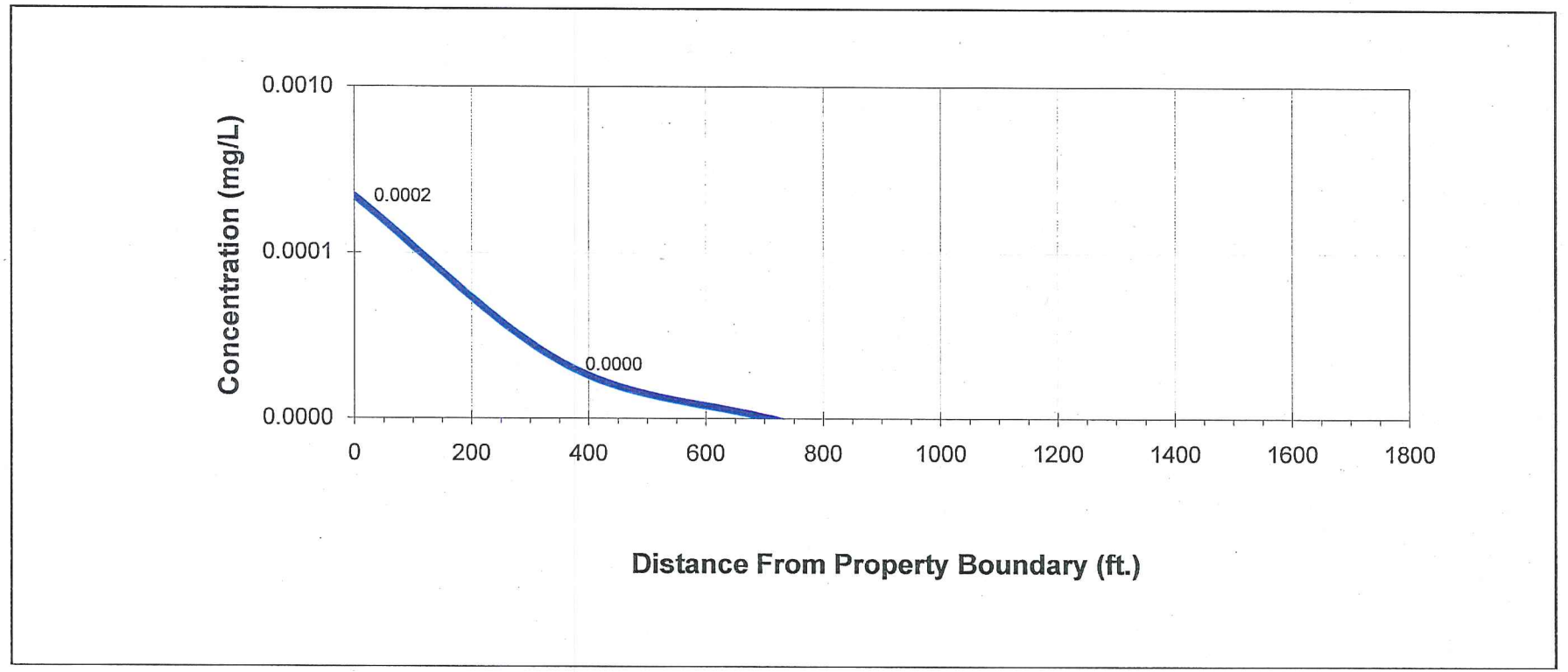


Figure A5
Fate and Transport Modeling
Vinyl Chloride
Precision Engineering, Inc.
Seattle, Washington

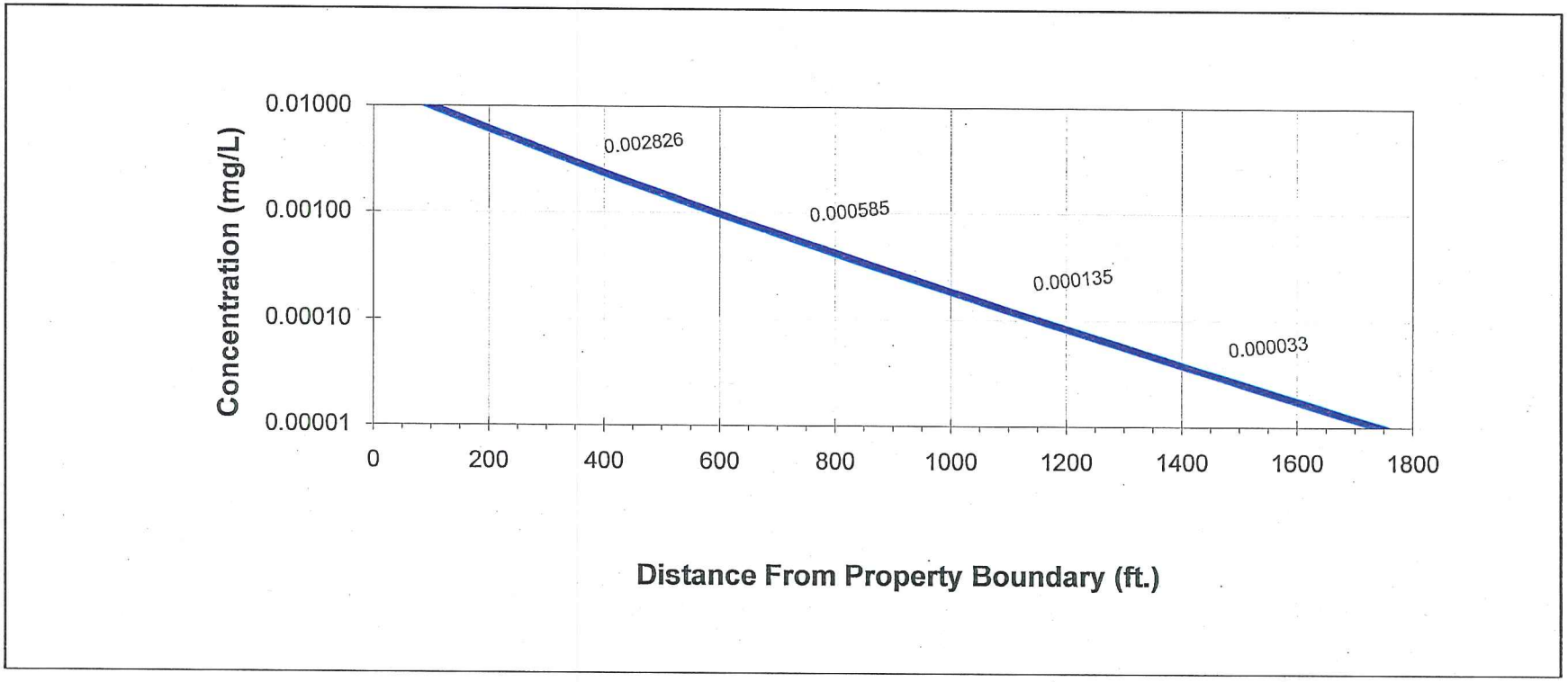


Figure A6
Fate and Transport Modeling
Benzo(a)anthracene
Precision Engineering, Inc.
Seattle, Washington

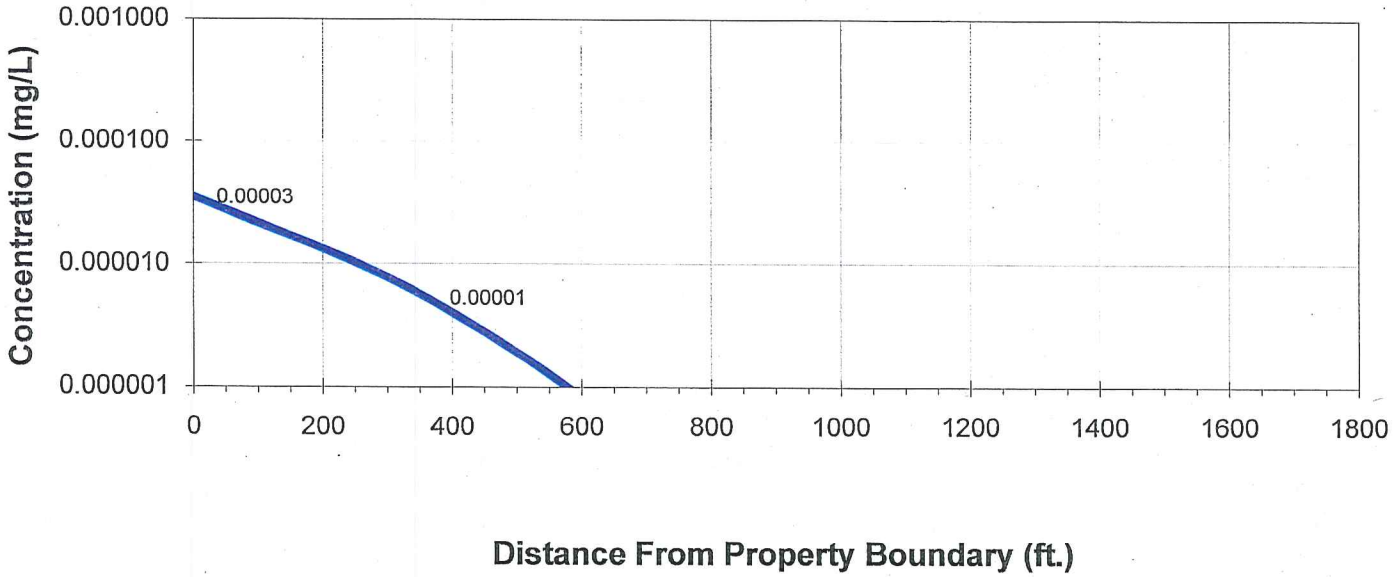


Figure A7
Fate and Transport Modeling
Chrysene
Precision Engineering, Inc.
Seattle, Washington

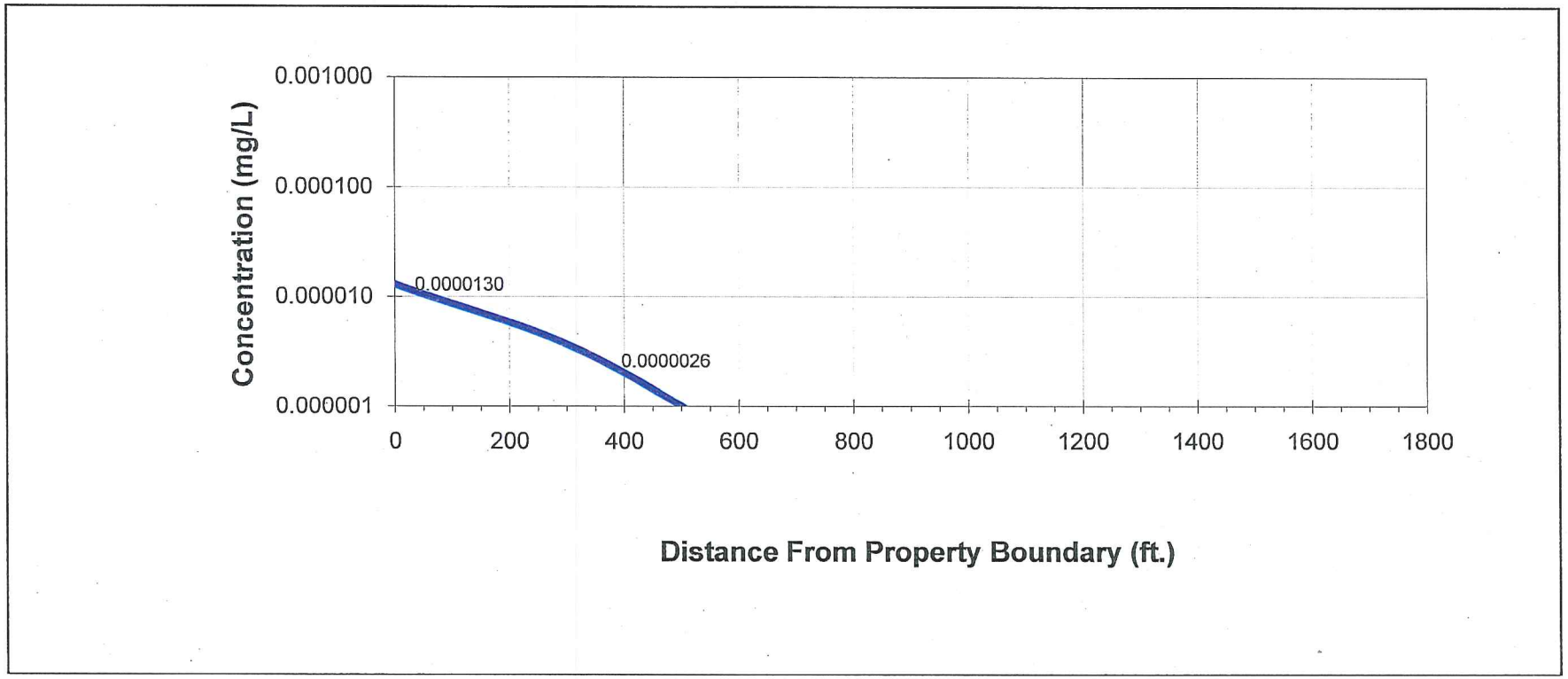


Figure A8
Fate and Transport Modeling
Dibenzo(a,h)anthracene
Precision Engineering, Inc.
Seattle, Washington

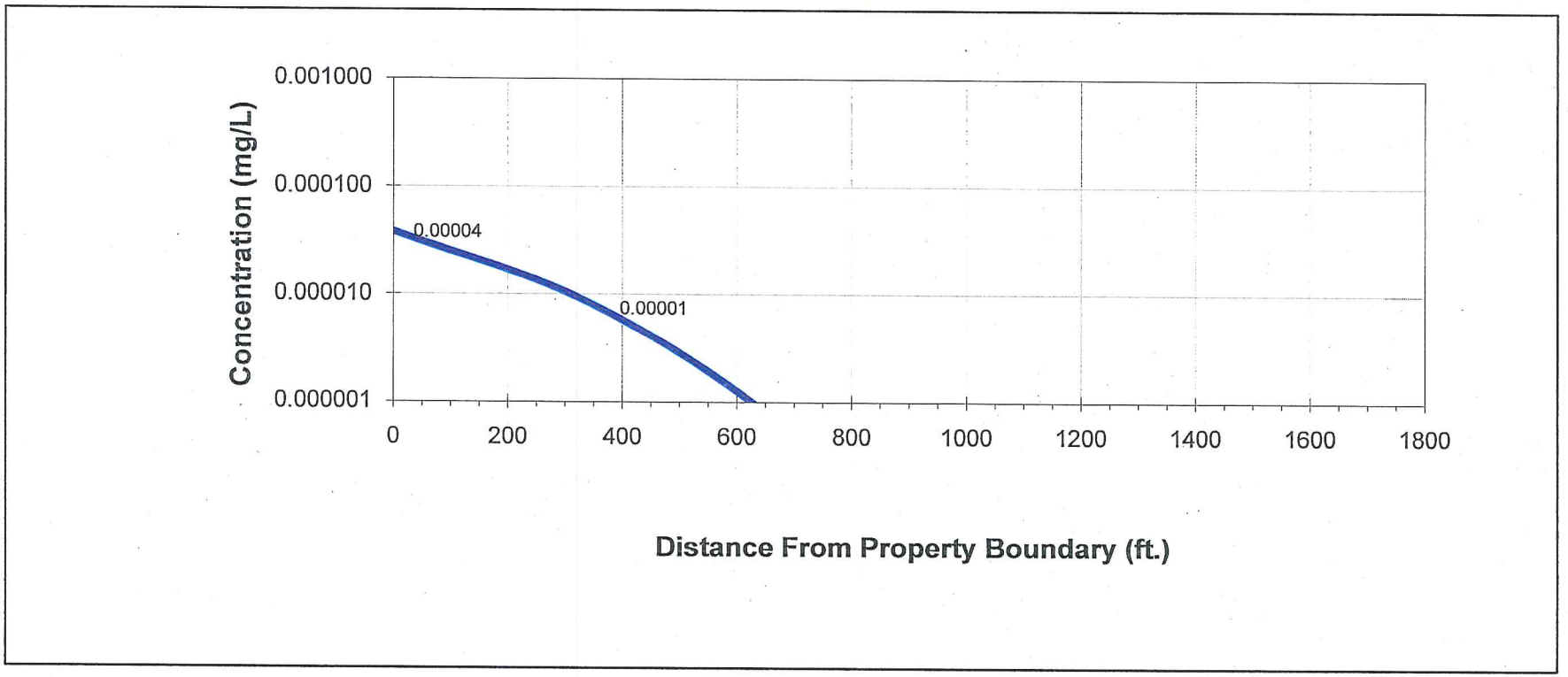


Figure A9
Fate and Transport Modeling
Indeno(1,2,3,-cd)pyrene
Precision Engineering, Inc.
Seattle, Washington

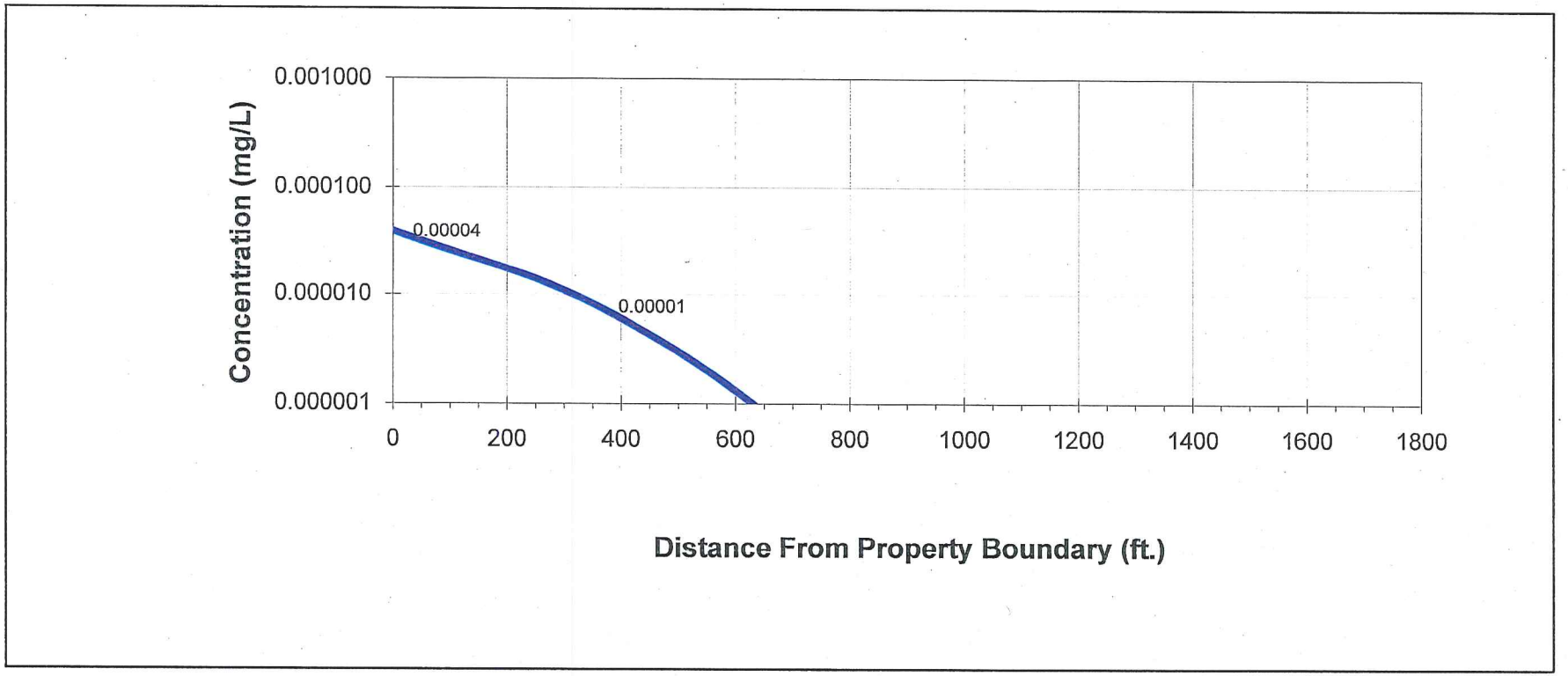


Figure A10
Fate and Transport Modeling for Site Specific CULs
Trivalent Chromium
Precision Engineering, Inc.
Seattle, Washington

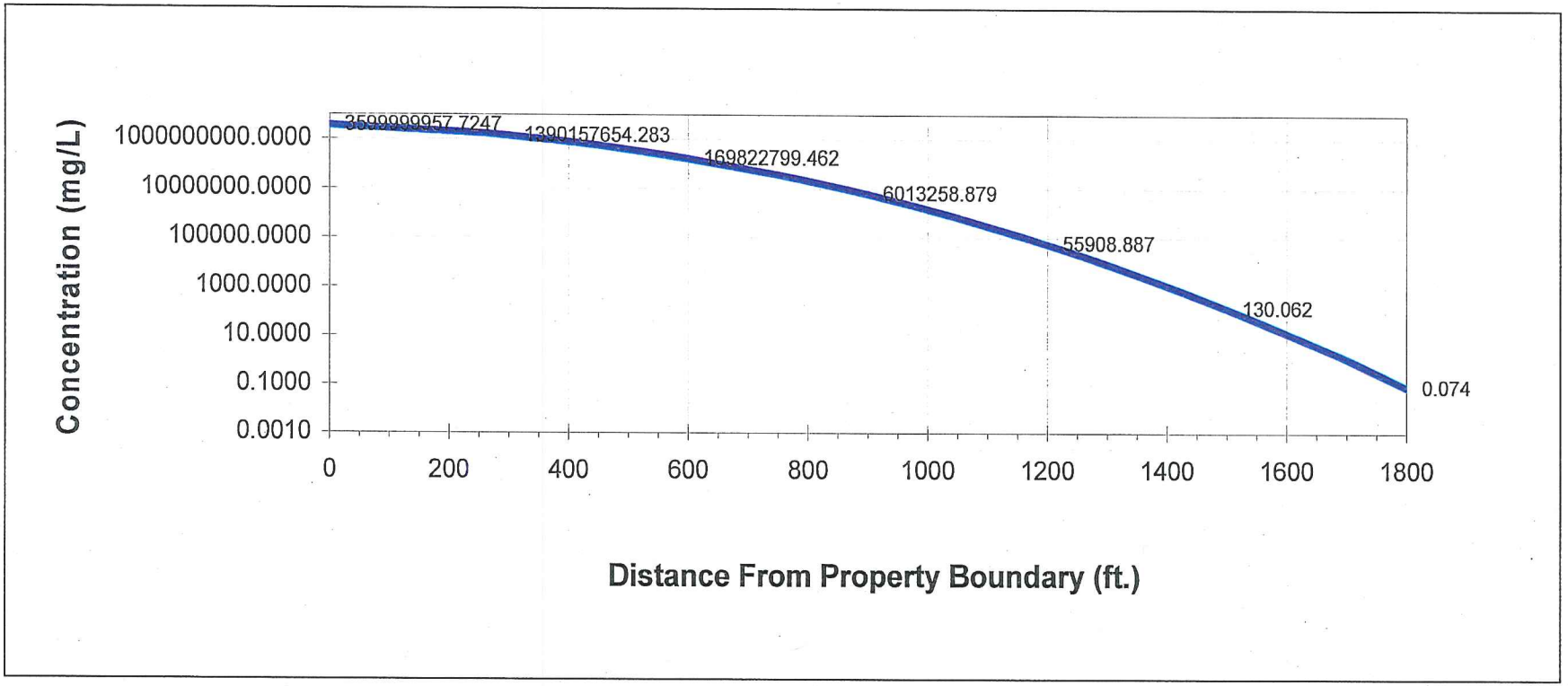


Figure A11
Fate and Transport Modeling for Site Specific CULs
Hexavalent Chromium
Precision Engineering, Inc.
Seattle, Washington

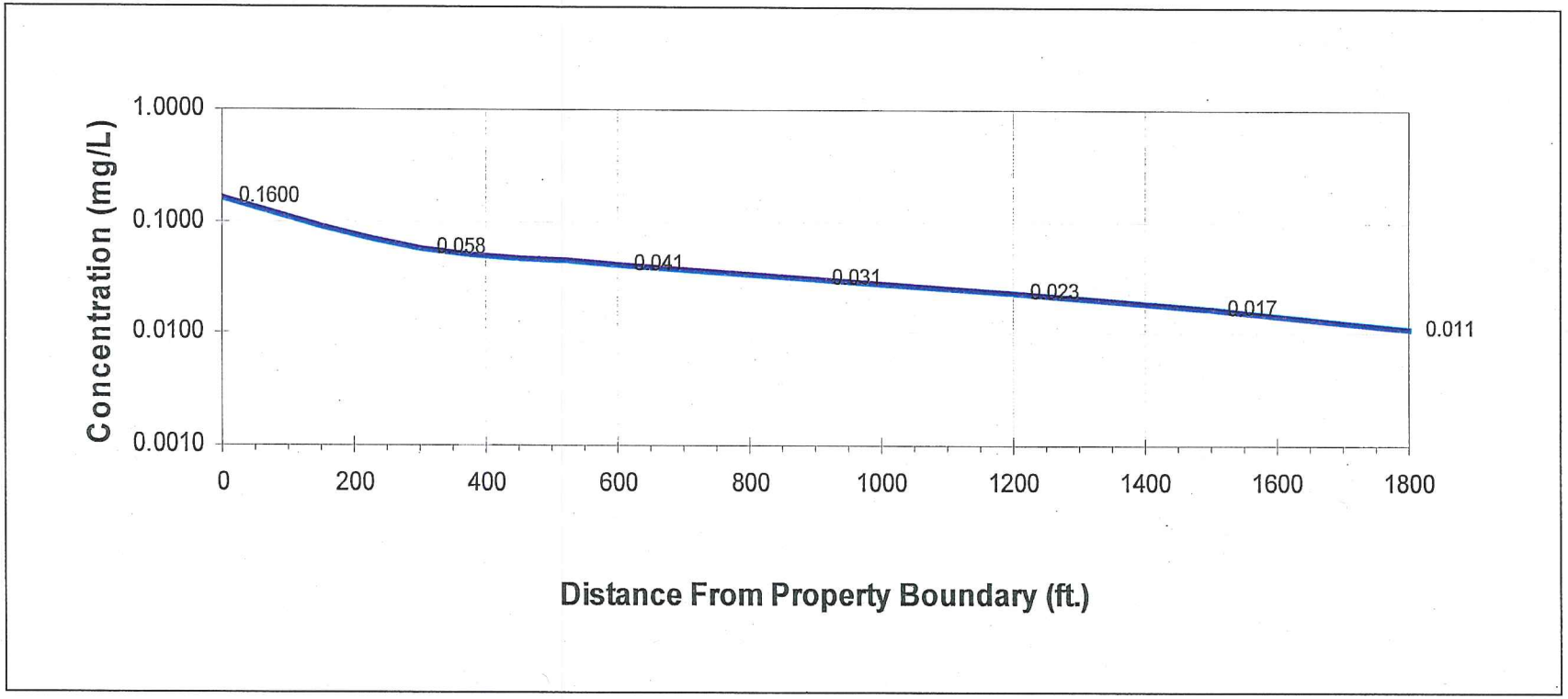


Figure A12
Fate and Transport Modeling for Site Specific CULs
Copper
Precision Engineering, Inc.
Seattle, Washington

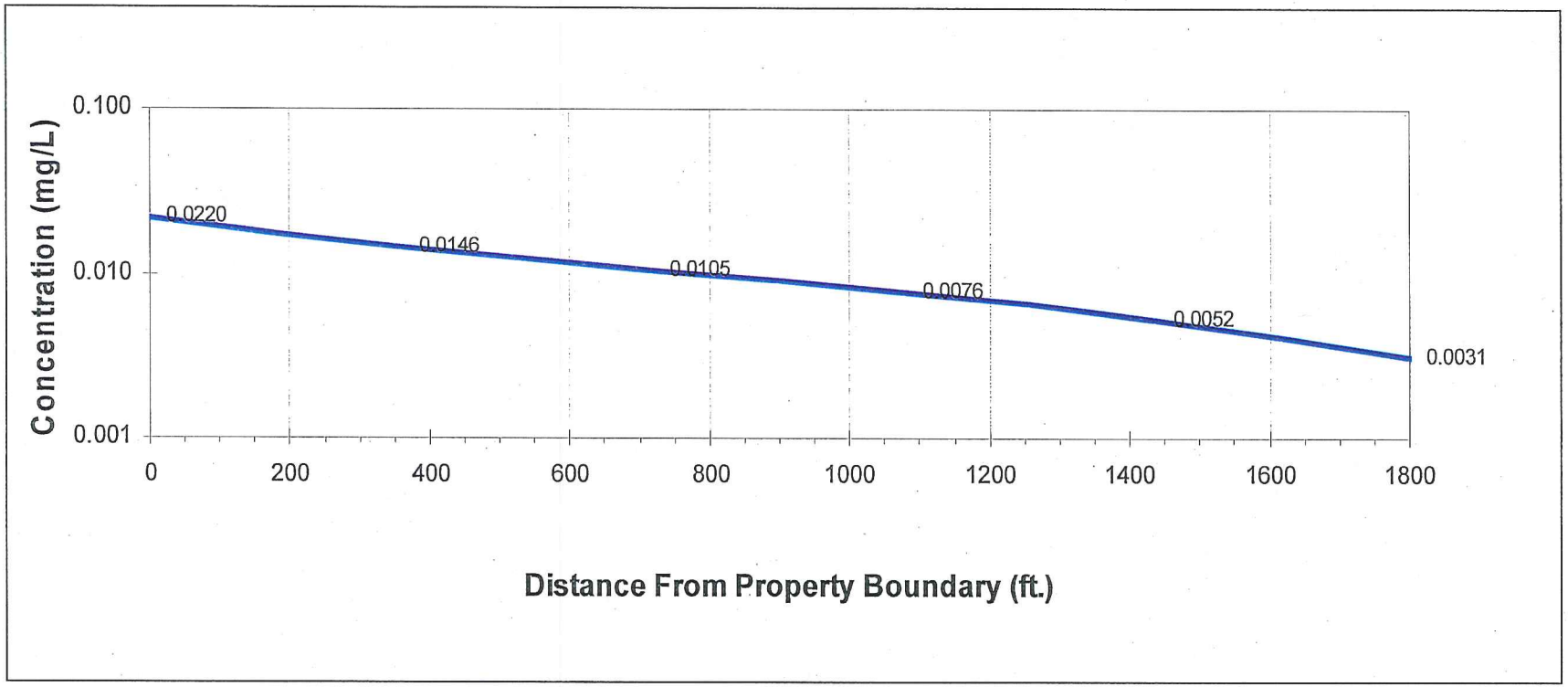


Figure A13
Fate and Transport Modeling for Site Specific CULs
TCE
Precision Engineering, Inc.
Seattle, Washington

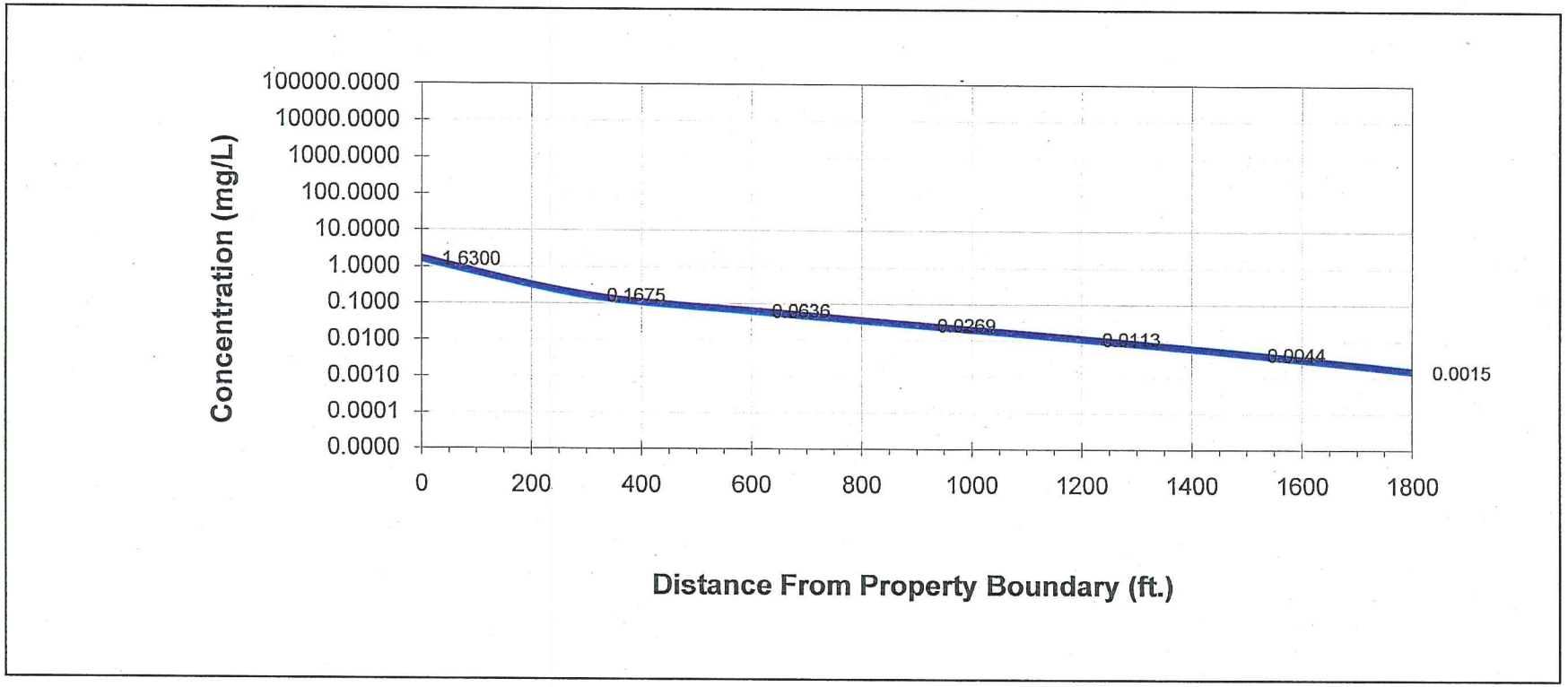


Figure A14
Fate and Transport Modeling for Site Specific CULs
Vinyl Chloride
Precision Engineering, Inc.
Seattle, Washington

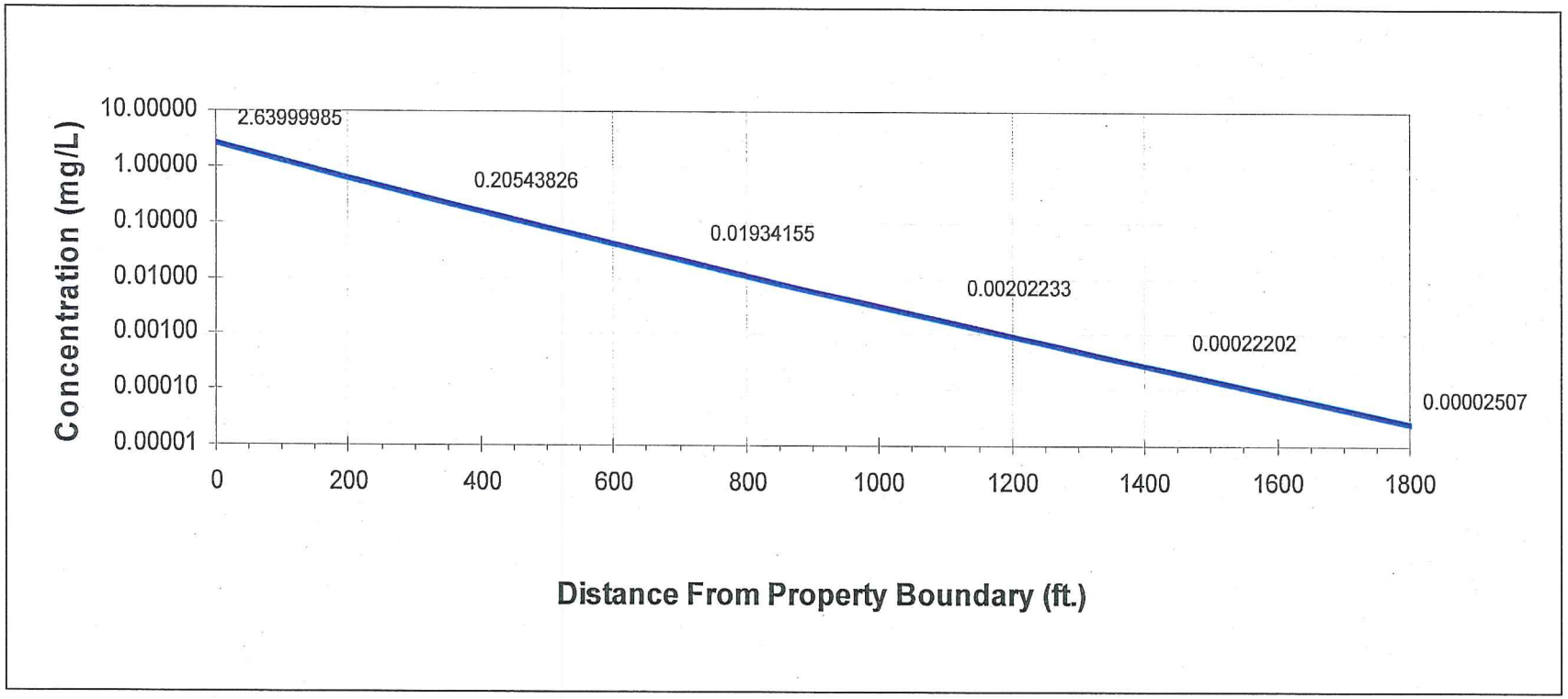


Figure A15
Fate and Transport Modeling for Site Specific CULs
Benzo(a)anthracene
Precision Engineering, Inc.
Seattle, Washington

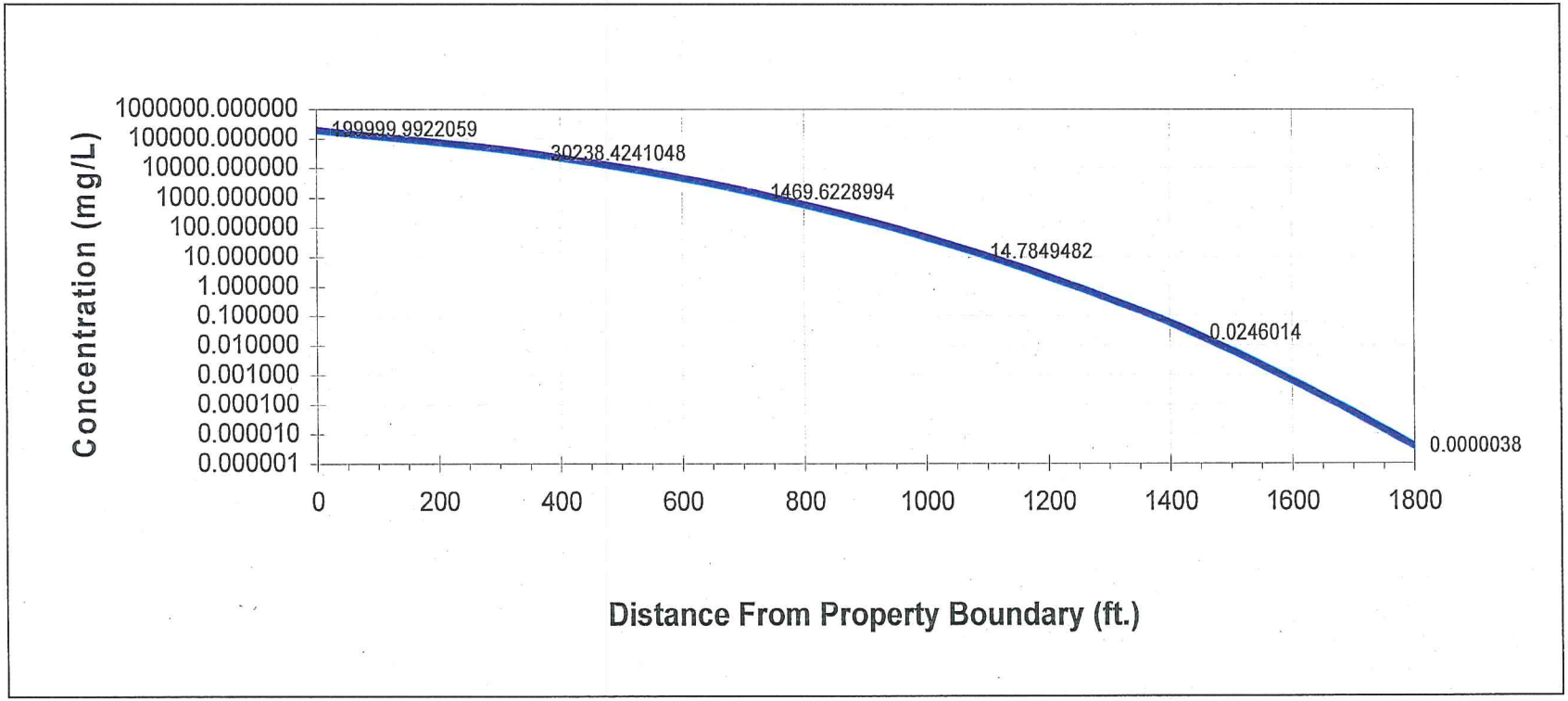


Figure A16
Fate and Transport Modeling for Site Specific CULs
Benzo(b)fluoranthene
Precision Engineering, Inc.
Seattle, Washington

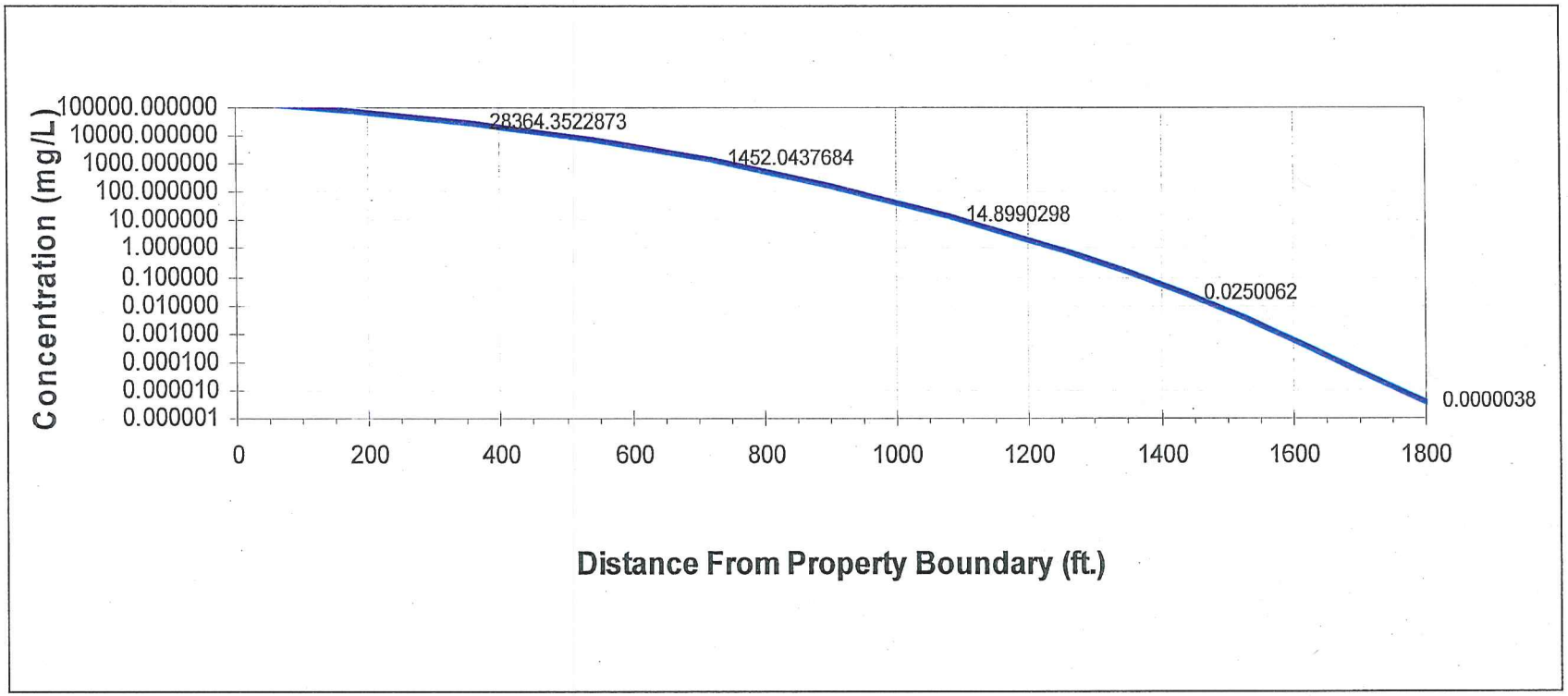


Figure A17
Fate and Transport Modeling for Site Specific CULs
Benzo(k)fluoranthene
Precision Engineering, Inc.
Seattle, Washington

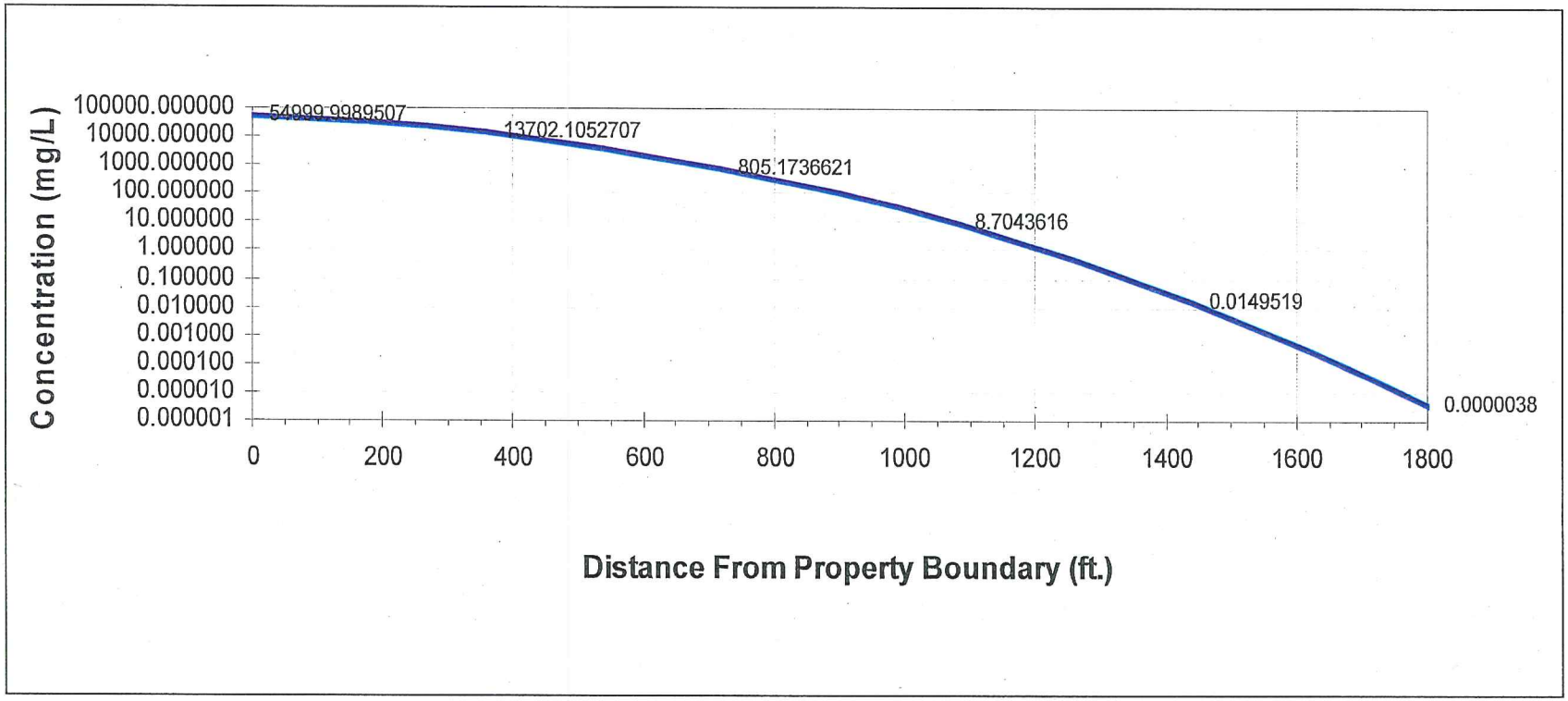


Figure A18
Fate and Transport Modeling for Site Specific CULs
Chrysene
Precision Engineering, Inc.
Seattle, Washington

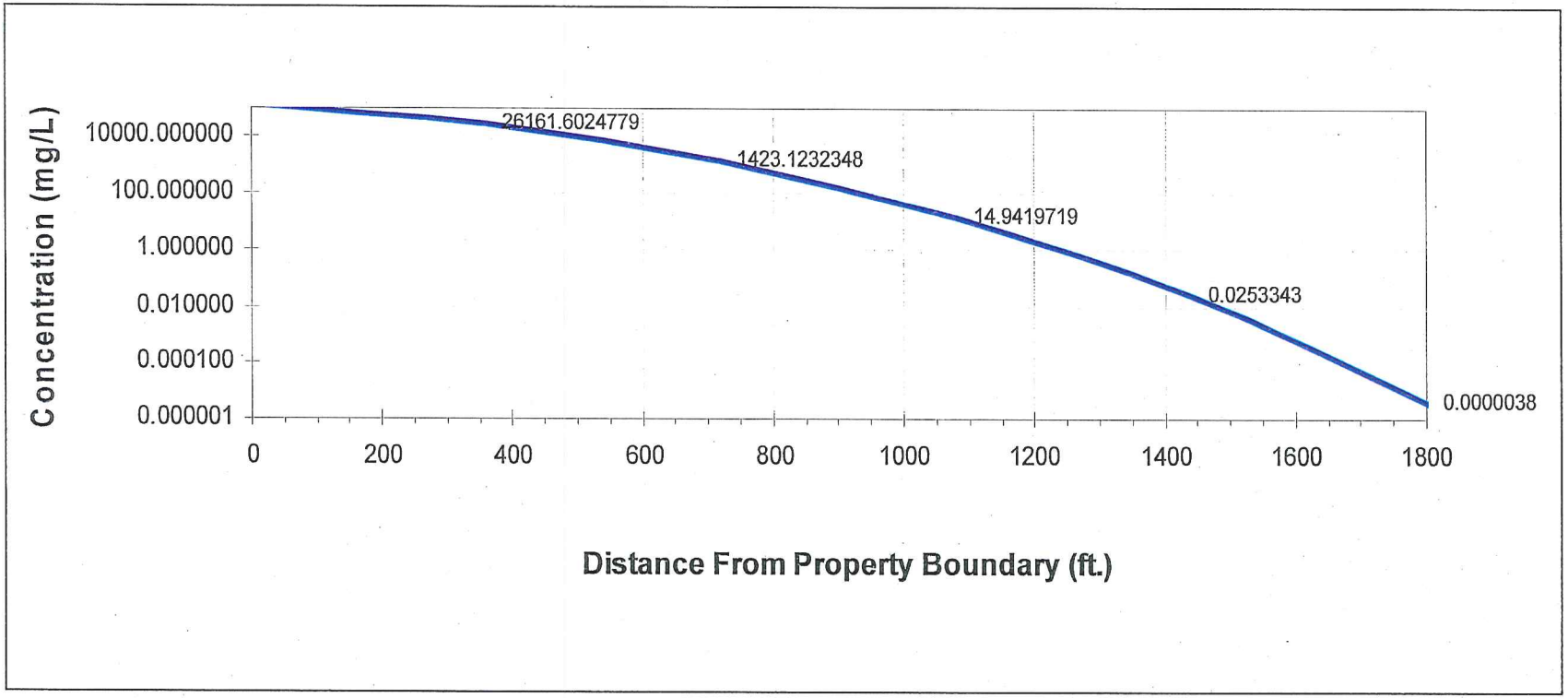


Figure A19
Fate and Transport Modeling for Site Specific CULs
Dibenzo(a,h)anthracene
Precision Engineering, Inc.
Seattle, Washington

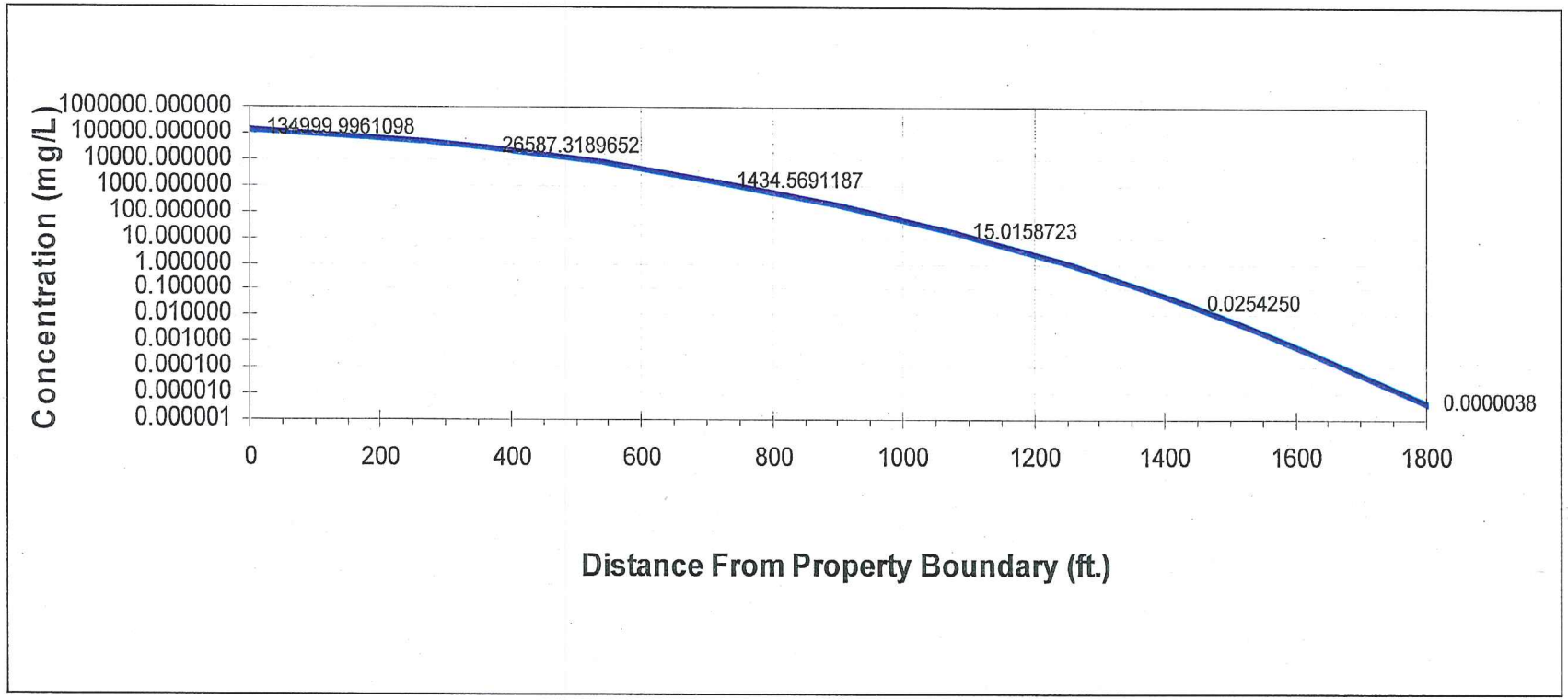
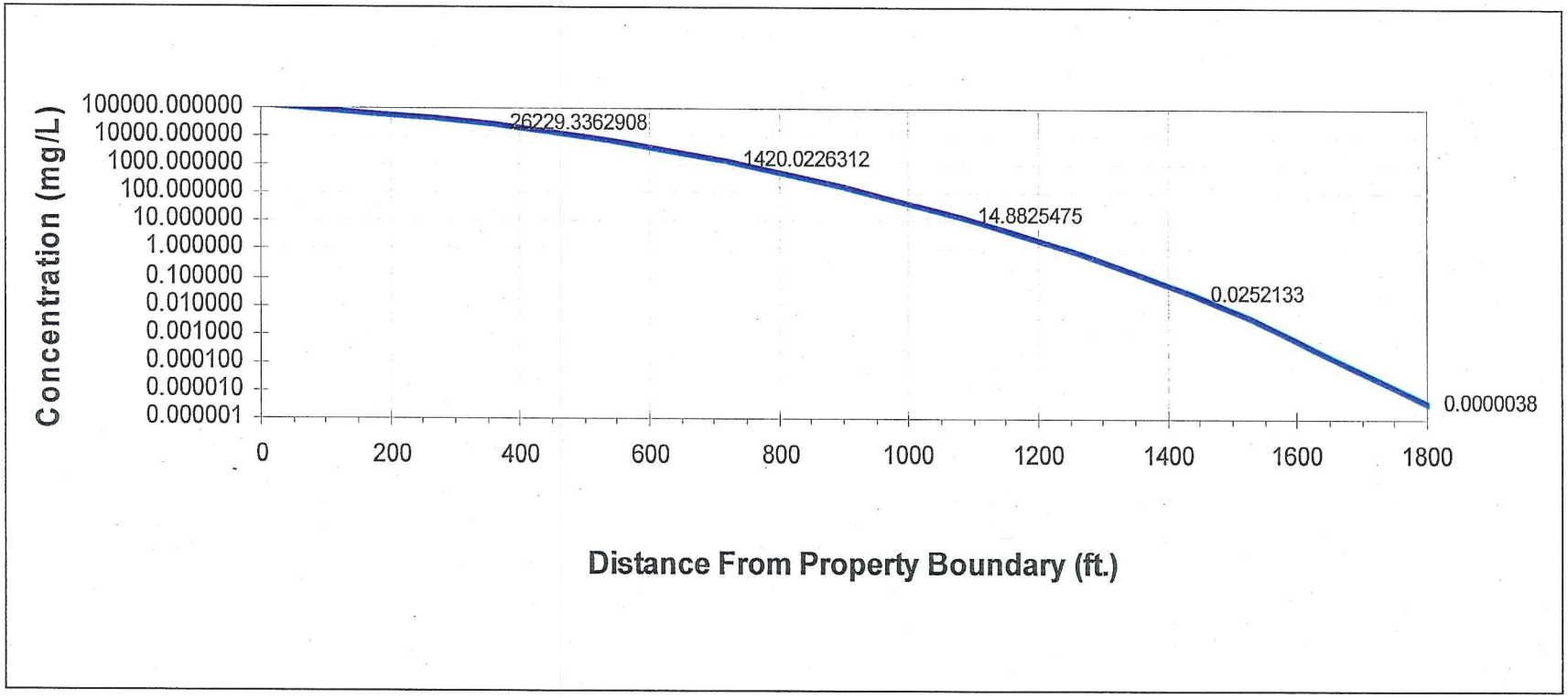


Figure A20
Fate and Transport Modeling for Site Specific CULs
Indeno(1,2,3-cd)pyrene
Precision Engineering, Inc.
Seattle, Washington



Appendix N

Terrestrial Ecological Evaluation Table and Form

Table N-1
Simplified Terrestrial Ecological Evaluation Scoresheet
Precision Engineering, Inc.
Seattle, Washington

Line Number	Scoring Parameters	Score	Rationale
1	Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre). From the table below, find the number of points corresponding to the area and enter this number in the field to the right. Area (acres) — Points 0.25 or less — 4 0.5 — 5 1.0 — 6 1.5 — 7 2.0 — 8 2.5 — 9 3.0 — 10 3.5 — 11 4.0 or more — 12	7	The approximately 3.5-acre Property associated with the Site is entirely developed (i.e., paved and/or covered by buildings). Approximately 1.5 acres of grassy land is present along the eastern, southern, and western borders of the Site.
2	Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1.	3	The Property is zoned for industrial use and is currently an active industrial supply store.
3	Enter a score in the box to the right for the habitat quality of the site, using the following rating system: High=1, Intermediate=2, Low=3.	3	The Site is entirely paved and/or covered by buildings and is located in industrial south Seattle, near the Highway 99 on-ramp.
4	Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.	1	It is possible the ditch could be considered a “habitat island.” Therefore, an ecologically conservative score of 1 is used.
5	Are any of the following soil contaminants present: chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	4	None of the listed soil contaminants have been detected at the Site.
6	Add the numbers in the boxes on lines 2 through 5 and enter this number to the right. If this number is larger than the number in the box on line 1, the simplified TEE may be ended under WAC 173-340-7292(2) (a) (ii).	11	11 is larger than 7, so the TEE process is ended.

Terrestrial Ecological Evaluation Form

Washington State Department of Ecology – Toxics Cleanup Program

Under the Model Toxics Control Act[1] (MTCA), the Department of Ecology (Ecology) requires a terrestrial ecological evaluation (TEE) if hazardous substances are released to the soil at a site. In this case, you must take one of these three actions as part of your site investigation and cleanup.

1. Document an exclusion from further evaluation under WAC 173-340-7491.[2]
2. Conduct a simplified evaluation under WAC 173-340-7492.[3]
3. Conduct a site-specific evaluation under WAC 173-340-7493.[4]

This form documents the TEE type and results for your Site. You must fill out and submit this form to Ecology to complete your remedial investigation. Completing this form alone isn't enough to document your evaluation. You still need to document your analysis and the basis for your conclusion in a cleanup plan or report. For more information, contact the Ecology cleanup project manager assigned to your Site, visit our Terrestrial Ecological Evaluations[5] webpage, or see our draft TEE guidance.[6]

Part 1 Site name and identifying information

Identify the Site being documented for an evaluation.

Site name: **Precision Engineering, Inc.**

Site address: **1231 South Director Street, Seattle, Washington 98108**

FSID:[a] **2056** VCP ID:[b] **Agreed Order**

Part 2 Evaluator name and contact information

Provide the name and contact information for the person who conducted the evaluation.

Name: **Garrett Leque, LG**

Title: **Senior Environmental Geologist**

Organization: **GeoEngineers**

Mailing address: **554 West Bakerview Road**

City: **Bellingham** State: **WA** Zip: **98226**

Email: **gleque@geoengineers.com** Phone: **253.312.7958**

[a] Facility/Site ID (FSID) assigned by Ecology

[b] Voluntary Cleanup Program (VCP) project ID assigned by Ecology

Part 3 Document evaluation type and results

3A Exclusion from further evaluation

3A-1 Does the Site qualify for an exclusion from further evaluation? (✓ one)

☐ Yes (go to next question).

☐ No or Unknown (go to Section 3B).

3A-2 What is the basis for the exclusion? (✓ all that apply, then skip to Part 4)

Point of compliance: WAC 173-340-7491(1)(a)

All soil contamination is, or will be, deeper than at least:*

☐ 15 feet below ground surface.

☐ 6 feet below ground surface or other Ecology-approved depth, and institutional controls are used to manage remaining contamination.

Barriers to exposure: WAC 173-340-7491(1)(b)

☐ All contaminated soil is, or will be, covered by physical barriers (e.g., buildings or pavement) that prevent exposure to plants and wildlife, and institutional controls are used to manage the remaining contamination.*

Undeveloped land: WAC 173-340-7491(1)(c)

☐ Less than 0.25 acres of contiguous# undeveloped land± are located on or within 500 feet of any area of the Site, and any of the following chemicals is present:

chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☐ For sites not impacted by any of these chemicals, less than 1.5 acres of contiguous undeveloped land exists on or within 500 feet of any area of the Site.

Background concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels defined in WAC 173-340-200[7] and WAC 173-340-709.[8]

* An exclusion based on future land use must have an Ecology-acceptable completion date for any future development.

\# Contiguous undeveloped land is not fragmented into smaller areas by highways, extensive paving, or similar structures that could hinder wildlife access to such areas.

± Undeveloped land is not covered by buildings, roads, pavement, or other barriers that would prevent wildlife from feeding on plants and other food sources in or on the soil.

3B Simplified evaluation

3B-1 Does the Site qualify for a simplified evaluation? (✓ one)

- [x] Yes (go to next question).
- [ ] No or Unknown (skip to Section 3C).

3B-2 Did you conduct a simplified evaluation? (✓ one)

- [x] Yes (go to next question).
- [ ] No (skip to Section 3C).

3B-3 Was further evaluation necessary? (✓ one)

- [ ] Yes (go to next question).
- [ ] No (go to Question 3B-5).

3B-4 If further evaluation was necessary, what did you do? (✓ one)

- [ ] Used the MTCA Table 749-2[9] concentrations as cleanup levels (skip to Part 4).
- [ ] Conducted a site-specific evaluation (skip to Section 3C).

3B-5 If no further evaluation was necessary, what was the reason? (✓ all that apply, then skip to Part 4).

Exposure analysis: WAC 173-340-7492(2)(a)

- [ ] The total area of Site soil contamination is not more than 350 square feet.
- [x] The current or planned land use makes wildlife exposure unlikely, based on MTCA Table 749-1.[10]

Pathway analysis: WAC 173-340-7492(2)(b)

- [ ] No potential exposure pathways from soil contamination to ecological receptors are complete.

Contaminant analysis: WAC 173-340-7492(2)(c)

- [ ] No contaminant listed in MTCA Table 749-2 is, or will be, present from ground surface to 15 feet deep at concentrations that exceed the values listed in MTCA Table 749-2.
- [x] No contaminant listed in MTCA Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth, if approved by Ecology) at concentrations that exceed the values listed in MTCA Table 749-2, and institutional controls are used to manage remaining contamination.
- [ ] No contaminant listed in MTCA Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate, as determined using Ecology-approved bioassay results.
- [ ] No contaminant listed in MTCA Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth, if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate, as determined using Ecology-approved bioassay results, and institutional controls are used to manage remaining contamination.

3C Site-specific evaluation

A site-specific evaluation process consists of: 1) formulating the problem, and 2) selecting the methods for addressing the identified problem. Both parts require Ecology consultation and approval – see WAC 173-340-7493(1)(c). For more information, see our draft TEE guidance.

3C-1 Was there a problem? – see WAC 173-340-7493(2)? (✓ one)

- ☐ Yes (go to next question)
- ☐ No (select the reason here, then go to 3C-5):
  - ☐ No issues were identified during the problem formulation step.
  - ☐ Issues were identified and resolved by cleanup actions for protecting human health.

3C-2 What did you do to resolve the problem? – see WAC 173-340-7493(3)? (✓ one)

- ☐ Used concentrations listed in MTCA Table 749-3 as cleanup levels (go to Question 3C-5).
- ☐ Used one or more methods listed in WAC 173-340-7493(3) to evaluate and resolve the identified problem (go to next question).

3C-3 If you conducted further site-specific evaluations, what methods did you use – see WAC 173-340-7493(3)? (✓ all that apply)

- ☐ Literature surveys.
- ☐ Biomarkers.
- ☐ Site-specific field studies
- ☐ Soil bioassays.
- ☐ Weight of evidence.
- ☐ Wildlife exposure model

Other Ecology-approved methods – please specify:

3C-4 What was the result of those evaluations? (✓ one)

- ☐ No problems were identified.
- ☐ Identified a problem and established site-specific cleanup levels.

3C-5 Has Ecology approved both your problem formulation and problem resolution steps? (✓ one)

- ☐ Yes Identify the Ecology staff who approved those steps:
- ☐ No (go to Part 4).

Part 4 Submit to Ecology

Email this completed form to the cleanup site manager assigned to your site.

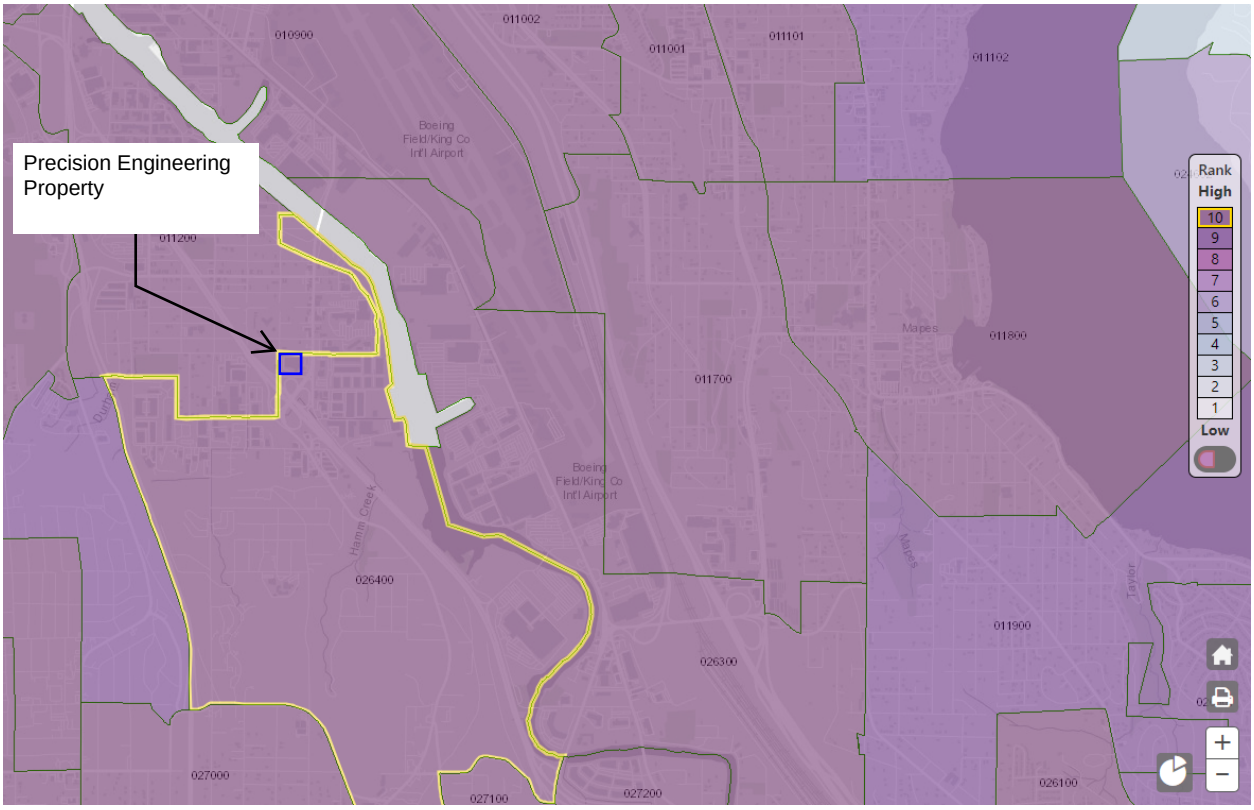
ADA Accessibility

Ecology is committed to providing people with disabilities access to our information and services by meeting or exceeding the requirements of state and federal laws.

To request an ADA accommodation, email ecyadacoordinator@ecy.wa.gov, call (360) 407-7170, or call Ecology through the Washington Telecommunication Relay for services including text telephone (TTY) at 711 or through your preferred relay service provider. Visit Ecology's Accessibility & the Americans with Disabilities Act[15] webpage for more accessibility information.

[1] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340&full=true
[2] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340&full=true#173-340-7491
[3] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340&full=true#173-340-7492
[4] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340&full=true#173-340-7493
[5] https://ecology.wa.gov/regulations-permits/guidance-technical-assistance/terrestrial-ecological-evaluation
[6] https://apps.ecology.wa.gov/publications/SummaryPages/1909051.html
[7] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340&full=true#173-340-200
[8] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340&full=true#173-340-709
[9] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340&full=true#173-340-900
[10] https://app.leg.wa.gov/WAC/default.aspx?cite=173-340&full=true#173-340-900
[11] mailto:VCP-NWRO@ecy.wa.gov
[12] mailto:VCP-SWRO@ecy.wa.gov
[13] mailto:VCP-CRO@ecy.wa.gov
[14] mailto:VCP-ERO@ecy.wa.gov
[15] https://ecology.wa.gov/about-us/accessibility-equity/accessibility

Appendix O
Environmental Health Disparities Map



May 2024 snapshot of WA DOH Environmental Health Disparities Map. The site and surroundings have a ranking of 10.

Appendix P
Arsenic Evaluation

Appendix P

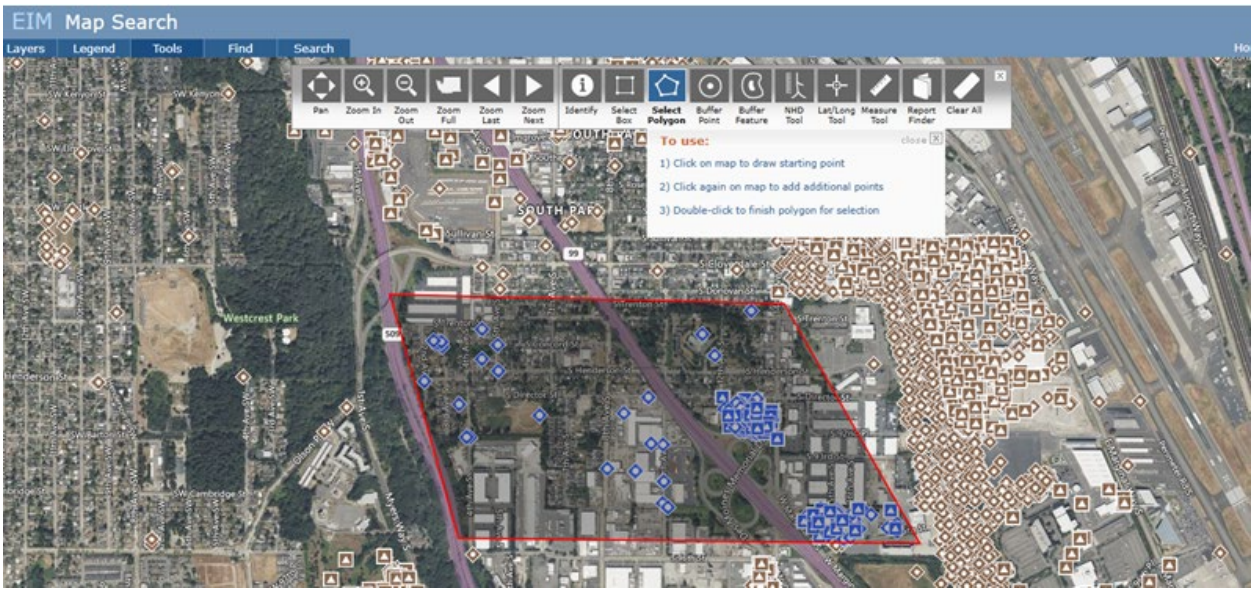
Arsenic Evaluation

This appendix contains two tables. Table P1 includes a background soil evaluation at the request of Ecology. 204 arsenic results from the general vicinity of Precision Engineering were queried using Ecology's EIM tool. A screenshot of the sample locations is shown below. The 90th percentile, and 4 times the 50th percentile of the arsenic soil concentrations were calculated. Table P1 indicates the lowest of these values is 14.3 mg/kg arsenic. This is the background concentration.

Table P2 assesses whether arsenic is a COC at the site based on the MTCA 3-part rule. The conclusion is that arsenic is not a COC because:

1. The 95 percent upper confidence level (UCL) on the mean arsenic is 5.71 mg/kg, which is less than 14.3 mg/kg.
2. No site soil arsenic concentrations are greater than 2 times the background concentration. The background concentration (Table P1) is 14.3 mg/kg. Therefore two times the background concentration is 28.6 mg/kg. The maximum onsite arsenic concentration is 19.9 mg/kg (Table P2).
3. Less than 10% of the site arsenic samples exceed the background concentration of 14.3 mg/kg. The exceedance percentage is 3%.

Conclusion: Arsenic is not a site COC.



EIM screenshot of area of soil samples providing 204 arsenic background samples.

Table P1

Background Arsenic Soil Samples (mg/kg)

Study ID	Sample Date	Sample Location	Result (mg/kg) (ND = 1/2 PQL)
AODE18079	6/7/2005	GP1-S-6.0	2.5 U
AODE18079	6/7/2005	GP2-S-1.0	11.3
AODE18079	12/12/2005	GP28-S-1.0	1.89
AODE18079	12/12/2005	GP31-S-1.0	5.72
AODE18079	12/12/2005	GP29-S-1.0	5.91
AODE18079	12/13/2005	GP12-S-3.0	2.79
AODE18079	12/13/2005	GP14-S-3.0	3
AODE18079	12/13/2005	GP18-S-1.0	3.55
AODE18079	12/13/2005	GP15-S-3.0	7.76
AODE18079	12/14/2005	GP24-S-3.0	3.06
AODE18079	12/14/2005	GP20-S-1.0	5.47
AODE18079	12/14/2005	GP13-S-1.0	9.45
AODE18079	12/15/2005	HA2-1.5	2.71
AODE18079	12/15/2005	HA1-1.5	2.88
AODE18079	12/15/2005	HA1-0.5	3.81
AODE18079	12/15/2005	HA2-0.5	3.94
AODE18079	12/15/2005	HA4-1.5	5.25
AODE18079	12/15/2005	HA3-1.5	6.96
AODE18079	12/15/2005	HA5-1.5	12.5
AODE18079	12/15/2005	HA5-0.5	35.9
AODE18079	12/15/2005	HA4-0.5	44.3
AODE18079	12/15/2005	HA3-0.5	53.9
AODE18079	4/19/2006	HA12-.05	9
AODE18079	1/9/2007	HA20-S-1.5	0.905 U
AODE18079	1/9/2007	HA20-S-0.5	1.01 U
AODE18079	1/9/2007	HA18-S-1.5	2.06 U
AODE18079	1/9/2007	HA19-S-1.5	4.02
AODE18079	1/9/2007	HA18-S-0.5	5.03
AODE18079	1/9/2007	HA17-S-1.5	5.3
AODE18079	1/9/2007	HA17-S-0.5	6.61
AODE18079	1/9/2007	HA19-S-0.5	12.7
AODE18079	1/10/2007	HA23-S-0.5	4.44
AODE18079	1/10/2007	HA24-S-0.5	4.9
AODE18079	1/10/2007	HA23-S-1.5	4.91
AODE18079	1/10/2007	HA24-S-1.5	5.23
AODE18079	1/10/2007	HA21-S-0.5	5.72
AODE18079	1/10/2007	HA21-S-1.5	5.83
AODE18079	1/10/2007	HA22-S-1.5	10.3
AODE18079	1/10/2007	HA25-S-0.5	11.6
AODE18079	1/10/2007	HA25-S-1.5	11.8

AODE18079	1/10/2007	HA22-S-0.5	53.5
AODE18079	10/24/2007	B6	2.76
AODE18079	10/24/2007	B5	3.07
AODE18079	10/24/2007	B4	3.79
AODE18079	10/24/2007	B7	7.21
AODE18079	10/24/2007	B9	8
AODE18079	10/24/2007	B11	8.26
AODE18079	10/24/2007	P6	9.05
AODE18079	10/24/2007	P5	9.54
AODE18079	10/24/2007	B8	10
AODE18079	10/24/2007	B3	10.7
AODE18079	10/24/2007	B12	11.3
AODE18079	10/24/2007	P4	11.6
AODE18079	10/24/2007	P3	13.3
AODE18079	10/24/2007	P8	13.8
AODE18079	10/24/2007	B2	13.9
AODE18079	10/24/2007	P2	15.7
AODE18079	10/24/2007	B10	16.1
AODE18079	10/24/2007	B1	16.2
AODE18079	10/24/2007	P7	19.9
AODE18079	10/24/2007	P1	22
AODE18079	10/24/2007	B13	26.3
AODE18079	10/25/2007	P10	15.6
AODE18079	11/19/2007	SS1-6	2.64
AODE18079	11/19/2007	SS4-6	3.58
AODE18079	11/19/2007	SS5-6	4.43
AODE18079	11/19/2007	SS2-6	4.82
AODE18079	11/19/2007	SS3-18	6.79
AODE18079	11/19/2007	SS6-6	16.8
AODE18079	11/19/2007	SS6-18	23.7
AODE18079	11/19/2007	SS3-6	37
AODE18079	3/27/2008	C-1	9.91
AODE18079	3/27/2008	C-3	13.2
AODE18079	3/27/2008	C-2	21.6
AODE18079	8/7/2014	SB14-6	2.5 U
AODE18079	8/7/2014	SB11-10	3 U
AODE18079	8/7/2014	SB12-12	3.5 U
AODE18079	8/7/2014	SB13-9	4 U
AODE18079	8/7/2014	SB11-30	6
AODE18079	8/7/2014	SB4-20	6
AODE18079	8/7/2014	SB4-5	7
AODE18079	8/8/2014	SB1-5	2.5 U
AODE18079	8/8/2014	SB10-7	2.5 U
AODE18079	8/8/2014	SB7-19	3 U

AODE18079	8/8/2014	SB3-8	3 U
AODE18079	8/8/2014	SB5-11	3.5 U
AODE18079	8/8/2014	SB6-16	3.5 U
AODE18079	8/8/2014	SB7-11	3.5 U
AODE18079	8/8/2014	SB8-16	3.5 U
AODE18079	8/16/2014	MW9-32.5-33.5	2.5 U
AODE18079	8/16/2014	MW9-38-39	2.5 U
AODE18079	8/16/2014	MW100	2.5 U
AODE18079	8/16/2014	MW11-18-19	3 U
AODE18079	8/16/2014	MW9-18-19	10
AODE18079	4/15/2015	SB15-41	4.9
AODE18079	4/15/2015	SB15-26	5.6
AODE18079	4/16/2015	SB16-46	2.9
AODE18079	4/16/2015	SB16-40	3.1
AODE18079	4/16/2015	SB17-26	4.8
AODE18079	4/16/2015	SB16-26	5.6
AODE18079	4/17/2015	SB18-39.5	2.1
AODE18079	4/17/2015	SB18-36.5	2.3
AODE18079	4/17/2015	SB17-40	2.5
AODE18079	4/17/2015	SB17-43.5	2.8
AODE18079	4/17/2015	SB18-26	6.4
AODE18079	4/20/2015	SB19-50	3.7
AODE18079	4/20/2015	SB19-45	6.2
AODE18079	4/20/2015	SB19-35	8.5
AODE18079	3/7/2022	SB-26-11-12	2.79
AODE18079	3/7/2022	SB-21-3-4	2.9
AODE18079	3/7/2022	SB-26-3-4	2.91
AODE18079	3/7/2022	SB-27-3-4	3.35
AODE18079	3/7/2022	SB-27-10-11	3.62
AODE18079	3/7/2022	SB-21-13-14	4.05
AODE18079	3/7/2022	SB-21-8-9	4.2
AODE18079	3/7/2022	SB-28-8.5-9	4.62
AODE18079	3/7/2022	SB-28-2.5-3	8.5
AODE18079	3/8/2022	SB-20-2-3	2.59
AODE18079	3/8/2022	SB-20-10-11	2.79
AODE18079	3/8/2022	SB-25-6-7	2.84
AODE18079	3/8/2022	SB-24-3-4	2.88
AODE18079	3/8/2022	SB-20-5-6	3.12
AODE18079	3/8/2022	SB-25-3.5-4.5	3.64
AODE18079	3/8/2022	SB-24-6.5-7.5	3.92
AODE18079	3/9/2022	SB-23-10-11	2.62
AODE18079	3/9/2022	SB-33-4-5	2.89
AODE18079	3/9/2022	SB-30-17-18	3.02
AODE18079	3/9/2022	SB-32-13-14	3.73

AODE18079	3/9/2022	SB-30-7.5-8.5	5.16
AODE18079	3/9/2022	SB-33-2-3	5.96
AODE18079	3/9/2022	SB-31-8-9	6.61
AODE18079	3/9/2022	SB-30-3-4	8.08
AODE18079	3/9/2022	DUP-220309	8.65
AODE18079	3/9/2022	SB-31-2-3	9.51
AODE18079	3/9/2022	SB-23-1.5-2.5	9.93
AODE18079	3/9/2022	SB-32-4-5	14.7
AODE18079	3/10/2022	SB-29-0-2	1.86
AODE18079	3/10/2022	SB-22-4-5	2.71
AODE18079	3/10/2022	SB-22-0.5-1.5	3.04
AODE18079	3/21/2022	MW-17-25-26	1.71
AODE18079	3/21/2022	MW-17-48-49	3.16
AODE18079	3/21/2022	MW-17-7-8	4.09
AODE18079	3/21/2022	MW-17-3-4	7.27
AODE18079	3/22/2022	MW-16-3-4	9.01 J
AODE18079	3/22/2022	MW-16-17.5-18.5	2.59
AODE18079	3/22/2022	MW-16-48-49	3.11
AODE18079	3/22/2022	MW-16-12-13	4.13
AODE18079	3/23/2022	MW-15-6-7	1.54
AODE18079	3/23/2022	MW-15-28-29	1.95
AODE18079	3/23/2022	MW-15-3-4	3.92
AODE18079	3/24/2022	MW-14-10.5-11.5	3.2
AODE18079	3/24/2022	MW-14-44-45	3.54
AODE18079	3/24/2022	MW-14-2-3	6.66
AODE18079	3/28/2022	MW-18-3-4	5.72
AODE18079	3/28/2022	MW-18-5.5-6.5	8.36
AODE18079	3/29/2022	MW-13-28-29	3.24
AODE18079	3/29/2022	MW-13-11-12	3.69
AODE18079	3/29/2022	DUP-2-220329	3.93
AODE18079	3/29/2022	MW-13-3-4	7.32
AODE3599	9/19/2011	091911-MW-44B-SB-7.5	1.9
AODE3599	9/19/2011	091911-MW-44B-SB-10	2.5
AODE3599	9/28/2011	092811-MW-44A-SB-10	1.9
AODE3599	9/28/2011	092811-MW-44A-SB-3	2.2
AODE7088	10/28/2011	TU48J	4.2
AODE7088	10/31/2011	TU65E	1.6
AODE7088	10/31/2011	TU65P	2.5
AODE7088	10/31/2011	TU65D	4.6
AODE7088	10/31/2011	TU65A	5.6
AODE7088	10/31/2011	TU65C	6.2
AODE7088	10/31/2011	TU65B	24.5
AODE7088	11/4/2011	TV85B	0.9
AODE7088	11/4/2011	TV85D	2.5

AODE7088	11/4/2011	TV85A	3
AODE7088	11/4/2011	TV85C	11.1
AODE7088	11/7/2011	TV99G	2.2
AODE7088	3/12/2012	UM06B	5.5
AODE7088	3/12/2012	UM06A	5.6
AODE7088	3/12/2012	UM06C	7.6
FS22978975	11/3/2020	SB07-4.5-20201103	4.76
FS22978975	11/3/2020	SB11-3-20201103	8.49
FS22978975	11/3/2020	SB08-8.5-20201103	10.6
FS22978975	11/3/2020	SB08-4.5-20201103	10.9
FS22978975	11/3/2020	SB07-7-20201103	21.3
FS22978975	11/4/2020	SB06-5.0	4.18
FS22978975	11/4/2020	SB0105-3.5-20201104	5.12
FS22978975	11/4/2020	SB03-5.5-20201104	7.58
FS22978975	11/4/2020	SB12-4-20201104	7.66
FS22978975	11/4/2020	SB05-3.5-20201104	10.9
FS22978975	11/4/2020	SB02-5-20201104	12.2
FS22978975	11/4/2020	SB04-3-20201104	20.8
LDWBS	5/10/2011	SKI-BS-1	2.5 U
LDWBS	5/10/2011	SKI-BS-6	8.7
LDWBS	5/10/2011	SKI-BS-3	12.7
LDWBS	5/10/2011	SKI-BS-5	13
LDWBS	5/10/2011	SKI-BS-2	14.4
LDWBS	5/10/2011	SKI-BS-4	19.7
TSPKCSSP	4/28/2008	17-1292-1-1-1-4	3.8
TSPKCSSP	4/28/2008	17-1292-1-8-1-4	3.8
TSPKCSSP	4/28/2008	17-1292-1-7-1-4	4.9
TSPKCSSP	4/28/2008	17-1292-1-6-1-4	5
TSPKCSSP	4/28/2008	17-1292-1-5-1-4	5.1
TSPKCSSP	4/28/2008	17-1292-1-2-1-4	5.5
TSPKCSSP	4/28/2008	17-1292-1-3-1-4	6.3
TSPKCSSP	4/28/2008	17-1292-1-4-1-4	7.2
		90th percentile	14.3
		4 x 50th percentile	19.6

Table P2
Precision Engineering Soil Arsenic Concentrations
Precision Engineering
Seattle, Washington

Sample ID	Location ID	Depth (feet bgs)	Date/Time Collected	Result	Result (ND = 1/2)
C-3	C3	1.5	3/27/2008 11:15	13.2	13.2
GP12-S-3.0	GP12	3	12/13/2005 15:00	2.79	2.79
GP13-S-1.0	GP13	1	12/14/2005 8:15	9.45	9.45
GP14-S-3.0	GP14	3	12/13/2005 12:20	3	3
GP15-S-3.0	GP15	3	12/13/2005 15:34	7.76	7.76
GP18-S-1.0	GP18	1	12/13/2005 13:35	3.55	3.55
GP1-S-6.0	GP1	6	6/7/2005 10:15	4.99 U	2.495
GP20-S-1.0	GP20	1	12/14/2005 9:15	5.47	5.47
GP24-S-3.0	GP24	3	12/14/2005 13:30	3.06	3.06
GP28-S-1.0	GP28	1	12/12/2005 12:30	1.89	1.89
GP29-S-1.0	GP29	1	12/12/2005 13:45	5.91	5.91
GP2-S-1.0	GP2	1	6/7/2005 11:00	11.3	11.3
GP31-S-1.0	GP31	1	12/12/2005 14:42	5.72	5.72
HA1-0.5	HA1	0.5	12/15/2005 11:15	3.81	3.81
HA1-1.5	HA1	1.5	12/15/2005 11:45	2.88	2.88
HA12-.05	HA12	0.5	4/19/2006 11:30	9	9
HA17-S-0.5	HA17	0.5	1/9/2007 13:04	6.61	6.61
HA17-S-1.5	HA17	1.5	1/9/2007 13:21	5.3	5.3
HA18-S-0.5	HA18	0.5	1/9/2007 13:52	5.03	5.03
HA18-S-1.5	HA18	1.5	1/9/2007 14:19	2.12 U	1.06
HA19-S-0.5	HA19	0.5	1/9/2007 14:51	12.7	12.7
HA19-S-1.5	HA19	1.5	1/9/2007 15:09	4.02	4.02
HA2-0.5	HA2	0.5	12/15/2005 12:45	3.94	3.94
HA20-S-0.5	HA20	0.5	1/9/2007 15:23	2.02 U	1.01
HA20-S-1.5	HA20	1.5	1/9/2007 15:51	1.81 U	0.905
HA2-1.5	HA2	1.5	12/15/2005 13:00	2.71	2.71
HA21-S-0.5	HA21	0.5	1/10/2007 8:08	5.72	5.72
HA21-S-1.5	HA21	1.5	1/10/2007 8:21	5.83	5.83
HA22-S-1.5	HA22	1.5	1/10/2007 9:21	10.3	10.3
HA23-S-0.5	HA23	0.5	1/10/2007 9:42	4.44	4.44
HA23-S-1.5	HA23	1.5	1/10/2007 10:08	4.91	4.91
HA24-S-0.5	HA24	0.5	1/10/2007 10:29	4.9	4.9
HA24-S-1.5	HA24	1.5	1/10/2007 10:47	5.23	5.23
HA25-S-0.5	HA25	0.5	1/10/2007 11:09	11.6	11.6
HA25-S-1.5	HA25	1.5	1/10/2007 11:31	11.8	11.8
HA4-1.5	HA4	1.5	12/15/2005 14:30	5.25	5.25
HA5-1.5	HA5	1.5	12/15/2005 15:10	12.5	12.5
MW100	MW11	18	8/16/2014 16:00	5 U	2.5
MW11-18-19	MW11	18	8/16/2014 15:35	6 U	3
MW-13-11-12	MW-13	11	3/29/2022 9:30	3.69	3.69
MW-13-28-29	MW-13	28	3/29/2022 10:25	3.24	3.24
MW-13-3-4	MW-13	3	3/29/2022 9:05	7.32	7.32
MW-14-10.5-11.5	MW-14	10.5	3/24/2022 18:10	3.2	3.2

MW-14-2-3	MW-14	2	3/24/2022 17:40	6.66	6.66
MW-14-44-45	MW-14	44	3/24/2022 20:25	3.54	3.54
MW-15-28-29	MW-15	28	3/23/2022 19:45	1.95	1.95
MW-15-3-4	MW-15	3	3/23/2022 17:15	3.92	3.92
MW-15-6-7	MW-15	6	3/23/2022 17:30	1.54	1.54
MW-16-12-13	MW-16	12	3/22/2022 9:25	4.13	4.13
MW-16-17.5-18.5	MW-16	17.5	3/22/2022 9:35	2.59	2.59
MW-16-3-4	MW-16	3	3/22/2022 9:10	9.01	9.01
MW-16-48-49	MW-16	48	3/22/2022 15:00	3.11	3.11
MW-17-25-26	MW-17	25	3/21/2022 12:15	1.71	1.71
MW-17-3-4	MW-17	3	3/21/2022 10:10	7.27	7.27
MW-17-48-49	MW-17	48	3/21/2022 13:40	3.16	3.16
MW-17-7-8	MW-17	7	3/21/2022 10:30	4.09	4.09
MW-18-3-4	MW-18	3	3/28/2022 9:05	5.72	5.72
MW-18-5.5-6.5	MW-18	5.5	3/28/2022 9:45	8.36	8.36
MW19-6-7.5	MW-19	6	5/26/2023 9:10	5.96	5.96
MW19-9-10.5	MW-19	9	5/26/2023 9:20	3.85	3.85
MW20-2.5-4	MW-20	2.5	5/25/2023 10:25	3.84	3.84
MW20-23-24.5	MW-20	23	5/25/2023 11:20	6.64	6.64
MW21-15-16.5	MW-21	15	5/31/2023 8:25	3.27	3.27
MW21-2.5-4	MW-21	2.5	5/31/2023 8:25	6.31	6.31
MW22-10-11	MW-22	10	5/30/2023 9:40	3.18	3.18
MW22-2.5-4	MW-22	2.5	5/30/2023 9:15	6.1	6.1
MW22-30-31	MW-22	30	5/30/2023 10:25	5.71	5.71
MW22-45-45.5	MW-22	45	5/30/2023 11:40	2.49	2.49
MW23-15-16.5	MW-23	15	5/24/2023 10:50	3.03	3.03
MW23-2.5-4	MW-23	2.5	5/24/2023 10:33	7.34	7.34
MW23-5-6.5	MW-23	5	5/24/2023 10:40	5.48	5.48
MW9-18-19	MW9	18	8/16/2014 8:45	10	10
MW9-32.5-33.5	MW9	32.5	8/16/2014 9:40	5 U	2.5
MW9-38-39	MW9	38	8/16/2014 10:20	5 U	2.5
P10	P10	0.5	10/25/2007 7:35	15.6	15.6
P2	P2	0.5	10/24/2007 11:05	15.7	15.7
P3	P3	0.5	10/24/2007 11:08	13.3	13.3
P4	P4	0.5	10/24/2007 11:10	11.6	11.6
P5	P5	0.5	10/24/2007 11:15	9.54	9.54
P6	P6	0.5	10/24/2007 12:30	9.05	9.05
P7	P7	0.5	10/24/2007 12:35	19.9	19.9
P8	P8	0.5	10/24/2007 12:40	13.8	13.8
SB10-7	SB10	7	8/8/2014 15:40	5 U	2.5
SB11-10	SB11	10	8/7/2014 9:10	6 U	3
SB11-30	SB11	30	8/7/2014 9:15	6	6
SB12-12	SB12	12	8/7/2014 10:20	7 U	3.5
SB13-9	SB13	9	8/7/2014 12:15	8 U	4
SB14-6	SB14	6	8/7/2014 14:20	5 U	2.5
SB1-5	SB1	5	8/8/2014 14:40	5 U	2.5
SB15-26	SB15	26	4/15/2015 12:10	5.6	5.6
SB15-41	SB15	41	4/15/2015 13:00	4.9	4.9
SB16-26	SB16	26	4/16/2015 10:00	5.6	5.6

SB16-40	SB16	40	4/16/2015 10:40	3.1	3.1
SB16-46	SB16	46	4/16/2015 11:10	2.9	2.9
SB17-26	SB17	26	4/16/2015 14:30	4.8	4.8
SB17-40	SB17	40	4/17/2015 9:20	2.5	2.5
SB17-43.5	SB17	43.5	4/17/2015 9:40	2.8	2.8
SB18-26	SB18	26	4/17/2015 11:50	6.4	6.4
SB18-36.5	SB18	36.5	4/17/2015 12:20	2.3	2.3
SB18-39.5	SB18	39.5	4/17/2015 12:45	2.1	2.1
SB19-35	SB19	35	4/20/2015 11:15	8.5	8.5
SB19-45	SB19	45	4/20/2015 11:50	6.2	6.2
SB19-50	SB19	50	4/20/2015 12:00	3.7	3.7
SB-20-10-11	SB-20	10	3/8/2022 12:55	2.79	2.79
SB-20-2-3	SB-20	2	3/8/2022 12:35	2.59	2.59
SB-20-5-6	SB-20	5	3/8/2022 12:45	3.12	3.12
SB-21-13-14	SB-21	13	3/7/2022 11:20	4.05	4.05
SB-21-3-4	SB-21	3	3/7/2022 10:40	2.9	2.9
SB-21-8-9	SB-21	8	3/7/2022 11:00	4.2	4.2
SB-22-0.5-1.5	SB-22	0.5	3/10/2022 9:05	3.04	3.04
SB-22-4-5	SB-22	4	3/10/2022 9:10	2.71	2.71
SB-23-1.5-2.5	SB-23	1.5	3/9/2022 9:30	9.93	9.93
SB-23-10-11	SB-23	10	3/9/2022 10:00	2.62	2.62
SB-24-3-4	SB-24	3	3/8/2022 10:55	2.88	2.88
SB-24-6.5-7.5	SB-24	6.5	3/8/2022 11:10	3.92	3.92
SB-25-3.5-4.5	SB-25	3.5	3/8/2022 9:35	3.64	3.64
SB-25-6-7	SB-25	6	3/8/2022 9:45	2.84	2.84
SB-26-11-12	SB-26	11	3/7/2022 14:05	2.79	2.79
SB-26-3-4	SB-26	3	3/7/2022 13:50	2.91	2.91
SB-27-10-11	SB-27	10	3/7/2022 13:15	3.62	3.62
SB-27-3-4	SB-27	3	3/7/2022 12:50	3.35	3.35
SB-28-2.5-3	SB-28	2.5	3/7/2022 9:35	8.5	8.5
SB-28-8.5-9	SB-28	8.5	3/7/2022 9:45	4.62	4.62
SB-29-0-2	SB-29	0	3/10/2022 10:00	1.86	1.86
SB-30-17-18	SB-30	17	3/9/2022 13:25	3.02	3.02
SB-30-3-4	SB-30	3	3/9/2022 12:50	8.08	8.08
SB-30-7.5-8.5	SB-30	7.5	3/9/2022 12:55	5.16	5.16
SB-31-2-3	SB-31	2	3/9/2022 14:00	9.51	9.51
SB-31-8-9	SB-31	8	3/9/2022 14:10	6.61	6.61
SB-32-13-14	SB-32	13	3/9/2022 15:30	3.73	3.73
SB-32-4-5	SB-32	4	3/9/2022 15:10	14.7	14.7
SB-33-2-3	SB-33	2	3/9/2022 10:50	5.96	5.96
SB-33-4-5	SB-33	4	3/9/2022 11:05	2.89	2.89
SB34-13-14	SB-34	13	6/2/2023 10:45	3.62	3.62
SB34-2-3	SB-34	2	6/2/2023 10:15	2.5	2.5
SB35-3-4	SB-35	3	6/2/2023 9:40	2.71	2.71
SB35-8-9	SB-35	8	6/2/2023 10:00	2.35	2.35
SB36-10-11.5	SB-36	10	6/2/2023 9:25	2.27	2.27
SB36-2-3.5	SB-36	2	6/2/2023 8:45	2.19	2.19
SB37-12.5-13.5	SB-37	12.5	6/2/2023 8:35	5.48	5.48
SB37-2-3	SB-37	2	6/2/2023 8:25	5.08	5.08

SB3-8	SB3	8	8/8/2014 13:30	6 U	3
SB4-20	SB4	20	8/7/2014 16:45	6	6
SB4-5	SB4	5	8/7/2014 16:00	7	7
SB5-11	SB5	11	8/8/2014 8:10	7 U	3.5
SB6-16	SB6	16	8/8/2014 9:30	7 U	3.5
SB7-11	SB7	11	8/8/2014 11:05	7 U	3.5
SB7-19	SB7	19	8/8/2014 11:00	6 U	3
SB8-16	SB8	16	8/8/2014 16:45	7 U	3.5
SS1-6	SS1	6	11/19/2007 13:32	2.64	2.64
SS2-6	SS2	6	11/19/2007 13:20	4.82	4.82
SS3-18	SS3	18	11/19/2007 13:15	6.79	6.79
SS3-6	SS3	6	11/19/2007 13:05	3.7	3.7
SS4-6	SS4	6	11/19/2007 13:52	3.58	3.58
SS5-6	SS5	6	11/19/2007 14:20	4.43	4.43
				Margin of error	0.53
				Average	5.18
				Lower CI	4.65
				Upper CI	5.71
				Maximum	19.9
				Number of samples >14.3	4
				Percent of samples >14.3	3%

All values mg/kg

Appendix Q
Ecology PCUL Memorandum

Memorandum

To: Garrett Leque, LG, Senior Environmental Geologist
Terry McPhetridge, LG, LHG, Principal Environmental Geologist
GeoEngineers, Inc.

From: Arthur Buchan, Toxicologist
Toxics Cleanup Program – Central Region Office

Date: April 2, 2026

RE: Precision Engineering Cleanup Project, Development of Preliminary Cleanup Levels (PCULs).

Background and Scope

This memorandum represents comments from the Washington State Department of Ecology, Toxics Cleanup Program (TCP) regarding the development of Preliminary Cleanup Levels (PCULs) for the Precision Engineers MTCA cleanup site:

Precision Engineering (Site)[1]
Facility site identification (FSID): 2056
Cleanup site identification (CSID): 4532

The comments provided are in effort to help complete the Remedial Investigation (RI) limited to the Precision Engineering Site, which is intended to investigate the nature and extent of any contamination found at the site. Note: This document is to be included as an attachment to the November 11, 2024, Public Review Draft Remedial Investigation as a summary of Washington State Department of Ecology (Ecology) comments used for reference for the Disproportionate Cost Analysis (DCA) and Feasibility Study (FS), as required for this site cleanup. Literature reviewed for this memorandum includes:

1) Ecology. (2001). Model Toxics Control Act. MTCA Cleanup Regulation Chapter 173-340. Washington State Department of Ecology. Revision January 2024. Publication No. 94-06.

[1] The Precision Engineering Site Address: 1231 South Director Street, Seattle, WA 98108 – King County

2) Ecology. (2016). Guidance for Evaluating Vapor Intrusion in Washington State. Washington State Department of Ecology. Revision November 2021. Publication No. 09-09-047.
3) GeoEngineers. (2024). Public Review Draft Remedial Investigation: Former Precision Engineering Property, 1231 South Director Street, Seattle, Washington. November 11, 2024.
4) GeoEngineers. (2025). Agency Review Draft Feasibility Study: Former Precision Engineering Property, 1231 South Director Street, Seattle, Washington. April 17, 2025.
5) MFA. (2008). Final Remedial Investigation and Risk Assessment Report> Former Precision Engineering, Inc., 1231 S. Director Street, Seattle, Washington. VCP ID Number NW1511. Prepared for Stoel Rives. July 21, 2008.

Brief History of Site Operations:

Precision Engineering operated an industrial manufacturing business on the Property from 1968 to March 1, 2005 (MFA 2008). The operation included manufacturing and repair of hydraulic cylinders, metal rolls used in the manufacturing of paper and sheet metal products, and other equipment. Services included grinding and polishing, honing, hard-chrome plating, milling, welding, and application of flame- and arc-applied metal coating, much of which involved the use of chromic acid. From 1985 to 2003, approximately 10,000 square feet of the west side of the building (i.e., Warehouse 3) was leased to Baszile Metals Service, an aluminum distributorship.

Important considerations, assumptions, and limitations to note on this memorandum:

Empirical demonstrations and highest detected values (provided by the PLP/Consultant) may change the PCULs listed.

Ecology Method Reporting Limits (MRLs)/Practical Quantitation Limits (PQLs) are draft subject to revision based on information from Ecology Manchester Laboratory.

MTCA Methods for Establishing Cleanup Levels at sites:

Method A, Method B, and Method C may be used for establishing cleanup levels at sites as summarized as follows:

- Specifically, Ecology uses the following general guidelines for mixing methods:
    - When using Method A, the site must be considered a simple site or routine cleanup and there must not be multiple chemicals without Method A table values.
    - When using Method B, Method A cleanup levels may be used but not Method C cleanup levels.
    - Method B is intended for all other sites.

- While each medium must be evaluated separately using criteria applicable to that medium, it has not been established that any medium within any of the sites qualifies to use Method C.

Establishing Site Specific Preliminary Cleanup Levels - MTCA Method B

Method B was used to establish preliminary cleanup levels for the Precision Engineering Site because:

- Numerous individual contaminants and mixtures have been investigated at the Site.
- Pathways potentially exist for soil, groundwater, air, surface water, and sediments.

Groundwater Preliminary Cleanup Levels

In general, WAC 173-340-720 requires setting groundwater cleanup levels at concentrations protective for drinking water beneficial uses, unless the groundwater qualifies as nonpotable. A determination of whether the groundwater qualifies as nonpotable must be made on a site-specific basis, based on the criteria in WAC 173-340-720(2). For this Site, it is assumed that the groundwater shall be protected for drinking water beneficial use.

WAC 173-340-720 also requires groundwater cleanup levels to be protective of surface water beneficial uses unless it can be demonstrated that the hazardous substances in the groundwater are not likely to reach surface water. The exposure pathway of concern is the discharge of contaminated groundwater into the surface water and for the protection of drinking water purposes, aquatic organisms living in that surface water and sediment, and persons that consume those organisms. A discharge of contaminated groundwater can occur directly through current or future excavations (i.e. construction activities), migration and seepage of the groundwater into the surface water and sorption onto the sediments. An indirect discharge can also occur through groundwater intercepted by ditches, foundation drains, utility corridors, and stormwater systems (including pipes, which typically are not water-tight), that then drain to surface water. It can also occur through temporary construction of dewatering systems that discharge to storm drains that then discharge either directly or indirectly to surface water.

For the groundwater to surface water exposure pathway, WAC 173-340-720 requires that the methods specified in WAC 173-340-730 for establishing surface water cleanup levels be used to develop groundwater cleanup levels protective of surface water.

Surface Water Preliminary Cleanup Levels

In general, WAC 173-340-730 requires surface water cleanup levels to be protective based on estimates of highest beneficial use and reasonable maximum exposure expected to occur under both current and potential future site use. This includes protection of aquatic organisms, and persons that consume these organisms (Ecology, 2005). More specifically, the WAC requires surface water cleanup levels to be at least as stringent as:

- Applicable state and federal laws.

- Concentrations protective of wildlife, fish, and other aquatic life.
- Concentrations protective of human health (such as through consumption of fish).
- Drinking water, for surface waters classified as suitable for domestic water supply under water quality law.

In addition, both WAC 173-340-720(1)(c) and 730(1)(d) require cleanup levels that do not directly or indirectly cause violations of cleanup standards in other media, including the sediment cleanup standards (Chapter 173-204 WAC). In the case when a conditional point of compliance is used, WAC 173-340-720(8)(d) requires groundwater discharges not result in violations of sediment cleanup levels published in Chapter 173-204 WAC.

For sites where multiple chemicals with similar toxic effects on human health are present, the respective concentrations may need to be further adjusted so that the additive risk does not exceed the acceptable thresholds in the rule (hazard index < 1 and cancer risk < 1X10-5). These adjustments will need to be made on a site-specific basis. This adjustment for additive risk does not need to be made for contaminants with cleanup levels controlled by protection of the environment (wildlife, fish, and other aquatic life). Rather, if multiple chemicals are present, it may be appropriate to otherwise account for additive risk by other methods (e.g., conducting bioassays with the groundwater) to determine if the combined effect is an environmental concern.

<u>Point of Compliance (Groundwater and Surface Water)</u>

The Point of Compliance in groundwater is:

- Throughout the Site:
    - The Site includes the Precision Engineering MTCA cleanup site – FSID # 2056, CSID # 4532) from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the Site.
- The Standard Point of Compliance is:
    - The point or points where the groundwater cleanup levels must be attained at the site to be in compliance with groundwater cleanup standards. Groundwater cleanup levels shall be attained in all groundwaters from the point of compliance to the outer boundary of the hazardous substance plume. This means that the Point of Compliance for groundwater is all wells within the characterized area.
- Note: Ecology can approve a conditional point of compliance during the DCA/FS.

The Point of Compliance for surface water is:

- The point or points at which hazardous substances are released to the surface waters of the state.
- At the point at which hazardous substances are released to the surface water as a result of groundwater flows, no mixing zone shall be allowed to demonstrate compliance with surface water cleanup levels. The point of compliance is the point

at which there is a discharge to the surface water at the nearest groundwater well (or soil erosion) to the surface water.

- Note: Ecology can approve a conditional point of compliance during the DCA/FS.

There are two possible results if surface water is located on or directly adjacent to the site[2]:

- Result (1): There is no contamination reaching the surface water (check wells, soil, and ditch/outfalls with a connection to the surface water):
  - Eliminate the surface water pathway in the remedial investigation. Use your groundwater cleanup level (i.e., drinking water) throughout the site.
- Result (2): There is contamination reaching the surface water (check wells, soil, and ditch/outfalls with a connection to the surface water):
  - Retain the surface water pathway in the remedial investigation. Use the more stringent cleanup level (groundwater vs. surface water) throughout the site.

Well construction and placement considerations: Groundwater flow directions are to the east with occasional flow directions to the east-northeast or east-southeast in both the shallow and deep WBZs. As a result, Surface Water and Sediment Standards were applied to Monitoring wells MW-19, 20, 21, 22, and 23 to determine an incomplete pathway from groundwater to surface water and sediments (See Appendix A: Figure 1).

Establishing Contaminants of Potential Concern (COPCs) and Preliminary Cleanup Levels for Groundwater

Table 1 (below) summarizes the COPCs and PCULs for Groundwater Protective of Drinking Water.

Table 1: COPCs and PCULs in Groundwater – Protective of Drinking Water (ug/L).

Hazardous Substance	Preliminary Cleanup Level (ug/L)	Highest Value Detected (ug/L)
Chromium, total	1.00E+02	1.33E+05
Chromium, trivalent	2.40E+04	1.10E+04
Chromium, hexavalent	1.40E+00	8.98E+04
DRO + HO	5.00E+02	1.29E+03
Trichloroethylene (TCE)	4.00E+00	4.03E+01
Vinyl Chloride	2.90E-01	1.56E+00
1,4-Dioxane	4.40E-01	2.04E+01

[2] At the time of this memo, enough information about the fate and transport of contamination has been collected to determine that the only probable contamination reaching the surface water is through a ditch/outfall which is proposed for soil cleanup. Note – There does not appear to be a pathway from GW to SW and/or sediments.

Under Method B, WAC 173-340-720(4) (b) requires that groundwater cleanup levels to be at least as stringent as all of the following four standards:

- Maximum contaminant levels established under the Safe Drinking Water Act and published in 40 C.F.R. 141.
- Maximum contaminant level goals for noncarcinogens established under the Safe Drinking Water Act and published in 40 C.F.R. 141.
- Maximum contaminant levels established by the state board of health and published in chapter 246-290 WAC.
- Concentrations in groundwater must be protective of surface water beneficial use unless it can be demonstrated that the hazardous substances are not likely to reach surface water. This demonstration must be based on factors other than implementation of a cleanup action at the site.

In addition to meeting the above four standards, under WAC 173-340-720(7)(b), when a cleanup level is based on the applicable state or federal law and the level of risk upon which the standard is based exceeds an excess cancer risk of one in one hundred thousand (1×10^{-5}) or a hazard index of one (1), the cleanup level shall be adjusted downward so that the total excess cancer risk does not exceed one in one hundred thousand (1×10^{-5}) or a hazard index of one (1) at the site. See Appendix A: Figure 2 for COPCs and PCULs for groundwater – protective of drinking water.

Establishing Contaminants of Potential Concern (COPCs) and Preliminary Cleanup Levels for Surface Water/Sediments

Table 2 (below) summarizes the COPCs and PCULs for Groundwater Protective of Surface Water and Sediments.

Table 2: COPCs in Groundwater and Ditch Surface Water – Protective of Surface Water and Sediments (ug/L).

Hazardous Substance	Preliminary Cleanup Level (ug/L)	Highest Value Detected in Ditch Surface Water (ug/L)	Notes
Chromium, total	2.70E+01	4.71E+01	Ditch Cleanup/ Property Controls
Chromium, trivalent	2.70E+01	5.35E+00	N/A
Chromium, hexavalent	1.10E-01	13U	Ditch Cleanup/ Property Controls
Copper	3.10E+00	1.42E+02	Ditch Cleanup/ Property Controls
Lead	8.10E+00	6.03E+01	Ditch Cleanup/ Property Controls

Mercury	2.50E-02	1.18E-01	Ditch Cleanup/ Property Controls
Zinc	8.10E+01	3.01E+02	Ditch Cleanup/ Property Controls
Benzo(a)anthracene	1.60E-04	1.20E-02	Ditch Cleanup/ Property Controls
Benzo(a)pyrene	1.60E-05	1.50E-02	Ditch Cleanup/ Property Controls
Benzo(b)fluoranthene	1.60E-04	1.70E-02	Ditch Cleanup/ Property Controls
Benzo(k)fluoranthene	1.60E-03	9.00E-03	Ditch Cleanup/ Property Controls
Chrysene	1.60E-02	1.80E-02	Ditch Cleanup/ Property Controls
Dibenzo(a,h)anthracene	1.60E-05	3.00E-03	Ditch Cleanup/ Property Controls
Indeno(1,2,3-c,d)pyrene	1.60E-04	1.20E-02	Ditch Cleanup/ Property Controls
Total cPAH TEQ	1.60E-05	2.05E-02	Ditch Cleanup/ Property Controls

Under Method B, WAC 173-340-730(3) (b) requires surface water cleanup levels to be at least as stringent as all of the following:

- Concentrations established under applicable state and federal laws (ARARs) including:
    - Water quality criteria published in the water quality standards for surface waters of the state of Washington, chapter 173-201A WAC.
    - Water quality criteria based on the protection of aquatic organisms (acute and chronic criteria) and human health published under section 304 of the Clean Water Act *unless it can be demonstrated that such criteria are not relevant and appropriate for a specific surface water body or hazardous substance*.
    - National Toxics Rule (40 C.F.R. Part 131).
- For substances for which environmental effects-based concentrations have not been established under applicable state or federal laws, concentrations that are estimated to result in no adverse effects on the protection and propagation of wildlife, fish, and other aquatic life.
- For substances for which sufficiently protective, health-based criteria or standards have not been established under state and federal laws, concentrations that protect human health as determined using the formulae in the rule. Note: For the

purposes of this cleanup site (located near the Duwamish), a Fish Consumption Rate of 97.5 grams/day was proposed by Ecology and was used in MTCA Equations 730-1 (non-carcinogens) and 730-2 (carcinogens).

- Potable water cleanup levels, for surface waters classified as suitable for use as a domestic water supply under chapter 173-201A WAC.

In addition, under WAC 173-340-730(5)(b), when a cleanup level is based on the applicable state or federal law and the level of risk upon which the standard is based exceeds an excess cancer risk of one in one hundred thousand (1 x 10-5) or a hazard index of one (1), the cleanup level shall be adjusted downward so that the total excess cancer risk does not exceed one in one hundred thousand (1 x 10-5) or a hazard index of one (1) at the site. See Appendix A: Figure 3 for COPCs and PCULs for groundwater – protective of surface water and sediments.

Vapor Intrusion and Air Cleanup Levels

In general, WAC 173-340-750(7)(D) requires an evaluation of air quality impacts as it applies to ambient (outdoor) air and air within any building, utility vault, manhole or other structure large enough for a person to fit into. Guidance for Evaluating Vapor Intrusion in Washington State (Ecology 2021) provides methods for evaluating air and associated cleanup levels.

A Tier 1 evaluation is completed during the site investigation to evaluate whether the concentrations of volatile contaminants in the subsurface are high enough to potentially result in unacceptable indoor air levels. Tier 1 evaluations can be conducted for existing buildings or buildings that could be constructed in the future. This evaluation typically uses generic soil gas and/or groundwater screening levels found in Ecology's Cleanup Levels and Risk Based Calculator (CLARC) Data Tables. If the Tier 1 evaluation concludes that subsurface contamination is significant enough to pose a threat to the indoor air quality of one or more occupied buildings, the next step is typically a Tier 2 evaluation.

The goal of a Tier 2 evaluation is to determine whether concentrations of VOCs in indoor air from VI are at unacceptable levels. Tier 2 evaluations also typically include measurements of ambient air and sub-slab soil gas or crawl space air. If the measured indoor air concentrations exceed the applicable cleanup levels and are not due to ambient air or indoor air sources such as household cleaners, paints, gasoline or other VOCs, quickly implement VI mitigation and/or other measures to protect indoor receptors.

Establishing Contaminants of Potential Concern (COPCs) and Preliminary Cleanup Levels for Vapor Intrusion and Air Quality

Table 3 (below) summarizes the COPCs and PCULs for Vapor Intrusion and Air Quality.

Table 3: COPCs in Air – Screening based on VI in Groundwater.

Hazardous Substance	Preliminary Cleanup Level (ug/L)	Highest Value Detected (ug/L)
Trichloroethylene (TCE)	1.40E+00	4.03E+01

Vinyl Chloride	3.30E-01	1.56E+00
1-Methylnaphthalene	1.70E-01	3.33E-01

Under Method B, WAC 173-340-750(3)(b) requires air cleanup levels to be at least as stringent as all of the following:

- Concentrations established under applicable state and federal laws (ARARs); and
- Human Health Protection: For hazardous substances for which sufficiently protective health-based criteria or standards have not been established under applicable state and federal laws, those concentrations which protect human health and the environment as determined by the following methods[3]:
    - Non-carcinogens.
    - Carcinogens.
    - Petroleum mixtures.

See Appendix A: Figure 4 for COPCs and PCULs for air quality based on VI.

Soil Preliminary Cleanup Levels

In general, WAC 173-340-740 requires that soil cleanup levels be set at concentrations that:

- Eliminate or substantially reduce the potential for food chain contamination.
- Eliminate or substantially reduce the potential for damage to soils or biota in the soils which could impair the use of soils for agriculture or silviculture purposes.
- Protect the potential health risk posed by dust at a site.
- Protect the groundwater at a site.
- Protect nearby surface waters from the site.
- Eliminate or minimize the potential for vapors in building or structures.

To meet these requirements for soil, preliminary concentrations have been established based on the protection of:

- Human health (direct contact).
- Terrestrial Ecological Receptors.
- Soil protective of groundwater (highest beneficial use).
- Soil protective of groundwater with transport to surface water (highest beneficial use).

[3] Groundwater screening levels for VI were derived from Ecology's Cleanup Levels and Risk Based Calculator (CLARC) Data tables for the Tier I evaluation.

Note that protective values have been adjusted for the practical quantitation limits and natural background concentrations for soil as required by WAC 173-340-740(5) (c) when establishing cleanup standards.

In addition, if multiple chemicals with similar toxic effects on human health are present at a site, these concentrations may need to be further adjusted so that the additive risk does not exceed the acceptable thresholds in the rule (hazard index $\leq$ 1 and cancer risk $\leq$ $1X10^{-5}$). These adjustments will need to be made on a site-specific basis. This adjustment for additive risk does not need to be made for contaminants with cleanup levels controlled by protection of the environment (terrestrial ecological receptors). Rather, if multiple chemicals are present, it may be appropriate to otherwise account for additive risk by, for example, conducting bioassays with the soil, to determine if the combined effect is an environmental concern.

Point of Compliance (Soil)

The Point of Compliance for soil is:

- For soil cleanup levels based on the protection of groundwater, the point of compliance shall be established in the soils throughout the site.
- For soil cleanup levels based on protection from vapors, the point of compliance shall be established in the soils throughout the site from the ground surface to the uppermost ground water saturated zone (e.g., from the ground surface to the uppermost water table).
- For soil cleanup levels based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway, the point of compliance shall be established in the soils throughout the site from the ground surface to fifteen feet below the ground surface. This represents a reasonable estimate of the depth of soil that could be excavated and distributed at the soil surface as a result of site development activities.
- For soil cleanup levels based on ecological receptors, the standard point of compliance is set from the ground surface to fifteen feet below the ground surface. The department may approve a conditional point of compliance set at the biologically active zone with placement of an institutional control to prevent excavation of deeper soil.

Terrestrial Ecological Receptors

Protective values for terrestrial ecological receptors should be established under the assumption that a Simplified Terrestrial Ecological Evaluation (TEE) would meet the requirements at this site. The Exposure Analysis Procedure under WAC 173-340-7492(2)(a)(ii) was used to indicate that land use at the site and surrounding area makes substantial wildlife exposure unlikely. Table 749-1 of MTCA was used to make this evaluation.

See Appendix A: Figure 5 for the Simplified Terrestrial Ecological Evaluation Scoresheet.

Soil Protective of Groundwater and Soil Protective of Groundwater with Transport to Surface Water – Assumed Saturated Conditions for this Environmental Assessment

Soil values that are protective of groundwater, and soil protective of groundwater with transport to surface water should be calculated using the fixed parameter three-phase partitioning model found in WAC 173-340-747. Saturated conditions were used in the calculations for this Preliminary Cleanup Level Development Memorandum.

PCULs established should be based on protection of the highest beneficial use with and upward adjustment to take into account natural background or practical quantitation limits, where applicable.

The Cleanup Levels and Risk Calculation (CLARC)4 Tool was used to derive the following chemical specific parameters:

- Hcc = Henry's Law Constant @ 13º C (dimensionless).
- Kd = Distribution Coefficient (L/kg).
- Koc = Soil organic carbon-water partitioning coefficient (ml/g).

Equation 747-1 was used to derive the following default parameters:

- UCF = Unit conversion factor (1 mg/1,000 ug).
- DF = Dilution faction (dimensionless – 1 for saturated).
- Θw = Water-filled soil porosity (ml water/ml soil – 0.43 for saturated).
- Θa = Air-filled soil porosity (ml air/ml soil – 0.0 for saturated).
- *Pb* = Dry soil bulk density (1.5 kg/L).

Note: Soil protective of groundwater values were derived directly from CLARC. Soil protective of groundwater, and soil protective of groundwater with transport to surface water calculated using the three-phase model.

See Appendix A: Figure 6 for soil protective of groundwater.

See Appendix A: Figure 7 for soil protective of groundwater with transport to surface water.

Soil Protective of Direct Contact

Soil that is considered protective of direct contact is based on concentrations that are estimated to result in no acute or chronic noncarcinogenic toxic effects on human health using a hazard quotient of one (1) and concentrations for which the upper bound on the estimated excess cancer risk is less than or equal to one in one million (1 x 10-6). Equations 740-1 and 740-2 (MTCA) and the associated default assumptions shall be used to calculate the concentration for direct contact with contaminated soil.

Establishing Preliminary Cleanup Levels for Soil

Table 4 (below) summarizes the COPCs and PCULs for soil.

[4] https://ecology.wa.gov/regulations-permits/guidance-technical-assistance/contamination-cleanup-tools/clarc

Table 4: COPCs and PCULs in Soil.

Hazardous Substance	Preliminary Cleanup Level (mg/kg)	Highest Value Detected in Soil (mg/kg)	Highest Concentration Location/Notes
Arsenic	7.00E+00	1.47E+01	SB-32
Chromium, total	1.00E+02	6.75E+03	GP-32 and Ditch Cleanup/Property Controls
Chromium, trivalent	1.00E+02	3.25E+03	GP-32 and Ditch Cleanup/Property Controls
Chromium, hexavalent	2.70E-02	3.50E+00	GP-32 and Ditch Cleanup/Property Controls
Copper	3.20E+03	1.13E+02	Ditch Cleanup/ Property Controls
Lead	2.50E+02	1.30E+02	Ditch Cleanup/ Property Controls
Mercury	7.00E-02	1.10E+00	GP-18 and Ditch Cleanup/Property Controls
Zinc	2.40E+04	3.41E+02	Ditch Cleanup/ Property Controls
DRO + HO	2.00E+03	2.52E+04	GP-21
Trichloroethylene (TCE)	2.00E-03	1.16E+00	GP-6
1,4-Dioxane	5.00E-02	6.01E-01	MW-22
Benzo(a)anthracene	N/A – Based on pathway to SW	N/A – Based on pathway to SW	Ditch Cleanup/ Property Controls
Benzo(a)pyrene	N/A – Based on pathway to SW	N/A – Based on pathway to SW	Ditch Cleanup/ Property Controls
Benzo(b)fluoranthene	N/A – Based on pathway to SW	N/A – Based on pathway to SW	Ditch Cleanup/ Property Controls
Benzo(k)fluoranthene	N/A – Based on pathway to SW	N/A – Based on pathway to SW	Ditch Cleanup/ Property Controls
Chrysene	N/A – Based on pathway to SW	N/A – Based on pathway to SW	Ditch Cleanup/ Property Controls
Dibenzo(a,h)anthracene	N/A – Based on pathway to SW	N/A – Based on pathway to SW	Ditch Cleanup/ Property Controls
Indeno(1,2,3-c,d)pyrene	N/A – Based on pathway to SW	N/A – Based on pathway to SW	Ditch Cleanup/ Property Controls

Table 4: COPCs and PCULs in Soil.

Hazardous Substance	Preliminary Cleanup Level (mg/kg)	Highest Value Detected in Soil (mg/kg)	Highest Concentration Location/Notes
Total cPAH TEQ	1.90E-01	2.22E-01	MW-23 and Ditch Cleanup/Property Controls

In general, standard Method B soil cleanup levels shall be at least as stringent as the following:

- Concentrations established under applicable state and federal laws.
- Concentrations that result in no significant adverse effects on the protection and propagation of terrestrial ecological receptors using the procedures specified in WAC 173-340-7490 through 7494.
- For hazardous substances for which sufficiently protective, health-based criteria or standards have not been established under applicable state and federal laws, those concentrations that protect human health as determined by evaluating the following exposure pathways:
    - Ground water protection.
    - Soil direct contact.
    - Soil vapors.

It is assumed that soil vapors are not a pathway at this site.

See Appendix A: Figure 8 for COPCs and PCULs for soil.

Establishing Preliminary Cleanup Levels for Sediments

Table 5 (below) summarizes the COPCs and PCULs for groundwater protective of surface water and sediments.

Table 5: COPCs in Groundwater and Ditch Surface Water – Protective of Surface Water and Sediments (ug/L).

Hazardous Substance	Preliminary Cleanup Level (ug/L)	Highest Value Detected in Ditch Surface Water (ug/L)	Notes
Chromium	2.70E+01	4.71E+01	Ditch Cleanup/ Property Controls
Copper	3.10E+00	1.42E+02	Ditch Cleanup/ Property Controls
Lead	8.10E+00	6.03E+01	Ditch Cleanup/ Property Controls

Mercury	2.50E-02	1.18E-01	Ditch Cleanup/ Property Controls
Zinc	8.10E+01	3.01E+02	Ditch Cleanup/ Property Controls
Benzo(a)anthracene	1.60E-04	1.20E-02	Ditch Cleanup/ Property Controls
Benzo(a)pyrene	1.60E-05	1.50E-02	Ditch Cleanup/ Property Controls
Benzo(b)fluoranthene	1.60E-04	1.70E-02	Ditch Cleanup/ Property Controls
Benzo(k)fluoranthene	1.60E-03	9.00E-03	Ditch Cleanup/ Property Controls
Chrysene	1.60E-02	1.80E-02	Ditch Cleanup/ Property Controls
Dibenzo(a,h)anthracene	1.60E-05	3.00E-03	Ditch Cleanup/ Property Controls
Indeno(1,2,3-c,d)pyrene	1.60E-04	1.20E-02	Ditch Cleanup/ Property Controls
Total cPAH TEQ	1.60E-05	2.05E-02	Ditch Cleanup/ Property Controls

The establishment of Preliminary Cleanup Levels for Sediment must comply with the requirements of chapter 173-204 WAC. In general, the sediment cleanup standards require the Sediment Cleanup Objective (SCO) risk-based concentration (for this project) to be the lowest of the following criteria:

- Freshwater Benthic SCO (WAC 173-204-563).
- Human Risk 10^{-6}, HQ ≤ 1 (WAC 173-204-561).
- Higher Trophic Level Risk (WAC 173-204-564).
- Applicable Laws under WAC 173-204-560(3) and WAC 173-204-505(2).

Then, the risk-based SCO is upward adjusted to be the highest of the following criteria:

- Natural Background.
- Risk Based Concentration.
- Practical Quantitation Limit.

In order to meet these site-specific requirements, the PCUL was based on the lowest of these criteria:

- Freshwater Benthic Criteria found in WAC 173-204-563 (Table VI)
- The SMS Lower Tier Human Health Direct Contact SCO:

- Sediment Ingestion/Direct Contact, Cancer.

SMS SCUM II, Equation 9-1 (sediment ingestion / direct contact, cancer)

$$RBC{-}SED{-}C = \frac{ACR\ x\ BW\ x\ ATc}{EF\ x\ ED\ x\ \left[\left(\frac{IR\ x\ AB\ x\ CPFo}{UCF}\right) + \left(\frac{SA\ x\ AF\ x\ ABS\ x\ CPFd}{UCF}\right)\right]}$$

General Parameters		
RBC-SED-C	Risk-based concentration, sediment, cancer	mg/kg
ACR	Acceptable cancer risk level	unitless
AB	Gastrointestinal absorption fraction	unitless
CPFo	Oral cancer potency factor	$(mg/kg\text{-}day)^{-1}$
UCF	Unit conversion factor	mg/kg
ABS	Dermal absorption factor	unitless
CPFd	Dermal cancer potency factor	$(mg/kg\text{-}day)^{-1}$

Scenario-Specific Parameters		
BW	Average body weight over exposure duration	kg
ATc	Averaging time (cancer)	days
EF	Exposure frequency	days/year
ED	Exposure duration	years
IR	Sediment ingestion rate	mg/day
SA	Skin surface area	cm^2/day
AF	Sediment-to-skin adherence factor	mg/cm^2-day
Intermediate Calculations		
ISDIF1c	Intermediate sediment intake factor 1, cancer	mg
ISDIF2	Intermediate sediment intake factor 2	mg/day

- Sediment Ingestion/Direct Contact, Non-Cancer.

SMS SCUM II, Equation 9-2 (sediment ingestion / direct contact, noncancer)

$$RBC{-}SED{-}N = \frac{HQ \ x \ BW \ x \ ATn}{EF \ x \ ED \ x \ \left[\left(\frac{IR \ x \ AB}{RfDo \ x \ UCF}\right) + \left(\frac{SA \ x \ AF \ x \ ABS}{RfDd \ x \ UCF}\right)\right]}$$

General Parameters		
RBC-SED-N	Risk-based concentration, sediment, noncancer	mg/kg
HQ	Hazard quotient	unitless
AB	Gastrointestinal absorption fraction	unitless
RfDo	Oral reference dose	mg/kg-day
UCF	Unit conversion factor	mg/kg
ABS	Dermal absorption factor	unitless
RfDd	Dermal reference dose	mg/kg-day

Scenario-Specific Parameters		
BW	Average body weight over exposure duration	kg
ATn	Averaging time (noncancer)	days
EF	Exposure frequency	days/year
ED	Exposure duration	years
IR	Sediment ingestion rate	mg/day
SA	Skin surface area	cm^2/day
AF	Sediment-to-skin adherence factor	mg/cm^2-day
Intermediate Calculations		
ISDIF1n	Intermediate sediment intake factor 1, noncancer	mg
ISDIF2	Intermediate sediment intake factor 2	mg/day

The Risk-Based Values were then upward adjusted to either a Duwamish Natural Background or PQL (based on SCUM II – Ecology Pub # 12-09-057).

Please Note: Seafood Consumption for Sediments was not evaluated due to lack of site-specific BSAF.

<u>See Appendix A: Figure 8 for COPCs and PCULs for groundwater based on protection surface water and sediments.</u>

Appendix A: Figures

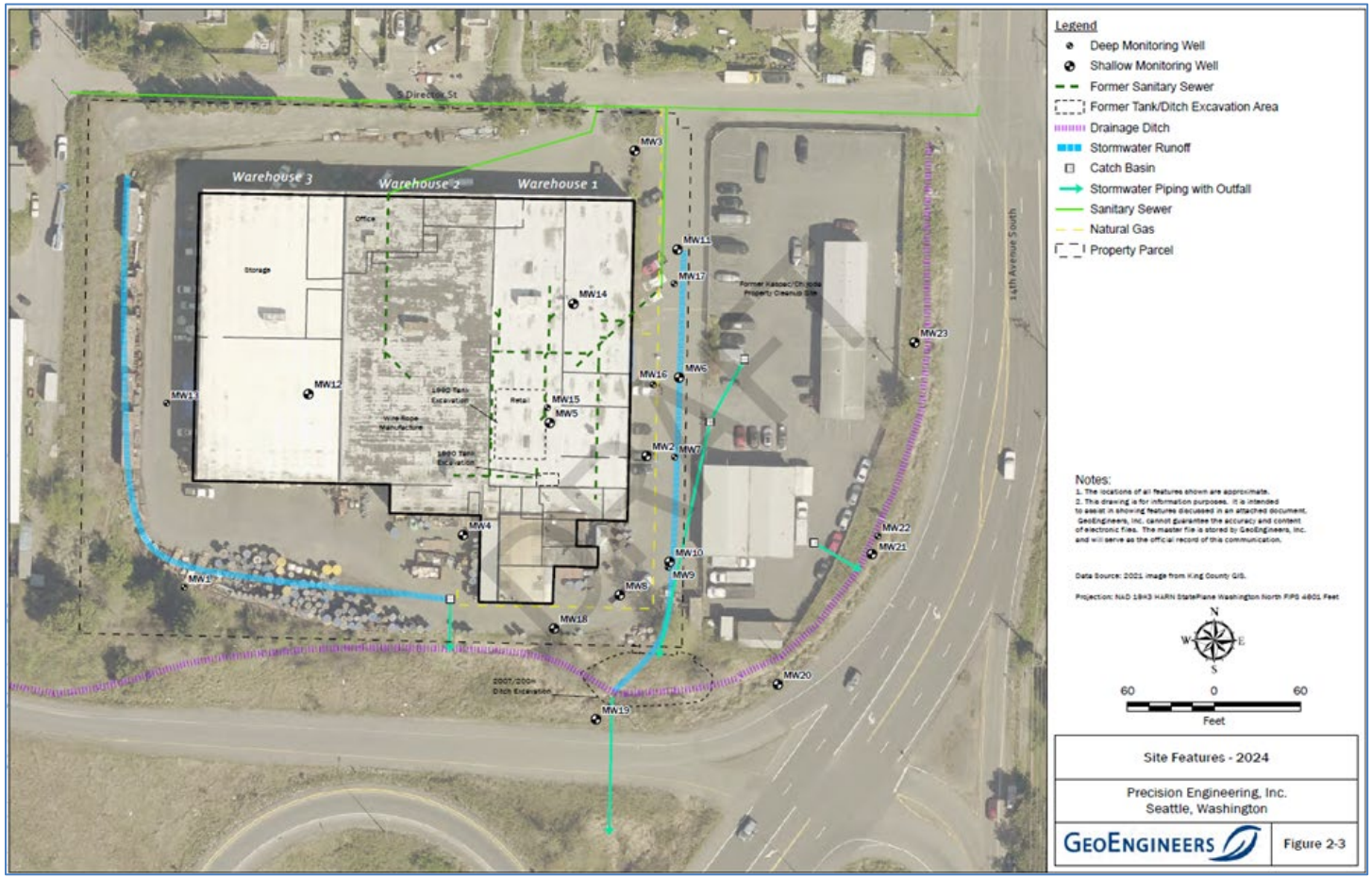


Figure 1: Figure depicting GW direction flow and MW19, 20, 21, 22, and 23 used to demonstrate an incomplete pathway to SW and Sediments.

Precision Engineering
FSID #: 2056
CSID #: 4532

Contaminant	CAS #	Proposed Water PCUL	Ecology GW PCUL	Highest Detected Value in MW's	GW/Drinking COPC?	Notes	Consultant Notes	Ecology Response	Consultant Notes
Metals (ug/L)									
Arsenic	7440-38-2	8.00E+00	8.00E+00	9.86E+01	N	See Notes	Arsenic is not a contaminant of concern for the Site because arsenic is not associated with Site activities or releases. Rather, arsenic is elevated in groundwater in the general vicinity where the Site is situated (i.e. South Park vicinity). Only 17 out of 126 soil samples collected at the Site exceed the arsenic soil PCUL (i.e. only 13% of soil samples). A single soil sample (SB32-4-5), located southeast of the building where chromium plating occurred, contained arsenic at a concentration of 14.7 mg/kg, which is approximately 2 times the PCUL of 7.3 mg/kg. The remaining 16 samples contained arsenic at concentrations less than than 2 times the PCUL. Furthermore, arsenic in groundwater is elevated in most Site wells, including upgradient deep wells MW1 and MW13 and upgradient shallow well MW12, suggesting an upgradient source. Monitoring well MW5, which is typically the "most contaminated" well located due to it's location in the chromium vault operation area, contains the lowest groundwater arsenic concentration (generally 3 ug/L to 6 ug/L, which is below the screening level of 8 ug/L). Meanwhile, the highest arsenic concentration in groundwater is located at MW23 that is distant from the property and not in a direct downgradient groundwater direction from the source area (see RI figures that show shallow groundwater flow is to the east-southeast; MW23 is east-northeast of the source area). These data indicate arsenic is generally elevated as a "background" condition and is not elevated due to Precision Engineering operations.	Provide Ecology with an area background value for Arsenic (at least 20 samples - calculate a 90th and 4 x 50th %- whichever is lower) and show that value of 9.86 was off-site and likely due to another source. You can use your samples and other previous samples (no need to re-sample).	Justification provided by the consultant
Cadmium	7440-43-9	1.20E+00	5.00E+00	4.70E-01					
Chromium	7440-47-3	1.00E+02	1.00E+02	1.33E+05	Y	GW-DW Must be addressed in DCA/FS			
Copper	7440-50-8	3.10E+00	6.40E+02	2.10E+02					
Lead	7439-92-1	5.60E+00	1.50E+01	9.07E+00					
Mercury	7439-97-6	2.50E-02	2.00E+00	8.01E-01					
Nickel	7440-02-0	8.20E+00	3.20E+02	6.62E+01					
Selenium	7782-49-2	5.00E+01	5.00E+01	1.83E+01					
Thallium	7440-28-0	6.20E-02	1.60E-01	N/D					
Zinc	7440-66-6	8.10E+01	4.80E+03	5.74E+01					
TPH (ug/L)									
GRO	X		1.00E+03	3.00E+02	N				
DRO+HO	X	5.00E+02	5.00E+02	1.29E+03	Y	GW-DW Must be addressed in DCA/FS			
VOCs (ug/L)									
Benzene	71-43-2	1.10E+00	5.00E+00	6.00E-02					
cis-1,2-Dichloroethylene	156-59-2	1.60E+01	1.60E+01	5.40E-01	N				
1,1-Dichloroethylene	75-35-4	x	7.00E+00	3.80E-01					
Methylene Chloride	75-09-2	5.00E+00	5.00E+00	2.77E+01	N	See Notes	Methylene chloride is not a contaminant of concern for the Site. Methylene chloride only exceeded the soil PCUL in 1 vadose soil sample. Methylene chloride did not exceed PCUL in any vadose or saturated soil samples inside the Precision Engineering building. Methylene chloride is a common laboratory contaminant and was present in numerous soil samples at very low concentrations in samples submitted on two days during the 2014/2015 investigation, all from borings outside the building. Method blank contamination was reported for numerous soil samples during the 2014 investigation. Methylene chloride was only detected in 3 out of 108 groundwater samples. The exceedances occurred in different wells during one sampling event only and methylene chloride did not exceed PCUL in those wells during any other sampling events.	Verify that the 3 exceedances (out of 108 samples) were outliers and the exceedances were due to sampling or laboratory error.	Justification provided by the consultant
Trans-1,2-Dichloroethylene	156-60-5	?	1.00E+02						
Trichloroethylene (TCE)	79-01-6	7.00E-01	4.00E+00	4.03E+01	Y	GW-DW Must be addressed in DCA/FS			
Vinyl Chloride	75-01-4	1.80E-01	2.90E-01	1.56E+00	Y	GW-DW Must be addressed in DCA/FS			
SVOCs (ug/L)									
1,4-Dioxane	123-91-1	4.40E-01	4.40E-01	2.04E+01	Y	GW-DW Must be addressed in DCA/FS			
Bis(2-Ethylhexyl) Phthalate	117-81-7	4.60E-02	6.00E+00	N/D					
Diethyl Phthalate	84-66-2	9.30E+01	1.30E+04	3.00E-01					
PAHs (ug/L)									
1-Methylnaphthalene	90-12-0	1.50E+00	8.60E-01	3.33E-01					
Benzo(a)anthracene	56-55-3	1.60E-04	N/A	1.30E-02					
Benzo(a)pyrene	50-32-8	1.60E-05	2.00E-01	9.00E-03					
Benzo(b)fluoranthene	205-99-2	1.60E-04	N/A	1.10E-02					
Benzo(k)fluoranthene	207-08-9	1.60E-03	N/A	7.00E-03					
Chrysene	218-01-9	1.60E-02	N/A	2.30E-02					
Dibenzo(a,h)anthracene	53-70-3	1.60E-05	N/A	2.00E-03					
Indeno(1,2,3-c,d)pyrene	193-39-5	1.60E-04	N/A	2.00E-03					
Napththalene	91-20-3	1.40E+00	1.60E+02	1.11E+00					
Total cPAH TEQ	X	9.70E-03	2.00E-01	1.32E-02					
Polychlorinated Biphenyls (PCBs) (ug/L)									
Total PCB Aroclors	1336-36-3	7.00E-06	2.20E-01	N/D					
Per-and Polyfluoroakkyl Substances (PFAS) (ug/L)									
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	6.50E-02	6.40E-06	2.40E-01	N	See Notes	There were no soil exceedances of PFHxS. There was only 1 groundwater exceedance of PFHxS out of 26 groundwater samples. The exceedance was in MW18 which is not near Precision Engineering's former operational areas, suggesting an off site / background source. If PFAS were used it would have been added to the chromium plating vaults inside the building, and PFAS concentrations would be expected to be very high in soil or groundwater in MW5 and/or downgradient wells.	Agreed (switch to "N")	
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	1.50E-02	4.00E-03	7.00E-02	N	See Notes	There were no soil exceedances of PFOS. There were only 3 groundwater exceedance out of 26 groundwater samples. Two of the exceedances were in MW18 and MW20 which are not near Precision Engineering's former operational areas, suggesting an off site / background source. (See comments above for PFHxS).	Agreed (switch to "N")	
Perfluorooctanoic Acid (PFOA)	335-67-1	1.00E-02	4.00E-03	7.50E-01	N	See Notes	There were no soil exceedances of PFOA. In groundwater, the highest concentration (0.75 ug/L) is in MW18, away from Precision's operational areas. All other groundwater exceedances were only several times higher than the PCUL. See comments above for PFHxS.	Agreed (switch to "N")	

Figure 2: COPCs and PCULs for Groundwater Protective of Drinking Water.

Precision Engineering
FSID #: 2056
CSID #: 4532

Contaminant	CAS #	Proposed Water PCUL	Lowest of Ecology SW/Sed PCUL	Highest Detected Value in MW 19, 20,21, 22,23	Highest Detected Value in Ditch?	SW/Sediment COPC?	Notes	Consultant Notes	Ecology Response	Consultant Notes
Metals (ug/L)										
Arsenic	7440-38-2	8.00E+00	8.00E+00	9.86E+01	4.33E+00	N	See Notes	Arsenic is not a contaminant of concern for the Site because arsenic is not associated with Site activities or releases. Rather, arsenic is elevated in groundwater in the general vicinity where the Site is situated (i.e. South Park vicinity). Only 17 out of 126 soil samples collected at the Site exceed the arsenic soil PCUL (i.e. only 13% of soil samples). A single soil sample (SB32-4-5), located southeast of the building where chromium plating occurred, contained arsenic at a concentration of 14.7 mg/kg, which is approximately 2 times the PCUL of 7.3 mg/kg. The remaining 16 samples contained arsenic at concentrations less than than 2 times the PCUL. Furthermore, arsenic in groundwater is elevated in most Site wells, including upgradient deep wells MW1 and MW13 and upgradient shallow well MW12, suggesting an upgradient source. Monitoring well MW5, which is typically the "most contaminated" well located due to it's location in the chromium vault operation area, contains the lowest groundwater arsenic concentration (generally 3 ug/L to 6 ug/L, which is below the screening level of 8 ug/L). Meanwhile, the highest arsenic concentration in groundwater is located at MW23 that is distant from the property and not in a direct downgradient groundwater direction from the source area (see RI figures that show shallow groundwater flow is to the east-southeast; MW23 is east-northeast of the source area). These data indicate arsenic is generally elevated as a "background" condition and is not elevated due to Precision Engineering operations.	Provide Ecology with an area background value for Arsenic (at least 20 samples - calculate a 90th and 4 x 50th % - whichever is lower) and show that value of 9.86 was off-site and likely due to another source. You can use your samples and other previous samples (no need to re-sample).	Justification provided by the consultant
Cadmium	7440-43-9	1.20E+00	1.20E+00	2.02E-01	8.24E-01	N				
Chromium	7440-47-3	1.00E+02	2.70E+01	3.51E+00	4.71E+01	Y	Ditch Cleanup/Property Controls			
Copper	7440-50-8	3.10E+00	3.10E+00	2.10E+00	1.42E+02	Y	Ditch Cleanup/Property Controls			
Lead	7439-92-1	5.60E+00	8.10E+00	2.00E-01	6.03E+01	Y	Ditch Cleanup/Property Controls			
Mercury	7439-97-6	2.50E-02	2.50E-02	4.11E-03	1.18E-01	Y	Ditch Cleanup/Property Controls			
Nickel	7440-02-0	8.20E+00	8.20E+00	8.89E+00	1.87E+01	N	SW/Sed must be addressed in DCA/FS and Ditch Cleanup/Property Controls	Nickel is not a contaminant of concern for the Site. Of the downgradient wells MW20, MW21, MW22, MW23, only one sample on one date slightly exceeded the groundwater PCUL. The one exceedance was in MW20 on 7/25/23 with a nickel concentration of 8.89 ug/L which only slightly exceeded the PCUL of 8.2 ug/L. The nickel concentration in MW20 was 5.3 ug/L below the PCUL during a follow up sampling on 12/6/23. Finally, 0 out of 89 soil samples analyzed from the Site for nickel exceeded the soil PCUL of 48 mg/kg.	Agreed (switch to "N")	
Selenium	7782-49-2	5.00E+01	7.10E+01	1.29E+00	ND	N				
Thallium	7440-28-0	6.20E-02	6.20E-02	ND	ND	N				
Zinc	7440-66-6	8.10E+01	8.10E+01	4.79E+00	3.01E+02	Y	Ditch Cleanup/Property Controls			
TPH (ug/L)										
GRO	X		1.00E+03	?	ND	?				
DRO+HO	X	5.00E+02	5.00E+02	ND	ND	N				
VOCs (ug/L)										
Benzene	71-43-2	1.10E+00	1.60E+00	?	?	N				
cis-1,2-Dichloroethylene	156-59-2	1.60E+01	N/A	1.40E-01	8.97E+00	N				
1,1-Dichloroethylene	75-35-4	?	N/A	?	1.10E-01	N				
Methylene Chloride	75-09-2	5.00E+00	1.00E+02	5.80E-01	ND	N				
Trans-1,2-Dichloroethylene	156-60-5	?	1.00E+03	?	?	N				
Trichloroethylene (TCE)	79-01-6	7.00E-01	7.00E-01	ND	2.00E-01	N				
Vinyl Chloride	75-01-4	1.80E-01	1.80E-01	ND	ND	N				
SVOCs (ug/L)										
1,4-Dioxane	123-91-1	4.40E-01	N/A	2.00E-01	2.00E-01	N				
Bis(2-Ethylhexyl) Phthalate	117-81-7	4.60E-02	4.60E-02	?	?	N				
Diethyl Phthalate	84-66-2	9.30E+01	9.30E+01	?	?	N				
PAHs (ug/L)										
1-Methylnaphthalene	90-12-0	1.50E+00	N/A	1.10E-01	1.30E-02	N				
Benzo(a)anthracene	56-55-3	1.60E-04	1.60E-04	ND	1.20E-02	Y	Ditch Cleanup/Property Controls			
Benzo(a)pyrene	50-32-8	1.60E-05	1.60E-05	ND	1.50E-02	Y	Ditch Cleanup/Property Controls			
Benzo(b)fluoranthene	205-99-2	1.60E-04	1.60E-04	ND	1.70E-02	Y	Ditch Cleanup/Property Controls			
Benzo(k)fluoranthene	207-08-9	1.60E-03	1.60E-03	ND	9.00E-03	Y	Ditch Cleanup/Property Controls			
Chrysene	218-01-9	1.60E-02	1.60E-02	ND	1.80E-02	Y	Ditch Cleanup/Property Controls			
Dibenzo(a,h)anthracene	53-70-3	1.60E-05	1.50E-05	ND	3.00E-03	Y	Ditch Cleanup/Property Controls			
Indeno(1,2,3-c,d)pyrene	193-39-5	1.60E-04	1.60E-04	ND	1.20E-02	Y	Ditch Cleanup/Property Controls			
Napththalene	91-20-3	1.40E+00	1.40E+00	4.00E-02	4.40E-02	N				
Total cPAH TEQ	X	9.70E-03	1.60E-05	ND	2.05E-02	Y	Ditch Cleanup/Property Controls			
Polychlorinated Biphenyls (PCBs) (ug/L)										
Total PCB Aroclors	1336-36-3	7.00E-06	7.00E-06	?	?	N				
Per-and Polyfluoroakkyl Substances (PFAS) (ug/L)										
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	6.50E-02	N/A	5.10E-03	?	N				
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	1.50E-02	1.10E+00	1.70E-02	?	N				
Perfluorooctanoic Acid (PFOA)	335-67-1	1.00E-02	1.20E+02	1.40E-02	?	N				

Figure 3: COPCs and PCULs for Groundwater Protective of Surface Water and Sediments.

Precision Engineering						
FSID #: 2056						
CSID #: 4532						
Contaminant	**CAS #**	**Proposed Water PCUL**	**Ecology VI Screening**	**Highest Detected Value in MW's**	**GW/Drinking COPC?**	**Notes**
Metals (ug/L)						
Arsenic	7440-38-2	8.00E+00	N/A	9.86E+01		
Cadmium	7440-43-9	1.20E+00	N/A	4.70E-01		
Chromium	7440-47-3	1.00E+02	N/A	1.33E+05		
Copper	7440-50-8	3.10E+00	N/A	2.10E+02		
Lead	7439-92-1	5.60E+00	N/A	9.07E+00		
Mercury	7439-97-6	2.50E-02	8.30E-01	8.01E-01		
Nickel	7440-02-0	8.20E+00	N/A	6.62E+01		
Selenium	7782-49-2	5.00E+01	N/A	1.83E+01		
Thallium	7440-28-0	6.20E-02	N/A	N/D		
Zinc	7440-66-6	8.10E+01	N/A	5.74E+01		
TPH (ug/L)						
GRO	X		N/A	?		
DRO+HO	X	5.00E+02	N/A	1.29E+03		
VOCs (ug/L)						
Benzene	71-43-2	1.10E+00	2.40E+00	6.00E-02		
cis-1,2-Dichloroethylene	156-59-2	1.60E+01	1.80E+02	2.63E+01		
1,1-Dichloroethylene	75-35-4	?	1.30E+02			
Methylene Chloride	75-09-2	5.00E+00	7.80E+02	2.77E+01		
Trans-1,2-Dichloroethylene	156-60-5	?	7.70E+01			
Trichloroethylene (TCE)	79-01-6	7.00E-01	1.40E+00	4.03E+01	Y	Tier II Must Empirically Eliminate or include in DCA/FS
Vinyl Chloride	75-01-4	1.80E-01	3.30E-01	1.56E+00	Y	Tier II Must Empirically Eliminate or include in DCA/FS
SVOCs (ug/L)						
1,4-Dioxane	123-91-1	4.40E-01	4.70E+03	2.04E+01		
Bis(2-Ethylhexyl) Phthalate	117-81-7	4.60E-02	N/A	N/D		
Diethyl Phthalate	84-66-2	9.30E+01	N/A	3.00E-01		
PAHs (ug/L)						
1-Methylnaphthalene	90-12-0	1.50E+00	1.70E-01	3.33E-01	Y	Tier II Must Empirically Eliminate or include in DCA/FS
Benzo(a)anthracene	56-55-3	1.60E-04	N/A	1.30E-02		
Benzo(a)pyrene	50-32-8	1.60E-05	N/A	9.00E-03		
Benzo(b)fluoranthene	205-99-2	1.60E-04	N/A	1.10E-02		
Benzo(k)fluoranthene	207-08-9	1.60E-03	N/A	7.00E-03		
Chrysene	218-01-9	1.60E-02	N/A	2.30E-02		
Dibenzo(a,h)anthracene	53-70-3	1.60E-05	N/A	2.00E-03		
Indeno(1,2,3-c,d)pyrene	193-39-5	1.60E-04	N/A	2.00E-03		
Napththalene	91-20-3	1.40E+00	8.80E+00	1.11E+00		
Total cPAH TEQ	X	9.70E-03	N/A	1.32E-02		
Polychlorinated Biphenyls (PCBs) (ug/L)						
Total PCB Aroclors	1336-36-3	7.00E-06	N/A	N/D		
Per-and Polyfluoroakkyl Substances (PFAS) (ug/L)						
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	6.50E-02	N/A	2.40E-01		
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	1.50E-02	N/A	7.00E-02		
Perfluoroctanoic Acid (PFOA)	335-67-1	1.00E-02	N/A	7.50E-01		

Figure 4: COPCs and PCULs for Air Based on Groundwater Screening for Vapor Intrusion.

Table N-1
Simplified Terrestrial Ecological Evaluation Scoresheet
Precision Engineering, Inc.
Seattle, Washington

Line Number	Scoring Parameters	Score	Rationale
1	Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre). From the table below, find the number of points corresponding to the area and enter this number in the field to the right. Area (acres) — Points 0.25 or less — 4 0.5 — 5 1.0 — 6 1.5 — 7 2.0 — 8 2.5 — 9 3.0 — 10 3.5 — 11 4.0 or more — 12	7	The approximately 3.5-acre Property associated with the Site is entirely developed (i.e., paved and/or covered by buildings). Approximately 1.5 acres of grassy land is present along the eastern, southern, and western borders of the Site.
2	Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1.	3	The Property is zoned for industrial use and is currently an active industrial supply store.
3	Enter a score in the box to the right for the habitat quality of the site, using the following rating system: High=1, Intermediate=2, Low=3.	3	The Site is entirely paved and/or covered by buildings and is located in industrial south Seattle, near the Highway 99 on-ramp.
4	Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.	1	It is possible the ditch could be considered a "habitat island." Therefore, an ecologically conservative score of 1 is used.
5	Are any of the following soil contaminants present: chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	4	None of the listed soil contaminants have been detected at the Site.
6	Add the numbers in the boxes on lines 2 through 5 and enter this number to the right. If this number is larger than the number in the box on line 1, the simplified TEE may be ended under WAC 173-340-7292(2) (a) (ii).	11	11 is larger than 7, so the TEE process is ended.

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Figure 5: Simplified Terrestrial Ecological Evaluation Scoresheet.

Precision Engineering							
FSID #: 2056							
CSID #: 4532							
3-Phase Model - Soil protective of groundwater		**Analyte**	**CAS**	**GW Protection (ug/L)**	**Hcc @ 13°**	**Kd**	**Soil Protective of GW (mg/kg)**
		Metals (ug/L)					
GW Protection (µg/Liter)	1.00E+02	Arsenic	7440-38-2	8.00E+00	x	x	Empirical Demonstration
Units Conversion (1 mg/1000 µg)	0.001	Cadmium	7440-43-9	5.00E+00	x	x	Empirical Demonstration
Dilution Factor - Saturated Zone (1)	1	Chromium	7440-47-3	1.00E+02	0.00E+00	1.00E+03	1.00E+02
Distribution Coefficient Kd (Liters/kg)	1.00E+03	Copper	7440-50-8	6.40E+02	x	x	Empirical Demonstration
Water-filled Soil Porosity - Saturated (0.43 ml water/ml soil)	0.43	Lead	7439-92-1	1.50E+01	x	x	Empirical Demonstration
Air-filled Soil Porosity Saturated (0 ml air/ml soil)	0	Mercury	7439-97-6	2.00E+00	x	x	Empirical Demonstration
Henry's Law Constant - Hcc - dimensionless	0.00E+00	Nickel	7440-02-0	3.20E+02	x	x	Empirical Demonstration
Dry Soil Bulk Density (1.5 kg/Liter)	1.5	Selenium	7782-49-2	5.00E+01	x	x	Empirical Demonstration
		Thallium	7440-28-0	1.60E-01	x	x	Empirical Demonstration
Soil Cleanup Level Protective of Groundwater - Saturated (mg/kg)	1.00E+02	Zinc	7440-66-6	4.80E+03	x	x	Empirical Demonstration
		TPH (ug/L)					
		GRO	X	1.00E+03	x	x	Empirical Demonstration
Saturated Conditions		DRO+HO	X	5.00E+02			2.00E+03
		VOCs (ug/L)					
		Benzene	71-43-2	5.00E+00	x	x	Empirical Demonstration
		cis-1,2-Dichloroethylene	156-59-2	1.60E+01	1.00E-01	3.96E-02	5.22E-03
		1,1-Dichloroethylene	75-35-4	7.00E+00	x	x	Empirical Demonstration
		Methylene Chloride	75-09-2	5.00E+00	x	x	Empirical Demonstration
		Trans-1,2-Dichloroethylene	156-60-5	1.00E+02	x	x	Empirical Demonstration
		Trichloroethylene (TCE)	79-01-6	4.00E+00	2.32E-01	9.40E-02	1.52E-03
		Vinyl Chloride	75-01-4	2.90E-01	8.50E-01	2.17E-02	8.94E-05
		SVOCs (ug/L)					
		1,4-Dioxane	123-91-1	4.40E-01	1.06E-04	2.63E-03	1.27E-04
		Bis(2-Ethylhexyl) Phthalate	117-81-7	6.00E+00	x	x	Empirical Demonstration
		Diethyl Phthalate	84-66-2	1.30E+04	x	x	Empirical Demonstration
		PAHs (ug/L)					
		1-Methylnaphthalene	90-12-0	8.60E-01	x	x	Empirical Demonstration
		Benzo(a)anthracene	56-55-3	N/A	x	x	Empirical Demonstration
		Benzo(a)pyrene	50-32-8	2.00E-01	x	x	Empirical Demonstration
		Benzo(b)fluoranthene	205-99-2	N/A	x	x	Empirical Demonstration
		Benzo(k)fluoranthene	207-08-9	N/A	x	x	Empirical Demonstration
		Chrysene	218-01-9	N/A	x	x	Empirical Demonstration
		Dibenzo(a,h)anthracene	53-70-3	N/A	x	x	Empirical Demonstration
		Indeno(1,2,3-c,d)pyrene	193-39-5	N/A	x	x	Empirical Demonstration
		Napththalene	91-20-3	1.60E+02	x	x	Empirical Demonstration
		Total cPAH TEQ	X	2.00E-01	x	x	Empirical Demonstration
		Polychlorinated Biphenyls (PCBs) (ug/L)					
		Total PCB Aroclors	1336-36-3	2.20E-01	x	x	Empirical Demonstration
		Per-and Polyfluoroakkyl Substances (PFAS) (ug/L)					
		Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	6.40E-06	x	x	Empirical Demonstration
		Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	4.00E-03	x	x	Empirical Demonstration
		Perfluoroctanoic Acid (PFOA)	335-67-1	4.00E-03	x	x	Empirical Demonstration

Figure 5: Three phase Model for Soil Protective of Groundwater.

Precision Engineering							
FSID #: 2056							
CSID #: 4532							
3-Phase Model - Soil protective of surface water		**Analyte**	**CAS**	**S.W. Protection (ug/L)**	**Hcc @ 13°**	**Kd**	**Soil Protective of S.W. (mg/kg)**
		Metals (ug/L)					
SW Protection (µg/Liter)	5.70E+01	Arsenic	7440-38-2	8.00E+00	x	x	Empirical Demonstration
Units Conversion (1 mg/1000 µg)	0.001	Cadmium	7440-43-9	1.20E+00	x	x	Empirical Demonstration
Dilution Factor - Saturated Zone (1)	1	Chromium	7440-47-3	2.70E+01	x	x	Empirical Demonstration
Distribution Coefficient Kd (Liters/kg)	2.33E-01	Copper	7440-50-8	3.10E+00	x	x	Empirical Demonstration
Water-filled Soil Porosity - Saturated (0.43 ml water/ml soil)	0.43	Lead	7439-92-1	8.10E+00	x	x	Empirical Demonstration
Air-filled Soil Porosity Saturated (0 ml air/ml soil)	0	Mercury	7439-97-6	2.50E-02	x	x	Empirical Demonstration
Henry's Law Constant - Hcc - dimensionless	1.41E-01	Nickel	7440-02-0	8.20E+00	x	x	Empirical Demonstration
Dry Soil Bulk Density (1.5 kg/Liter)	1.5	Selenium	7782-49-2	7.10E+01	x	x	Empirical Demonstration
		Thallium	7440-28-0	6.20E-02	x	x	Empirical Demonstration
Soil Cleanup Level Protective of Groundwater - Saturated (mg/kg)	2.96E-02	Zinc	7440-66-6	8.10E+01	x	x	Empirical Demonstration
		TPH (ug/L)					
		GRO	X	1.00E+03	x	x	Empirical Demonstration
Saturated Conditions		DRO+HO	X	5.00E+02	x	x	Empirical Demonstration
		VOCs (ug/L)					
		Benzene	71-43-2	1.60E+00	x	x	Empirical Demonstration
		cis-1,2-Dichloroethylene	156-59-2	N/A	x	x	Empirical Demonstration
		1,1-Dichloroethylene	75-35-4	N/A	x	x	Empirical Demonstration
		Methylene Chloride	75-09-2	1.00E+02	x	x	Empirical Demonstration
		Trans-1,2-Dichloroethylene	156-60-5	1.00E+03	x	x	Empirical Demonstration
		Trichloroethylene (TCE)	79-01-6	7.00E-01	x	x	Empirical Demonstration
		Vinyl Chloride	75-01-4	1.80E-01	x	x	Empirical Demonstration
		SVOCs (ug/L)					
		1,4-Dioxane	123-91-1	N/A	x	x	Empirical Demonstration
		Bis(2-Ethylhexyl) Phthalate	117-81-7	4.60E-02	x	x	Empirical Demonstration
		Diethyl Phthalate	84-66-2	9.30E+01	x	x	Empirical Demonstration
		PAHs (ug/L)					
		1-Methylnaphthalene	90-12-0	N/A	x	x	Empirical Demonstration
		Benzo(a)anthracene	56-55-3	1.60E-04	x	x	Empirical Demonstration
		Benzo(a)pyrene	50-32-8	1.60E-05	x	x	Empirical Demonstration
		Benzo(b)fluoranthene	205-99-2	1.60E-04	x	x	Empirical Demonstration
		Benzo(k)fluoranthene	207-08-9	1.60E-03	x	x	Empirical Demonstration
		Chrysene	218-01-9	1.60E-02	x	x	Empirical Demonstration
		Dibenzo(a,h)anthracene	53-70-3	1.50E-05	x	x	Empirical Demonstration
		Indeno(1,2,3-c,d)pyrene	193-39-5	1.60E-04	x	x	Empirical Demonstration
		Napththalene	91-20-3	1.40E+00	x	x	Empirical Demonstration
		Total cPAH TEQ	X	1.60E-05	x	x	Empirical Demonstration
		Polychlorinated Biphenyls (PCBs) (ug/L)					
		Total PCB Aroclors	1336-36-3	7.00E-06	x	x	Empirical Demonstration
		Per-and Polyfluoroakkyl Substances (PFAS) (ug/L)					
		Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	N/A	x	x	Empirical Demonstration
		Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	1.10E+00	x	x	Empirical Demonstration
		Perfluorooctanoic Acid (PFOA)	335-67-1	1.20E+02	x	x	Empirical Demonstration

Figure 6: Three phase Model for Soil Protective of Groundwater with Transport to Surface Water and Sediments.

Precision Engineering														
FSID #: 2056														
CSID #: 4532														
Soil Regulation														
Soil Guidance														
Analyte	CAS	Soil Method B Direct Contact (mg/kg)	Soil Method B Protection of Groundwater (mg/kg) - Sat	Soil Method B Protection of SW (mg/kg) - Sat	Final Protective H.H. Value (mg/kg)	Consultant MRL (mg/kg)	Ecology MRL (mg/kg)	Final PQL (mg/kg)	Natural Background	PCUL (mg/kg)	Highest Recorded Value (mg/kg)	Location	COPC?	Ecology Comments
Master CLARC Spreadsheet Column	A	R and S	X				Guidance for TPH		Natural Background Metals				Based on Complete Leaching Pathways	
MTCA Table 830-1														
Metals (mg/kg)														
Arsenic	7440-38-2	3.10E-02	Empirical Demonstration	Empirical Demonstration	3.10E-02		4.50E+00	4.50E+00	7.00E+00	7.00E+00	1.47E+01	SB-32	Y	
Cadmium	7440-43-9	8.00E+01	Empirical Demonstration	Empirical Demonstration	8.00E+01		2.00E-01	2.00E-01	1.00E+00	8.00E+01	2.51E+00	MW-16	N	
Chromium	7440-47-3	x	1.00E+02	Empirical Demonstration	1.00E+02		5.00E-01	5.00E-01	4.80E+01	1.00E+02	6.75E+03	GP-32	Y	Ditch Cleanup/Property Controls
Copper	7440-50-8	3.20E+03	Empirical Demonstration	Empirical Demonstration	3.20E+03		2.00E-01	2.00E-01	3.60E+01	3.20E+03	1.13E+02	GP-18	Y	Ditch Cleanup/Property Controls
Lead	7439-92-1	2.50E+02	Empirical Demonstration	Empirical Demonstration	2.50E+02		2.00E+00	2.00E+00	2.40E+01	2.50E+02	1.30E+02	SB-30	Y	Ditch Cleanup/Property Controls
Mercury	7439-97-6	na	Empirical Demonstration	Empirical Demonstration	na		x	x	7.00E-02	7.00E-02	1.10E+00	GP-18	Y	Ditch Cleanup/Property Controls
Nickel	7440-02-0	1.60E+03	Empirical Demonstration	Empirical Demonstration	1.60E+03		9.00E-01	9.00E-01	4.80E+01	1.60E+03	4.70E+01	MW-13	N	
Selenium	7782-49-2	4.00E+02	Empirical Demonstration	Empirical Demonstration	4.00E+02		3.00E+00	3.00E+00	7.80E-01	4.00E+02	2.21E+00	MW-13	N	
Thallium	7440-28-0	8.00E-01	Empirical Demonstration	Empirical Demonstration	8.00E-01		2.00E+00	2.00E+00	5.00E+00	5.00E+00	1.29E-01	MW-13	N	
Zinc	7440-66-6	2.40E+04	Empirical Demonstration	Empirical Demonstration	2.40E+04		1.00E+00	1.00E+00	8.60E+01	2.40E+04	3.41E+02	HA-2	Y	Ditch Cleanup/Property Controls
TPH (ug/L)														
GRO	X	1.00E+02	Empirical Demonstration	Empirical Demonstration	1.00E+02		5.00E+00	5.00E+00	x	1.00E+02	2.42E+01	GP-4	Y	
DRO+HO	X	2.00E+03	2.00E+03	Empirical Demonstration	2.00E+03		2.50E+01	2.50E+01	x	2.00E+03	2.52E+04	GP-21	Y	
VOCs (ug/L)														
Benzene	71-43-2	1.80E+01	Empirical Demonstration	Empirical Demonstration	1.80E+01		5.00E-03	5.00E-03	x	1.80E+01	2.55E-03	GP-1	N	
cis-1,2-Dichloroethylene	156-59-2	1.60E+02	Empirical Demonstration	Empirical Demonstration	5.22E-03		2.00E-03	2.00E-03	x	1.60E+02	5.40E-04	SB-24	N	
1,1-Dichloroethylene	75-35-4	4.00E+03	Empirical Demonstration	Empirical Demonstration	4.00E+03		5.00E-03	5.00E-03	x	4.00E+03	2.37E-02	GP-10	N	
Methylene Chloride	75-09-2	9.40E+01	Empirical Demonstration	Empirical Demonstration	9.40E+01		1.00E-02	1.00E-02	x	9.40E+01	1.79E-02	GP-10	N	
Trans-1,2-Dichloroethylene	156-60-5	1.60E+03	Empirical Demonstration	Empirical Demonstration	1.60E+03		2.00E-03	2.00E-03	x	1.60E+03	5.40E-04	SB-24	Y	
Trichloroethylene (TCE)	79-01-6	1.20E+01	1.52E-03	Empirical Demonstration	1.52E-03		2.00E-03	2.00E-03	x	2.00E-03	1.16E+00	GP-6	Y	
Vinyl Chloride	75-01-4	6.70E-01	8.94E-05	Empirical Demonstration	8.94E-05		2.00E-03	2.00E-03	x	2.00E-03	ND	ND	N	
SVOCs (mg/kg)														
1,4-Dioxane	123-91-1	1.00E+01	1.27E-04	Empirical Demonstration	1.27E-04		5.00E-02	5.00E-02	x	5.00E-02	6.01E-01	MW-22	Y	
Bis(2-Ethylhexyl) Phthalate	117-81-7	7.10E+01	Empirical Demonstration	Empirical Demonstration	7.10E+01		1.19E-01	1.19E-01	x	7.10E+01	6.91E-02	SB-29	N	
Diethyl Phthalate	84-66-2	6.40E+04	Empirical Demonstration	Empirical Demonstration	6.40E+04		1.19E-01	1.19E-01	x	6.40E+04	3.45E-01	MW-14	N	
PAHs (mg/kg)														
1-Methylnaphthalene	90-12-0	2.00E+01	Empirical Demonstration	Empirical Demonstration	2.00E+01		5.00E-02	5.00E-02	x	2.00E+01	2.05E-02	SB-23	N	
Benzo(a)anthracene	56-55-3	x	Empirical Demonstration	Empirical Demonstration	x		5.00E-02	5.00E-02	x	x		x	Y	Ditch Cleanup/Property Controls
Benzo(a)pyrene	50-32-8	1.90E-01	Empirical Demonstration	Empirical Demonstration	1.90E-01		5.00E-02	5.00E-02	x	1.90E-01	1.39E-01	MW-23	Y	Ditch Cleanup/Property Controls
Benzo(b)fluoranthene	205-99-2	x	Empirical Demonstration	Empirical Demonstration	x		5.00E-02	5.00E-02	x	x		x	Y	Ditch Cleanup/Property Controls
Benzo(k)fluoranthene	207-08-9	x	Empirical Demonstration	Empirical Demonstration	x		5.00E-02	5.00E-02	x	x		x	Y	Ditch Cleanup/Property Controls
Chrysene	218-01-9	x	Empirical Demonstration	Empirical Demonstration	x		5.00E-02	5.00E-02	x	x		x	Y	Ditch Cleanup/Property Controls
Dibenzo(a,h)anthracene	53-70-3	x	Empirical Demonstration	Empirical Demonstration	x		5.00E-02	5.00E-02	x	x		x	Y	Ditch Cleanup/Property Controls
Indeno(1,2,3-c,d)pyrene	193-39-5	x	Empirical Demonstration	Empirical Demonstration	x		5.00E-02	5.00E-02	x	x		x	Y	Ditch Cleanup/Property Controls
Napththalene	91-20-3	1.60E+03	Empirical Demonstration	Empirical Demonstration	1.60E+03		5.00E-01	5.00E-01	x	1.60E+03	9.55E-02	MW-19	N	
Total cPAH TEQ	X	1.90E-01	Empirical Demonstration	Empirical Demonstration	1.90E-01		5.00E-02	5.00E-02	x	1.90E-01	2.22E-01	MW-23	Y	Ditch Cleanup/Property Controls
Polychlorinated Biphenyls (PCBs) (mg/kg)														
Total PCB Aroclors	1336-36-3	1.00E+00	Empirical Demonstration	Empirical Demonstration	1.00E+00		4.00E-02	4.00E-02	x	1.00E+00	1.48E-02	SB-29	N	
Per-and Polyfluoroakyl Substances (PFAS) (mg/kg)														
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	3.20E-05	Empirical Demonstration	Empirical Demonstration	3.20E-05		x	x	x	3.20E-05	ND	x	N	
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	8.00E-03	Empirical Demonstration	Empirical Demonstration	8.00E-03		x	x	x	8.00E-03	ND	x	N	
Perfluorooctanoic Acid (PFOA)	335-67-1	3.40E-05	Empirical Demonstration	Empirical Demonstration	3.40E-05		x	x	x	3.40E-05	ND	x	N	

Figure 7: COPCs and PCULs for Soil.

Precision Engineering										
FSID #: 2096										
CSID #: 4532										
Contaminant	CAS #	Proposed Water PCUL	Lowest of Ecology SW/Sed PCUL	Highest Detected Value in MW 19, 20, 21, 22, 23	Highest Detected Value in Ditch?	SW/Sediment COPC?	Notes	Consultant Notes	Ecology Response	Consultant Notes
Metals (ug/L)										
Arsenic	7440-38-2	8.00E+00	8.00E+00	9.86E+01	4.33E+00	N	See Notes	Arsenic is not a contaminant of concern for the Site because arsenic is not associated with Site activities or releases. Rather, arsenic is elevated in groundwater in the general vicinity where the Site is situated (ie. South Park vicinity). Only 17 out of 126 soil samples collected at the Site exceed the arsenic soil PCUL (i.e. only 13% of soil samples). A single soil sample (SB22-4.5), located southwest of the building where chemium plating occurred, contained arsenic at a concentration of 14.7 mg/kg, which is approximately 2 times the PCUL of 7.3 mg/kg. The remaining 16 samples contained arsenic at concentrations less than then 2 times the PCUL. Furthermore, arsenic in groundwater is elevated in most Site wells, including upgradient deep wells MW5 and MW13 and upgradient shallow well MW12, suggesting an upgradient source. Monitoring well MW5, which is typically the "most contaminated" well located due to its location in the chromium vault operation area, contained the lowest ground water arsenic concentration (generally 3 ug/L to 5 ug/L, which is below the screening level of 8 ug/L). Meanwhile, the highest arsenic concentration in groundwater is located at MW23 that is distant from the property and not in a direct downgradient groundwater direction from the source area (see FF figures that show shallow groundwater flow is to the east southeast; MW23 is east-northeast of the source area). These data indicate arsenic is generally elevated as a "background" condition and is not elevated due to Precision Engineering operations.	Provide Ecology with an area background value for Arsenic (at least 20 samples - calculate a 90th and 4 x 10th % - whichever is lower) and show that value of 8.86 was off site and likely due to another source. You can use your samples and other previous samples (no need to re-sample).	Justification provided by the consultant
Cadmium	7440-43-9	1.20E+00	1.20E+00	2.02E-01	8.24E-01	N				
Chromium	7440-47-3	1.00E+02	2.70E+01	3.51E+00	4.71E+01	Y	Ditch Cleanup/Property Contains			
Copper	7440-50-8	3.10E+00	3.10E+00	2.10E+00	1.42E+02	Y	Ditch Cleanup/Property Contains			
Lead	7439-92-1	5.60E+00	8.10E+00	2.00E-01	6.03E+01	Y	Ditch Cleanup/Property Contains			
Mercury	7439-97-6	2.50E-02	2.50E-02	4.11E-03	1.18E-01	Y	Ditch Cleanup/Property Contains			
Nickel	7440-02-0	8.20E+00	8.20E+00	8.89E+00	1.87E+01	N	SW/Sed must be addressed in DCA/FS and Ditch Cleanup/Property Contains	Nickel is not a contaminant of concern for the Site. Of the downgradient wells MW20, MW21, MW22, MW23, only one sample on one date slightly exceeded the groundwater PCUL. The one exceedance was in MW20 on 7/25/23 with a nickel concentration of 8.89 ug/L, which only slightly exceeded the PCUL of 8.2 ug/L. The nickel concentration in MW20 was 5.3 ug/L below the PCUL during a follow up sampling on 12/6/23. Finally, 0 out of 88 soil samples analyzed from the Site for nickel exceeded the soil PCUL of 48 mg/kg.	Agreed (set tch to "N")	
Selenium	7782-49-2	5.00E+01	7.10E+01	1.29E+00	ND	N				
Thallium	7440-28-0	6.20E-02	6.20E-02	ND	ND	N				
Zinc	7440-66-6	8.10E+01	8.10E+01	4.79E+00	3.01E+02	Y	Ditch Cleanup/Property Contains			
TPH (ug/L)										
GRO	X		1.00E+03	?	ND	?				
DRO+RO	X		5.00E+02	ND	ND	N				
VOCs (ug/L)										
Benzene	71-43-2	1.10E+00	1.60E+00	?	?	N				
cis-1,2-Dichloroethylene	156-59-2	1.60E+01	N/A	1.40E-01	8.97E+00	N				
1,1-Dichloroethylene	75-35-4	?	N/A	?	1.10E-01	N				
Methylene Chloride	75-09-2	5.00E+00	1.00E+02	5.80E-01	ND	N				
Trans-1,2-Dichloroethylene	156-60-5	?	1.00E+03	?	?	N				
Trichloroethylene (TCE)	79-01-6	7.00E-01	7.00E-01	ND	2.00E-01	N				
Vinyl Chloride	75-01-4	1.80E-01	1.80E-01	ND	ND	N				
SVOCs (ug/L)										
1,4-Dioxane	123-91-1	4.40E-01	N/A	2.00E-01	2.00E-01	N				
Bis(2-Ethylhexyl) Phthalate	117-81-7	4.60E-02	4.60E-02	?	?	N				
Diethyl Phthalate	84-66-2	9.30E+01	9.30E+01	?	?	N				
PAHs (ug/L)										
1-Methylnaphthalene	90-12-0	1.50E+00	N/A	1.10E-01	1.30E-02	N				
Benzo(a)anthracene	56-55-3	1.60E-04	1.60E-04	ND	1.20E-02	Y	Ditch Cleanup/Property Contains			
Benzo(a)pyrene	50-32-8	1.60E-05	1.60E-05	ND	1.50E-02	Y	Ditch Cleanup/Property Contains			
Benzo(b)fluoranthene	205-99-2	1.60E-04	1.60E-04	ND	1.70E-03	Y	Ditch Cleanup/Property Contains			
Benzo(k)fluoranthene	207-08-9	1.60E-03	1.60E-03	ND	9.00E-03	Y	Ditch Cleanup/Property Contains			
Chrysene	218-01-9	1.60E-02	1.60E-02	ND	1.80E-02	Y	Ditch Cleanup/Property Contains			
Dibenzo(a,h)anthracene	53-70-3	1.60E-05	1.50E-05	ND	3.00E-03	Y	Ditch Cleanup/Property Contains			
Indeno(1,2,3-c,d)pyrene	193-39-5	1.60E-04	1.60E-04	ND	1.20E-02	Y	Ditch Cleanup/Property Contains			
Naphthalene	91-20-3	1.40E+00	1.40E+00	4.00E-02	4.40E-02	N				
Total cPAH TEQ	X	9.70E-03	1.60E-05	ND	2.05E-02	Y	Ditch Cleanup/Property Contains			
Polychlorinated Biphenyls (PCBs) (ug/L)										
Total PCB Aroclors	1336-36-3	7.00E-06	7.00E-06	?	?	N				
Per- and Polyfluoroalkyl Substances (PFAS) (ug/L)										
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	6.50E-02	N/A	5.10E-03	?	N				
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	1.50E-02	1.10E+00	1.70E-02	?	N				
Perfluorooctanoic Acid (PFOA)	335-67-1	1.00E-02	1.20E+02	1.40E-02	?	N				

Figure 8: COPCs and PCULs for Groundwater Protective of Surface Water and Sediments.